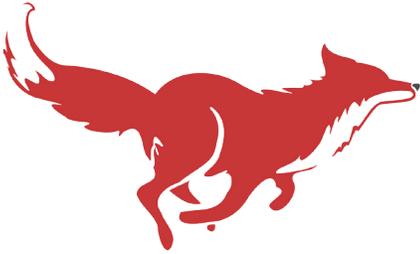


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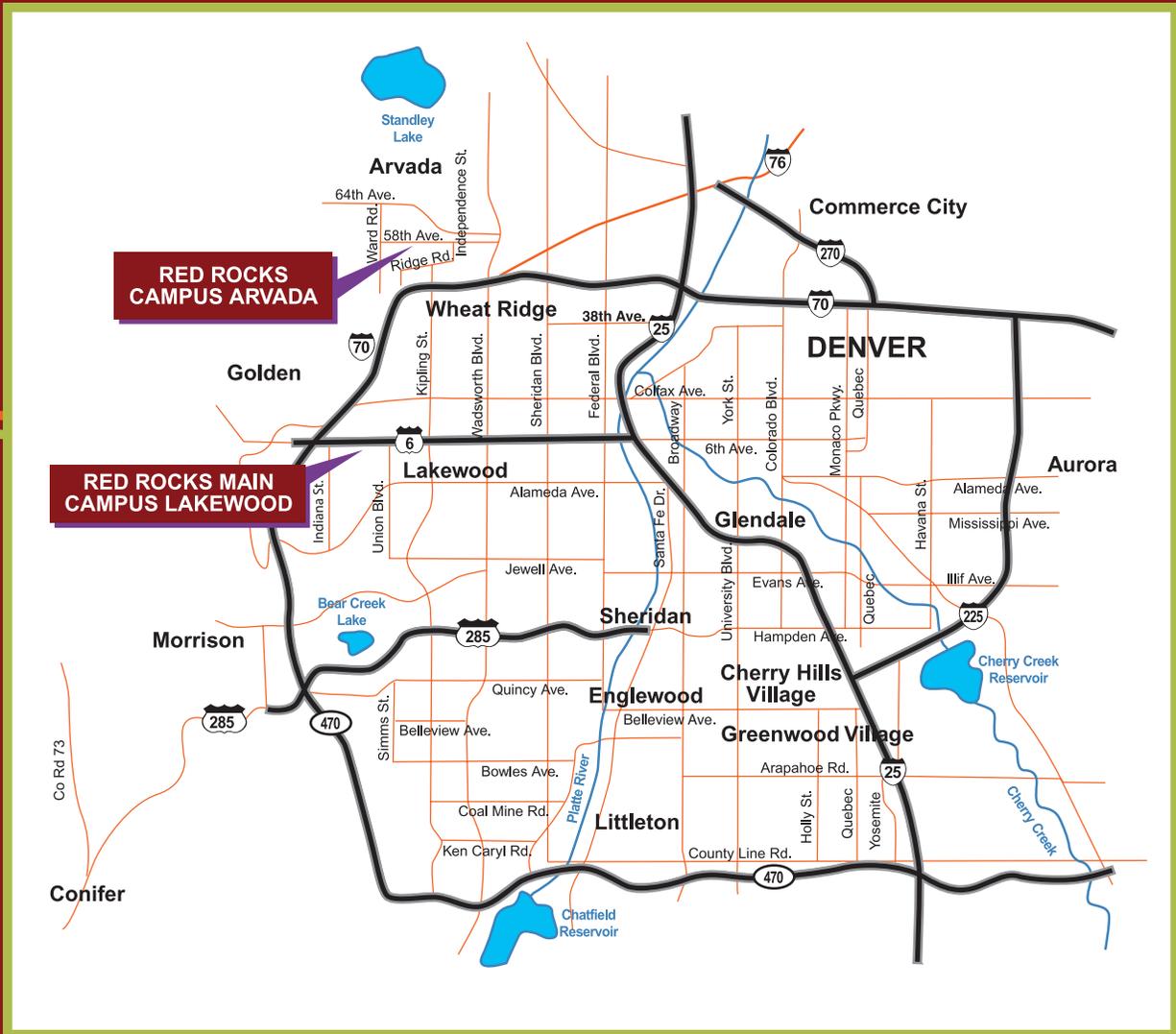
Red Rocks Community College

# CATALOG

LAKEWOOD | ARVADA | ONLINE



RED ROCKS  
COMMUNITY COLLEGE



## LAKWOOD CAMPUS

13300 West Sixth Avenue  
 Lakewood, CO 80228-1255  
 303.914.6600

## ARVADA CAMPUS

5420 Miller Street  
 Arvada, CO 80002-3069  
 303.914.6010

[www.rrcc.edu](http://www.rrcc.edu)



# Welcome to Red Rocks Community College (RRCC)

**This catalog applies to students beginning their RRCC studies from Fall 2013 through Summer 2014.**

You will graduate under the catalog requirements listed for the semester that 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 you graduate. Be sure to keep a copy of your catalog.

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

The programs, policies, statements, and procedures contained in this publication are subject to change or subject to correction by the College without prior notice. Red Rocks Community College reserves the right to withdraw courses; revise the academic calendar; or change curriculum graduation procedures, requirements, and policies that apply to students at any time. Changes will become effective whenever the proper authorities so determine. This publication is not intended to be a contract between the student and Red Rocks Community College. However, students are bound by the policies, procedures, standards, and requirements stated herein, so long as they are in effect.

#### **College Accredited by:**

The Higher Learning Commission of the North Central Association of Colleges and Schools, 30 North LaSalle St., Suite 2400, Chicago, IL 60602-2504. Information: 1.800.621.7440

#### **Programs Approved by:**

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 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 Human Resources Director 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 the Title IX/EO Coordinator(s): Bill Dial, Director of Human Resources/Title IX Administrator, 13300 West Sixth Avenue, Lakewood, CO 80228. 303.914.6298. [bill.dial@rrcc.edu](mailto:bill.dial@rrcc.edu).

#### **Gainful Employment Information:**

The US Department of Education requires colleges to disclose a variety of information for any financial aid eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. However, we hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. [www.rrcc.edu/gainful\\_employment](http://www.rrcc.edu/gainful_employment)

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## Academic Calendar Fall 2013 – Summer 2014

**The following is a condensed Academic Calendar and subject to change. For a complete Academic Calendar visit [www.rrcc.edu/schedule/calendar.htm](http://www.rrcc.edu/schedule/calendar.htm)**

### Fall 2013

Fall 2013 Registration begins	April 1, 2013
New Student Welcome Night	August 13
15-week weekend classes begin	August 16
Regular 15-week classes begin (other classes begin throughout the fall)	August 19
No classes after 5:00 p.m.	August 30
Labor Day weekend; no classes (both campuses closed)	August 31 - September 1-2
All-College Development Day; no classes	October 15
Spring 2014 Registration begins	November 4
Fall Break; no classes	November 25 - December 1
Thanksgiving Holiday (both campuses closed)	November 28, 30 - December 1
Fall Session ends	December 10

### Spring 2014

Spring 2014 Registration begins	November 4, 2013
15-week weekend classes begin	January 17, 2014
Martin Luther King Day Holiday, no classes	January 20
15-week classes begin (other classes begin throughout the spring)	January 21
Spring Break; no classes	March 24 - March 30
Summer 2014 Registration begins	April 7
Fall 2014 Registration begins	April 7
All-College Development Day; no classes	April 15
Easter weekend; no classes (both campuses closed)	April 19 - 20
Spring Session ends	May 13
Graduation Ceremony	May 17

### Summer 2014

Summer 2014 Registration begins	April 7
Fall 2014 Registration begins	April 7
No classes after 5:00 p.m.	May 23
Memorial Day Holiday; no classes (both campuses closed)	May 24 - 26
Full term 8- and 9-week Sessions begin	June 2
Independence Day Holiday; no classes (both campuses closed)	July 4
8-week Summer Session ends	July 27
9-week Summer Session ends	August 3



*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 dual enrollment programs, and initiated plans to expand grant funding and workforce development. Dr. Haney's leadership has increased student retention, graduation, and minority enrollment.*

### **Welcome to Red Rocks Community College, a vibrant institution dedicated to your success!**

We are proud to serve our community with flexible, high-quality education at an affordable price. Whether you are earning a degree, brushing up on career skills, or seeking life-long learning, you will enjoy an environment of inspiration and support. It is our goal to create an experience that will enrich your life educationally, professionally, and personally.

#### **Imagine the possibilities at Red Rocks:**

##### **Choices**

Choose from over 300 programs and 650 courses including those that are guaranteed to transfer to Colorado four-year institutions.

##### **Support**

Benefit from the supportive environment that is created by our knowledgeable, dedicated staff and faculty. Learn in small classes, where you receive the personal attention you need to accomplish your goals.

##### **Experience**

Our talented instructors bring years of real-world experience and education into the classroom, providing students with the most current and relevant information in their fields.

##### **Convenience**

Courses are offered at two campus locations during days, evenings, and weekends. Choose from classroom, online, self-paced, or accelerated courses – all designed to fit into your busy lifestyle.

##### **Affordability**

Red Rocks is affordable. Financial aid and scholarships are available, and we have an extensive job placement and internship program.

Welcome to our community. The staff and faculty at Red Rocks Community College are here to serve you and deliver what you need to succeed.

A handwritten signature in black ink that reads "C. Michele Haney". The signature is written in a cursive, flowing style.

Dr. Michele Haney  
President, Red Rocks Community College

## About Red Rocks Community College

RRCC is a community of 14,000 learners each year studying at campuses in Lakewood and Arvada – and around the world through online courses. We are one of 13 Colorado community colleges charged with preparing a state workforce for the emerging needs of employers. RRCC also offers an affordable start for students who plan to earn a four-year degree.

### Lakewood Campus



The Lakewood campus houses everything from state-of-the-art multimedia graphics computer labs to traditional classrooms and health-careers practice areas. The full range of services for students includes an assessment center, academic advising, learning support services, tutoring, financial aid, a library, a project center, and a student employment center. A bookstore provides new and used textbooks, snacks, gifts, and school supplies. Students with disabilities can find support and services, including an Assistive Technology lab, at the Office of Disability Services.

In addition to academic support, the campus offers extras including a cafeteria and coffee shop, recreational facilities and a fitness center. The Children's Center offers full-day care for children from 18 months to kindergarten entry.

### Arvada Campus



The Arvada campus offers innovative scheduling options Mondays through Saturdays in a helpful and friendly atmosphere. Students can apply for admission, meet with an advisor, receive career counseling, register for classes, take college placement assessment exams, and receive financial aid assistance.

The Learning Commons is the centerpiece of the campus which houses the computer commons, assessment, online writing support and library services, tutorial services, free GED pre-testing, career resources, and study areas with wireless Internet access. The Arvada campus is home to the Medical Imaging program (Ultrasound and X-Ray Technology) and Holistic Health program.

Courses offered range from biology to art appreciation, including guaranteed transfer general education courses and basic skills courses in English and mathematics. Students are able to earn an AA degree by taking all their classes at Arvada. The range of classes offered at this campus also allows students to meet the requirements of other programs, to take prerequisite courses, and to take classes that enrich their lives.

## RRCC Guiding Principles

### Vision:

To be the college of first choice

### Mission:

To create a passion for learning through our dedication to students, our commitment to excellence, and our own love of learning

### Values:

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

- Innovation
- Teamwork
- Diversity
- Communication
- Integrity

### RRCC is:

- A committed business partner responding to industry and community needs through innovative solutions.
- A coalition builder initiating opportunities for creative problem-solving through teamwork.
- A proponent for diversity providing an environment that respects differences among us.
- A believer in communication fostering a culture that promotes an open exchange of ideas.
- A model of integrity supporting our mission with thoughtful and judicious decision-making.

## Admissions Policy

Red Rocks Community College practices an "open door" admissions policy, which is generally unrestricted. However, the college reserves the right to restrict students' access to classes on the basis of academic advising, testing, pre-enrollment interviews, and past educational achievement.

Admittance does not ensure acceptance into a particular course or program. Some programs have limited space and special admissions procedures. Applicants for these programs must contact the appropriate department. 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, which is available online: [www.cccs.edu/SBCCOE/Policies/BP/PDF/BP4-10.pdf](http://www.cccs.edu/SBCCOE/Policies/BP/PDF/BP4-10.pdf)

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 or the Student Records office.

Students who have a disability or who otherwise have special needs are encouraged to contact the Office of Disability Services. This office provides academic support and accommodations (at no cost) to students with documented disabilities. Students who had an Individual Education Plan (IEP) or 504 Plan in high school should contact the Office of Disability Services after applying for admission to the college.

### 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 application.
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 "Waiver of Admissions requirements" (available at the office of the Vice President for Student Services). Students must complete the Accuplacer placement test, and may be required to submit a monitored writing sample. 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. Students under the age of 15 will only be considered for admission if they have received a high school diploma.

## Acceptance Letters

Acceptance letters are sent by e-mail or by regular U.S. mail. Please contact the Admissions office at 303.914.6360 with any questions regarding the acceptance letter.

## Admission Procedures

### In order to enroll, complete these eight steps:

#### 1. Apply for admission online

Complete the RRCC application online at [www.rrcc.edu/apply](http://www.rrcc.edu/apply) or stop by the Admissions Office. Upon completion, you will receive a User ID. The user ID starts with a capital "S" followed by 8 numbers (example: S12345678) Save this number as you will need it for registration and all other correspondence with RRCC.

**Information: 303.914.6348**

#### 2. Apply for the College Opportunity Fund (COF).

All Colorado residents should complete the application. 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. If you do not apply for COF funding and authorize its use, you are responsible for both the student share and the state share of all tuition and fees.

**To apply and authorize COF:** 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/cof](http://www.rrcc.edu/cof) and click on "Sign up for COF"

#### 3. Complete the Accuplacer assessment in the Assessment Center.

Students who have graduated from a Colorado public or private high school (or its equivalent) during the previous academic year, or students who will be working toward a degree within the Colorado Community College System, must be assessed for reading, writing, and mathematics ability. The Accuplacer is the state-required test that provides information in these areas to help you and your academic advisor make appropriate course choices. It is not an entrance exam and no appointment is required.

#### Exemptions:

You will not have to complete the Accuplacer if you meet any of the exemptions listed on the next page.

**Information: 303.914.6720 or [www.rrcc.edu/assessment](http://www.rrcc.edu/assessment)**

#### 4. Set up your student email account

Your Red Rocks email (name@student.cccs.edu) will be your primary communication tool while enrolled at RRCC for your Faculty members, Advisors, Financial Aid staff, Enrollment Services, Business Office, Office of Student Life, College Foundation, Instructional Services, and more. Activate your account today at

**[www.rrcc.edu/admissions/studentemail.html](http://www.rrcc.edu/admissions/studentemail.html)**

**5. Apply for Financial Aid** at [www.rrcc.edu/finaid](http://www.rrcc.edu/finaid) and attend a Financial Aid orientation.

**6. Schedule to attend a Red Rocks 101 Orientation Session.**

**Red Rocks 101** is a free one-time session to help you start college on the right track. By attending, you will get the answers to your questions before classes start, and learn how to be successful at RRCC.

Register for an upcoming **Red Rocks 101** session at [www.rrcc.edu/advising/redrocks101.html](http://www.rrcc.edu/advising/redrocks101.html)

**7. Meet with an academic advisor.**

An advisor will help you select courses, identify course prerequisites, obtain program information, evaluate assessment 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, and AGS degree plans and develop a course schedule that fits your needs and academic goals. A team of academic advisors is available year-round by appointment or on a walk-in basis. An important step toward succeeding at RRCC is meeting regularly with an academic advisor.

**Information: 303.914.6255 or [www.rrcc.edu/advising](http://www.rrcc.edu/advising)**

**8. 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](http://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.

**Information: 303.914.6348**

**9. Get your RRCC Student ID card.**

[www.rrcc.edu/admissions](http://www.rrcc.edu/admissions)

You will need a photo ID and a copy of your current schedule, which you can get online or in Admissions.

**Information: 303.914.6370 or [www.rrcc.edu/studentlife](http://www.rrcc.edu/studentlife)**

**10. 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.

**Information: 303.914.6232 or [www.rrcc.bncollege.com](http://www.rrcc.bncollege.com)**

**11. Stay current with RRCC.**

"Like us" on Facebook and sign up with Twitter and you'll never miss free food, events, or guest speakers visiting campus.

**Former Students**

If you are returning to RRCC after an absence of more than one year, you must re-apply for admission. If you have earned credit at another college and plan to use that credit to fulfill requirements for an RRCC degree or certificate, submit an official transcript to the Student Records Office prior to the semester in which you plan to graduate.

**Information: 303.914.6355**

## Assessment

Students who are working toward a degree within the Colorado Community College system, or wanting to transfer guaranteed-transfer courses to a four-year college, or are under the age of 21 must complete the Accuplacer assessment or provide exemption documentation (see below). The results will help you and your advisor make appropriate choices.

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

The Accuplacer placement test is given on a walk-in basis (no appointment necessary) and is not timed. You must have applied and received a student identification number prior to taking the test and arrive with a government-issued photo ID at least 2 hours before the Assessment Center closes.

We strongly recommend you review the online study guides available prior to taking the Accuplacer. The study guides can be found at [www.rrcc.edu/assessment](http://www.rrcc.edu/assessment). You cannot "fail" the Accuplacer; your score is an indication of the level of coursework you are ready to take. You are responsible for enrolling in basic skills courses during your first 30 credit hours of attendance if your assessment scores are below college level.

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

## Exemptions to the Assessment Requirement

You may be exempt from taking the Accuplacer if you:

- have taken ACT or SAT in the past five years, please check our website to see if your scores exempt you from this requirement. Your Reading and English scores are valid for 5 years; Math scores are only valid for 2 years. (Please submit your score report to the RRCC Assessment Office.)
- have an Associate of Arts, Associate of Science, or higher degree from an accredited college or university, you must submit your transcript(s) to the RRCC Student Records Office.
- have completed college-level English composition or college-level math with a grade of C or higher
- have qualifying AP/IB test scores (You may submit your transcript(s) and/or official score report to RRCC to be exempt from taking the corresponding section(s) of the Accuplacer.
- are taking a non-guaranteed transfer course and Accuplacer is not required as a prerequisite.

**Information: 303.914.6720 or [www.rrcc.edu/assessment](http://www.rrcc.edu/assessment)**

## Credit for Prior Learning (CPL)

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

- College Level Examination Program (CLEP).
- Portfolio (documentation of past learning).
- Institutional Challenge Examination.
- Course credit is granted once appropriate documentation, approval, and payment are received.

**Information: 303.914.6720 or**

**[www.rrcc.edu/assessment/prior.html](http://www.rrcc.edu/assessment/prior.html)**

## High School Students

### 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 their High School Counselor
2. Complete the RRCC, College Opportunity Fund and Concurrent Enrollment Applications.
3. Complete the RRCC assessment test or provide ACT/SAT scores that meet the minimum requirement.
4. Registration dates and time will be scheduled for students who have completed the Concurrent Enrollment Agreement and are approved by the school district to take RRCC classes.

Check with your school district for information related to tuition and fees. For additional information, call High School Relations at 303.914.6350.

### High School Students 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 assessment test or provide ACT/SAT scores that meet the minimum requirement.
3. Meet with a representative from High School Relations to register for classes.
4. Pay for tuition, student fees, books, and supplies.
5. Students under age 17 are required to submit a Request for Waiver of Admissions Requirements for Underage Students. Call Deb Dahlstrom at 303.914.6388 to begin the process.

**For additional information, call 303.914.6350.**

## 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.

Register for Army ROTC classes (ARM prefix) either online or through the RRCC Student Records office, Room 1200. For more information about the AROTC program, contact the AROTC Enrollment/Scholarship officer at **303.492.3459, or 303.492.6495**, or see **[www.colorado.edu/arotc](http://www.colorado.edu/arotc)**.

**Information: 303.914.6356**

## Transcripts

There are several ways to order a transcript. If you took classes before summer 1987, contact the Student Records Office. You may also print a transcript request form found on our website. You can mail or fax the form to Student Records at 303.989.6919

If you took classes after spring semester 1987, you may order your transcript on our website. There is no charge to order a transcript. Phone requests are accepted only for transcripts sent to other colleges. Transcripts will not be released for students who have failed to fulfill their financial obligations to the college.

**Information: 303.914.6352 or**

**[www.rrcc.edu/student\\_records.html](http://www.rrcc.edu/student_records.html)**

## Transfer of Credits

The Colorado Community College System (CCCS) uses a common course numbering system to simplify transfer to other state colleges and universities and to ensure curriculum quality across the system. Information is posted at:

**[www.cccs.edu](http://www.cccs.edu)**. Once you are on the site, select 'Common Course Number System'.

- Initial transcript evaluation is completed in Student Records.
- Grade point average (GPA) from transfer institutions is not calculated into your RRCC GPA.
- The college reserves the right to validate and examine all courses to determine if they are obsolete. If a course is obsolete, you may be required to take a similar course at RRCC.
- 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 AAS

degree or certificate will be accepted in an equivalent program.

- All received and/or evaluated transcripts become the property of RRCC. Only grades of C or higher 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 envelope to Student Records as soon as possible after registering for classes. Transcripts will not be evaluated until you are registered. However, they can be processed before you register in order to override a prerequisite requirement.

**Information: 303.914.6355**

## **Transferring from RRCC to Four-Year Colleges and Universities**

**RRCC has established transfer agreements with the following institutions:**

Adams State College

Argosy University

Colorado Christian University

Colorado College

Colorado School of Mines

Colorado State University:

- Fort Collins
- Pueblo

CSU Global

Colorado Mesa University

Colorado Technical University

DeVry University

Fort Hays State University

Fort Lewis College

Franklin University

Jones International University

Kaplan University

Metropolitan State University of Denver

Naropa University

Regis University

St. Francis University

University of Colorado:

- Boulder
- Colorado Springs
- Denver
- Anschutz Medical Campus

University of Northern Colorado

University of Southern Colorado

University of Phoenix

Western Governors University

Western State College

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](http://www.rrcc.edu/transfer)**

## **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.

## WarrenTech

Through a cooperative agreement with WarrenTech (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.

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 M–F from 7:30–10:30 a.m. and the afternoon classes run M–TH from 12:00–3:45 p.m.

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.

Adult students pay tuition to RRCC but attend programs on the WT campus. Students are required to pay WT program fees at the RRCC cashier's office.

### WarrenTech Admission Steps:

1. Apply for admission to RRCC at: [www.rrcc.edu/admissions](http://www.rrcc.edu/admissions)
2. Take the Accuplacer 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](http://www.rrcc.edu/assessment). Students may submit ACT scores or college transcripts in place of Accuplacer scores (See Exemptions to the Assessment Requirement).
3. Attach the Accuplacer 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 (303.914.6543) to register for courses.
6. Pay RRCC tuition and fees and the additional WT program fee at the RRCC Cashiers office. Call **303.982.8600** for current WT program fee information.
7. For financial aid information, visit the RRCC Financial Aid office or [www.rrcc.edu/finaid](http://www.rrcc.edu/finaid).

WarrenTech Information Guides are available at WT or RRCC. For more information, visit the WT counseling website at [www.warrentech.org](http://www.warrentech.org) or contact the RRCC-WT Liaison at **303.982.0695** or 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)  
Cosmetology: Hairstyling  
Cosmetology: Manicurist (nail technology)  
Dental Assisting  
Power Equipment and Motorcycle Technology  
Precision Machining Technology  
Welding

## Western Undergraduate Exchange

The Western Undergraduate Exchange (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're 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 (100% of the full resident tuition rate). Please see restrictions below:

- Only Colorado WUE/WICHE students are eligible to participate in the College Opportunity Fund (COF).
- 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.
- Colorado WUE/WICHE participants must comply with HB-06S-1023 by proving lawful presence in the United States. See the Tuition and Fees page in this schedule for details on WUE/WICHE rates.
- 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](http://www.wiche.edu/psep)

**Information: 303.914.6543 or <http://wue.wiche.edu>**

**If tuition is a problem, RRCC has scholarships and other financial aid options that can help you.**

### **College Opportunity Fund (COF)**

The College Opportunity Fund (COF) 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. Failure to apply for COF or comply with HB1023 could result in your tuition being changed to non-resident. 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/cof](http://www.rrcc.edu/cof) and click on "Sign up for COF" and then Apply for a Stipend. Be sure to authorize COF when you register for your classes.

### **House Bill-06S-1023**

In July 2006, the Colorado State Legislature enacted HB-06S-1023, which became effective on August 1, 2006. This legislation requires all citizens who apply for state-funded benefits that entail any payment or financial assistance provide proof that they are lawfully present in the United States. An example of this is in-state tuition.

### **Financial Aid**

Approximately one-third of our students receive some type of financial aid each year. Four types are available:

- Scholarships are generally based on academic performance, accomplishments, and need.
- Grants are federal and state programs based on need.
- Loans must be repaid, unlike scholarships and grants.
- Work-study agreements allow you to work for the college while you are enrolled.

**The Financial Aid Office can provide details for the following:**

- Local and regional scholarships
- Federal Pell Grants, Federal Supplemental Educational Opportunity Grants, Colorado Student Grants, Federal Direct Stafford Student Loans, and Federal Direct Parent Loans (P.L.U.S.)
- Federal and Colorado Work-Study Program

Once you have applied for financial aid, it can take eight to ten weeks to process your request. Although the application for financial aid can be submitted throughout the year, priority dates have been established to assure the availability of funding. For

complete financial aid information, see the Red Rocks Community College website.

**Information: [www.rrcc.edu/finaid](http://www.rrcc.edu/finaid) or 303.914.6256**

### **Priority Dates to Receive Financial Aid**

<b>To Receive Aid For:</b>	<b>Apply By:</b>
Fall 2013	April 1, 2013
Spring 2014	September 1, 2013
Summer 2014	February 1, 2014
Fall 2014	April 1, 2014

### **Financial Obligations of Students**

Payment dates for tuition, fees, and materials are published in the current class schedule. You are financially obligated for full tuition and fees for all classes you have not officially dropped by the drop/refund date.

**Do not assume you have been dropped from a class for missing payment deadlines or for not attending a class.**

### **Non-resident Students**

For tuition purposes, Colorado law determines whether a student is classified as an 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, obtain a petition form for in-state status from the Admissions Office or online at [www.rrcc.edu/tuition/pdf/petition.pdf](http://www.rrcc.edu/tuition/pdf/petition.pdf). The Colorado Higher Education Residency guide can be accessed online at <http://highered.colorado.gov/finance/residency/faq.html>.

Deadlines for submission of the petition are published each semester in the current class schedule. 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 Director of Enrollment Services.

**Information: 303.914.6543**

# **Tuition Payment**

## **Pay tuition 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; the Arvada campus does not accept in-person payments. If you are sponsored by a third party, such as an employer or other agency, bring a check to the Cashier's Office from the sponsor or a letter stating that the sponsor will pay upon receipt of billing and before grades are released.

## **Pay tuition online:**

Go to [www.rrcc.edu](http://www.rrcc.edu). Click on the Portal link "**The Rock**" and log in using your student ID# and PIN (birth month and date – for example, May 11 = 0511, unless you have selected your own PIN) then click on the "**Student Finance**" tab. Only MasterCard and VISA are accepted online.

## **Pay tuition by mail:**

Mail a check or money order to:  
Red Rocks Community College  
Cashier's Office, Box 2  
13300 W. 6th Ave.  
Lakewood, CO 80228-1255

## Tuition Rates

Tuition rates are set annually by the State Board for Community Colleges and Occupational Education. For current tuition rates, please check the website: [www.rrcc.edu/tuition](http://www.rrcc.edu/tuition)

### Resident Tuition Rates

Credits	Student Share Tuition	COF Stipend Tuition (see Note 1)	Total Tuition	Registration Fee	Student Fees* (see Note 2)	Student Health Clinic Fee (see Note 3)	Total Cost	Student Share Tuition, Fees
1	\$112.75	\$62.00	\$174.75	\$12.05	\$9.21	\$20.00	\$216.01	\$154.01
2	\$225.50	\$124.00	\$349.50	\$12.05	\$18.42	\$20.00	\$399.97	\$275.97
3	\$338.25	\$186.00	\$524.25	\$12.05	\$27.63	\$20.00	\$583.93	\$397.93
4	\$451.00	\$248.00	\$699.00	\$12.05	\$36.84	\$20.00	\$767.89	\$519.89
5	\$563.75	\$310.00	\$873.75	\$12.05	\$46.05	\$20.00	\$951.85	\$641.85
6	\$676.50	\$372.00	\$1,048.50	\$12.05	\$55.26	\$20.00	\$1,135.81	\$763.81
7	\$789.25	\$434.00	\$1,223.25	\$12.05	\$64.47	\$20.00	\$1,319.77	\$885.77
8	\$902.00	\$496.00	\$1,398.00	\$12.05	\$73.68	\$20.00	\$1,503.73	\$1,007.73
9	\$1,014.75	\$558.00	\$1,572.75	\$12.05	\$82.89	\$20.00	\$1,678.69	\$1,129.69
10	\$1,127.50	\$620.00	\$1,747.50	\$12.05	\$92.10	\$20.00	\$1,871.65	\$1,251.65
11	\$1,240.25	\$682.00	\$1,922.25	\$12.05	\$101.31	\$20.00	\$2,055.61	\$1,373.61
12	\$1,353.00	\$744.00	\$2,097.00	\$12.05	\$110.52	\$20.00	\$2,239.57	\$1,495.57
13	\$1,465.75	\$806.00	\$2,271.75	\$12.05	\$110.52	\$20.00	\$2,414.32	\$1,608.32
14	\$1,578.50	\$868.00	\$2,446.50	\$12.05	\$110.52	\$20.00	\$2,589.07	\$1,721.07
15	\$1,691.25	\$930.00	\$2,621.25	\$12.05	\$110.52	\$20.00	\$2,763.82	\$1,833.82
16	\$1,804.00	\$992.00	\$2,796.00	\$12.05	\$110.52	\$20.00	\$2,938.57	\$1,946.57
17	\$1,916.75	\$1,054.00	\$2,970.75	\$12.05	\$110.52	\$20.00	\$3,113.32	\$2,059.32
18	\$2,029.50	\$1,116.00	\$3,145.50	\$12.05	\$110.52	\$20.00	\$3,288.07	\$2,172.07

**\*Student Fees of \$9.21 per credit hour include:** Student Activity Fee \$5.45, Student Center Bond Fee \$2.50, Parking Fee \$1.25. Total Student Fees per Term for Fall and Spring Terms = \$9.21

**Instructional course fee:** \$6.35 per credit hour for designated courses. **Cisco fee:** \$17.50 per credit hour for designated courses.

**CCOnline digital textbook fees:** \$ 52.00 - \$ 62.00 per class per term for specified classes

Note 1: The College Opportunity Fund (COF) stipend is only available to eligible resident students.

Note 2: Student fees apply to the first 12 credits of on-campus classes.

Note 3: The Student Health Center Fee is \$20.00 per term for fall and spring terms, \$10.00 for the summer term.

*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.*

## Non-resident Tuition Rates

Credits	Tuition	Registration Fee	Student Fees (see Note 2)	Student Health Clinic Fee (see Note 3)	Total Cost
1	\$462.55	\$12.05	\$9.21	\$20.00	\$503.81
2	\$925.10	\$12.05	\$18.42	\$20.00	\$975.57
3	\$1,387.65	\$12.05	\$27.63	\$20.00	\$1,447.33
4	\$1,850.20	\$12.05	\$36.84	\$20.00	\$1,919.09
5	\$2,321.75	\$12.05	\$46.05	\$20.00	\$2,390.85
6	\$2,775.30	\$12.05	\$55.26	\$20.00	\$2,862.61
7	\$3,237.85	\$12.05	\$64.47	\$20.00	\$3,334.37
8	\$3,700.40	\$12.05	\$73.68	\$20.00	\$3,806.13
9	\$4,162.95	\$12.05	\$82.89	\$20.00	\$4,277.89
10	\$4,625.50	\$12.05	\$92.10	\$20.00	\$4,749.65
11	\$5,088.05	\$12.05	\$101.31	\$20.00	\$5,221.41
12	\$5,550.60	\$12.05	\$110.52	\$20.00	\$5,693.17
13	\$6,013.15	\$12.05	\$110.52	\$20.00	\$6,155.72
14	\$6,475.70	\$12.05	\$110.52	\$20.00	\$6,618.27
15	\$6,938.25	\$12.05	\$110.52	\$20.00	\$7,080.82
16	\$7,400.80	\$12.05	\$110.52	\$20.00	\$7,543.37
17	\$7,863.35	\$12.05	\$110.52	\$20.00	\$8,005.92
18	\$8,325.90	\$12.05	\$110.52	\$20.00	\$8,468.47

**\*Student Fees of \$9.21 per credit hour include:** Student Activity Fee \$5.45, Student Center Bond Fee \$2.50, Parking Fee \$1.25. Total Student Fees per Term for Fall and Spring Terms = \$9.21

**Instructional course fee:** \$6.35 per credit hour for designated courses. **Cisco fee:** \$17.50 per credit hour for designated courses.

**CCOnline digital textbook fees:** \$ 52.00 - \$ 62.00 per class per term for specified classes

Note 1: The College Opportunity Fund (COF) stipend is only available to eligible resident students.

Note 2: Student fees apply to the first 12 credits of on-campus classes.

Note 3: The Student Health Center Fee is \$20.00 per term for fall and spring terms, \$10.00 for the summer term.

*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.*

## Online, Nursing, PA Program, and WUE/WICHE Tuition Rates

### RRCC Online & CCOOnline Tuition

Resident: \$199.30 student share, \$ 62.00 COF, \$261.30 Total

Non-Resident and WUE: \$303.75 per credit hour

NUR Online resident: \$250.85 student share, \$62.00 COF, \$312.85 Total

NUR Online Non-resident: \$355.30 per credit hour

### Nursing Courses (NUR):

Resident: \$164.30 student share, \$62.00 COF, \$226.30 Total

Non-Resident: \$462.55 per credit hour

### Physician Assistant Program (PAP):

Resident: \$424.10 student share, \$62.00 COF, \$486.10 Total

Non-Resident: \$517.60 per credit hour

### Western Undergraduate Exchange (WUE):

WUE Non-Resident-on campus: \$169.15 per credit hour

WUE Non-Resident-online: \$303.75 per credit hour

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

The RRCC Foundation is a 501(c)(3) not-for-profit organization founded in 1993 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 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, nearly 20 years later, hundreds of donors support the Foundation's mission each year. As a result, the Foundation has been able to raise in excess of \$10.5 million allowing the Foundation to award more than \$3.4 million in scholarships to over 2,000 students, and provide approximately \$3.1 million to the college in support of mini-grants for innovative faculty and staff, the Teaching Chair program that recognizes excellence in the classroom, instructional equipment, and other initiatives that have merit but no source of funding.

Each year, more than \$500,000 is distributed to support the students, faculty and staff at the college.

Scholarship applications are available at the beginning of spring semester each year. Please check with the Foundation for the exact deadline and application instructions as they may change from year to year. Applications accepted in the spring 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.

The 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](http://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  
Robert E. Barber  
Kevin J. Bervik  
John G. Brant  
Tim Campbell  
Shelley Cook  
Michael Coughlin  
Dr. Carl Craig  
Jim Dascalos  
Dr. Michele Haney  
Dan Leach  
Thomas W. Lemcke  
Tom Menk  
Dr. Melinda O'Rourke  
Skip Olson  
Jim Petrock  
Robert Rogers  
Bob Short  
Doris Stipech  
John Sullivan  
Dr. John Trefny  
Shirleen Tucker  
Denise Waddell  
Jim Whitfield  
Ron Slinger, Executive Director

## International Students

### Admission Information

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, [www.rrcc.edu/international](http://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 \$26,000/year based on tuition of \$6,000/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, June 1**

**Spring, November 1**

**Summer, March 1**

New applications are not accepted after classes begin.

### Assessment

Prior to registering for classes, you must take the Accuplacer basic-skills assessment and/or the Accuplacer English placement test and follow the placement requirements. The Accuplacer takes at least 90 minutes and is available on a walk-in basis. Test times are listed in the current schedule and on our website. All non-native English speakers are tested for English ability in addition to taking the Accuplacer basic-skills test. 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.

#### Generally, if you

- complete your AA or AS degree, including 35 credits of state-guaranteed general education courses, and
- earn a C grade or higher in each course,

#### then

- at least 60 hours of your AA/AS degree will transfer completely, upon admission, to a liberal arts and sciences program in Colorado's public four-year institutions,

#### and

- you are guaranteed to be able to finish your liberal arts and sciences degree in another 60 credit hours.

Certain majors require essential lower-division courses. Please meet with an advisor for information about obtaining a transfer guide that will help you select lower-division credits to finish your degree.

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.

### Housing/Family Homestay Assistance

American family homestay opportunities are often available to you, in addition to a variety of local housing arrangements. If you choose the homestay option, you will need to contact the International Student Services Office prior to your arrival in the United States.

### 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 (20-25 hours per week) 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, conversation, and iBT TOEFL preparation.

**Information: 303.914.6416, 303.914.6536, 303.914.6538, or [www.rrcc.edu/international](http://www.rrcc.edu/international)**

### 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 are a combination of online and classroom instruction. They are designed for a curriculum that can be offered partially online but is difficult to learn completely online. In-class instruction is held at RRCC during the week or weekend.

### Independent Study

Most areas of study at RRCC offer opportunities to engage in intensive study and/or research on a topic under the direction of a qualified faculty member. The student and the instructor determine independent study course content, credit, and contact hours jointly. Permission of the instructor is required prior to registering. Independent study can be taken an unlimited number of times, but no more than six credits will be applied to any associate degree program.

### 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 RRCC Lakewood or Arvada campus to use computers.

### CCCOOnline Courses

Colorado Community College Online provides a centralized online program where you can take classes, earn a certificate, or even complete an associate's 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.ccconline.org](http://www.ccconline.org)**

### Self-Paced and Flex Courses

#### 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

#### Flex Courses

Flex classes are designed for students to work independently, finding out solutions on their own with minimum assistance. These classes are not designed for online delivery or for communication via email. Regular attendance is not required, but students must meet with their instructors several times throughout the semester to receive and submit assignments, to ask questions, and to receive assistance. Students can enroll in flex classes at any time during the term, but all work must be submitted by the deadline indicated on the syllabus.

### Weekend College

If you work, have a family, or want something interesting to do on Friday nights, Saturdays, and/or Sundays, Weekend College 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 few as three weekends.

### 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 on a limited walk-in basis and by appointment 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: 303.914.6255 [www.rrcc.edu/advising](http://www.rrcc.edu/advising)**

#### Lakewood Campus Advising Center hours

Monday through Thursday, 8 a.m. to 6:00 p.m.

Friday, 9 a.m. to 5:00 p.m.

#### Arvada Campus Advising

By appointment only, call 303.914.6010.

### Bookstore

The Red Rocks Bookstore, located at the Lakewood Campus, is your source for all of your educational materials including those for CCOnline classes. We offer digital books and rental books as well as new and used textbooks. Study aids, reference books and dictionaries are also available.

The bookstore also carries school supplies, calculators, electronic items, backpacks, greeting cards, magazines, best-selling paperbacks (discounted 25%), RRCC gifts and apparel along with snack food and beverages. Barnes & Noble gift cards may be purchased and redeemed. Bookstore services include special orders for books not in stock, limited check cashing and UPS shipping.

The bookstore will buy back used textbooks at the end of the semester if your instructors have requested them for the next semester. Textbooks may be ordered online by clicking on "Bookstore" from the Red Rocks website [www.rrcc.edu](http://www.rrcc.edu). Books may be shipped to students' homes, held for in store pickup, or delivered to the Arvada Campus. Payment is accepted by cash, check (with proper ID), Visa, MasterCard, Discover, American Express, PayPal (online orders), Student Financial Aid and Barnes & Noble Gift Card. 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.

**Information: 303.914.6232 or [sm259@bncollege.com](mailto:sm259@bncollege.com)**

**[rrcc.bncollege.com](http://rrcc.bncollege.com)**

**[www.facebook.com/redrocksbookstore](https://www.facebook.com/redrocksbookstore)**

### Cafeteria/Food Service

The RRCC Café on the Lakewood campus serves hot and cold food selections.

**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 crashes, 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.

**For emergencies, dial 911**

**Non-emergencies, call 303.914.6394**

### Career Services

**Career Services website: [www.rrcc.edu/careercenter](http://www.rrcc.edu/careercenter)**

Visit and explore the three paths: Career Exploration, Employment Resources, and Educational Planning. Career Exploration includes career assessments and exercises exploring values, strengths, skills, interests and personality. Also explore college majors, workshops and classes. Employment resources include labor market information, job search skills, internships and jobs for Red Rocks students. Educational Planning includes academic advising, advising orientations and resources for transferring to four-year colleges and universities.

To make an appointment for a one-on-one career advising session please call the Arvada campus at 303.914.6010 or the Lakewood campus at 303.914.6255.

### Career Assessments

Individual interpretive sessions for the Myers-Briggs Type Indicator, Strong Interest Inventory and StrengthsQuest are \$20 each for students and alumni or \$30 each for community members.

**Call or email for more information: 303.914.6016 or [dan.macy@rrcc.edu](mailto:dan.macy@rrcc.edu)**

### Career Assessment Workshops

The Myers-Briggs Type Indicator and Strong Interest Inventory can be interpreted in a small group setting, offered each fall and spring semester on a Saturday morning. \$30 for Red Rocks Student or \$50 for community members.

## Career Development Course

Career Development, PSY 110, is offered each fall, spring, and summer semester. PSY 110 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.

**Call or email for more information: 303.914.6016 or [dan.macy@rrcc.edu](mailto:dan.macy@rrcc.edu)**

## Child Care

Red Rocks Community College is home to Child Care Innovations, a Child Care Resource and Referral Agency. Parents looking for child care may visit room 2666 at the Lakewood campus or call 1.877.338.2273 for free referrals of licensed child care facilities, assistance in evaluating options and helpful consumer education information. To conduct a search online, visit [www.qualistar.org](http://www.qualistar.org).

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, offers brewed coffee, espresso drinks, smoothies, plus quick meals and snacks.

**Information: 303.914.6262**

## Employment and Internship Opportunities for Students

### Student Employment

#### Employment On Campus

On-campus, part-time employment is available to eligible students through Work Study and Student Hourly Programs. For more information, visit Human Resources in Room 1025 on the Lakewood campus.

**Information: 303.914.6299 or [www.rrcc.edu/careerconnect](http://www.rrcc.edu/careerconnect)**

#### 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: [www.rrcc.edu/careerconnect](http://www.rrcc.edu/careerconnect)**

## 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.
- Current RRCC students who find paid internships are not required to register for internship credit.
- Students who plan to do a paid, non-credit internship sign up with the internship office prior to beginning the internship. At the successful completion of the internship, they will receive a Certificate of Completion, verifying the professional nature of the internship.

### Qualifications

- All internships are reserved for currently enrolled Red Rocks Community College students. We also welcome interested RRCC alumni to apply for credit bearing internships.
- 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 2.0 is required.
- The student will provide a signed Instructor Recommendation form, verifying that the student has the professionalism to represent RRCC in the workplace, and the skills to do the job.
- An internship site is needed. Students who wish assistance in seeking an internship site are encouraged to contact the internship coordinator for an appointment.

**Information: 303.914.6361 or [www.rrcc.edu/internships](http://www.rrcc.edu/internships)**

## 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 service with academic instruction, focusing on critical, reflective thinking and personal and civic responsibility. With the support of faculty and fellow students, service learning can add a new dimension to classroom discussions. 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 non-designated SL classes can ask their instructors' permission to pursue individual service projects. Transcript designation is available to these students as well.

**Information: 303.914.6389**

## **Fitness Education Center**

The Fitness Education Center at Red Rocks offers students the opportunity to improve cardiovascular fitness, flexibility, muscle strength, and endurance. Equipment includes free weights, weight machines, computerized bicycles, treadmills, stepmills, a versa climber and a ricochet court. Use of the Center is free for students with a current semester ID. Students may enroll in PED 110-Fitness Center Activity for 1 credit.

**Information: 303.914.6375**

## **Learning Commons**

The Learning Commons houses a variety of learning support services, tutoring, library and Internet resources, and adaptations for students with disabilities. The Learning Commons is a welcoming place where you can study on your own or meet with a tutor, a study group, or an instructor. Centers are located at both the Lakewood and Arvada campuses.

**Information: 303.914.6705 or [www.rccc.edu/lc](http://www.rccc.edu/lc)**

## **Active Learning Skills**

Need to improve your Accuplacer scores? AAA 099 is a 1 credit hour, self-paced, open entry course that uses a diagnostic tool to determine your strengths and weaknesses in Sentence Skills, Reading, and/or Mathematics. From that, you will use a Web-based program and have access to tutoring in the College Prep Zone to build your skills in the specific area(s) identified by the diagnostic.

**Information: 303.914.6701**

## **Communication Lab**

Give your Best Presentation with help from the CommLab:

- Develop presentation outlines
- Enhance oral presentation skills
- Control speech anxiety
- Develop confidence in delivery
- Practice using visual aids
- Record your presentation
- Drop-in or sign-up times available

Visit the CommLab upstairs in the Learning Commons– Rm 2281. Free tutoring is available to ALL RRCC Students.

**Information: [marlene.adzema@rrcc.edu](mailto:marlene.adzema@rrcc.edu) 303.914.6239 or Dr. Sherry Messina Dewald at [sherry.dewald@rrcc.edu](mailto:sherry.dewald@rrcc.edu) 303.914.6429**

## **Connect to Success Services**

Connect to Success is a learning support service that assists students with reaching their academic, career and personal goals by providing support with study skills, success strategies, career development activities, recommendations for campus services, and information about community resources. Students can stop by the offices in the Learning Commons or visit the website for staff members' contact options.

**Information: [www.rccc.edu/success](http://www.rccc.edu/success)**

## **Disability Services**

### **Office of Disability Services**

The Office of Disability Services (ODS) coordinates services to provide equal access for individuals with documented disabilities to pursue their educational goals. The ODS staff makes determinations and provisions regarding access and reasonable accommodations and provides advocacy services for students and visitors with disabilities. The office is also a resource for college employees regarding disability issues. Services include sign language interpreters, books in alternate format, note takers, readers, test accommodations, and assistive technology.

Red Rocks Community College has an ADA Committee that focuses on ensuring the accessibility of the campus, programs and services. This committee is co-chaired by Dr. Lisa Fowler, Vice President of Student Success and Mr. Bill Dial, Director of Human Resources.

**Information: 303.914.6733 or [www.rccc.edu/disabilityservices](http://www.rccc.edu/disabilityservices)**

## **ESL/Foreign Language Lab**

The ESL/Foreign Language Lab offers tutoring in Spanish, French, German, and English as a Second Language (ESL). Computers bookmarked with useful language sites are also available.

**Information: 303.914.6701 (Foreign Language) 303.914.6416 (ESL)**

## GED Pre-test

A free practice test for the General Education Development (GED) is offered on a walk-in basis at the Arvada campus. The GED pre-test allows students to determine whether or not they are ready for the official GED.

**Information: 303.914.6030**

## International Student Services

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

**Information: 303.914.6416, 303.914.6536, 303.914.6538, or [www.rrcc.edu/international](http://www.rrcc.edu/international)**

## Tutoring

Tutoring is provided by professional and peer tutors. Walk-in tutoring for math, writing, the sciences, accounting, Microsoft applications, and other subjects is free to RRCC students in the Learning Commons.

One-to-one tutoring is available for vocational students with a C or below in their classes and for transfer majors whose grades fall below average in selected content areas.

**Information: 303.914.6701 or [www.rrcc.edu/lc/tutoring.htm](http://www.rrcc.edu/lc/tutoring.htm)**

## Writing Center and Online Writing Center

The mission of the Writing Center is to help students become better writers. Tutors are available to work individually with students in any subject area to improve their writing skills, offering them strategies and resources for succeeding in any kind of writing assignment, including essays, research papers, and essay exams. Tutors will help students generate ideas, organize and develop topics, revise and edit with confidence, and observe conventions of format and documentation.

**Information: 303.914.6321 or [www.rrcc.edu/writing](http://www.rrcc.edu/writing)**

## Library

The RRCC library is a buzzing hub of campus activity and learning throughout the semester. The library offers extensive print and electronic resources to support the RRCC curriculum, as well as programming and training to support student learning. Print and materials collections range from popular books, faculty-curated book selections, magazines, newspapers, educational films and popular movies on DVD. Online services include article databases, ebooks, multimedia assets and online tutorial libraries, all of which are accessible on and off campus. The library's collections and services are designed to support students transitioning from high school or the workplace into four-year colleges, via traditional learning methods and complimentary

learning styles. The goal of the library is to support a wide range of interests among students, faculty, and staff of the college.

**Information: 303.914.6740 or [www.rrcc.edu/library](http://www.rrcc.edu/library)**

## Red Rocks Student Government

### The Voice of the Students

Red Rocks 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**

## Student Center

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

- Campus events and entertainment
- Leadership opportunities
- Publications and bulletin boards
- Recreational sports
- 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 other RRCC locations are encouraged to visit the main 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, fitness center, coffee bar, The Den, the Student Life Desk, and the Student Project Center.

**Information: 303.914.6370**

## Student Health Clinic

### Services Provided Include:

- ONE annual physical, or ONE well woman exam per year per student
- Multiple sick visits or consultations for other illnesses
- Evaluation and Treatment of Common Illnesses:
  - Upper and Lower Respiratory Illnesses (Ex: cough, bronchitis, pneumonia)
  - Eye/Ear/Nose/Throat illnesses (Ex: sore throat, allergies, ear infections, eye infections, sinus complaints)
  - Gastrointestinal (Ex: stomach pain, vomiting, diarrhea)
  - Musculoskeletal (Ex: ankle sprains, strains)
  - Dermatologic (Ex: rashes, acne, minor wounds, burns)

- Genitourinary (Ex: STIs (sexually transmitted infections), urinary tract infections, other infections of the genitalia)
- Women’s Health (Ex: family planning and counseling, pregnancy testing, well-woman exam with pap-smear)
- Minor Procedures (Ex: laceration repair (stitches), toe nail removal, evaluation of abscesses, wart removal)
- Preventative Healthcare:
  - diet and exercise counseling
  - smoking/tobacco cessation
- Vaccinations and Seasonal Flu Shots

Prescriptions for non-controlled medicines to treat the stated conditions will be given if seen by a provider. Prescriptions must be filled at an outside pharmacy of your choice. NO prescriptions for the following medications will be provided under ANY circumstances: Narcotics, sleep aids, ADD/ADHD medicines, anti-anxiety or any mental health medicines

### **Payment for Procedures and Tests**

While the cost of the office visit is covered, you will be charged for certain in-office procedures, tests, medications, and vaccines in order to cover the cost of materials. All external laboratory tests (including those needed to make a diagnosis during annual and well woman exams) must be paid for by the patient. This clinic does not take insurance of any kind.

### **Scheduling**

To schedule an appointment, please call or visit the clinic and we are happy to assist you! Same-day scheduled walk-in appointments will be available. To cancel an appointment, please call 24 hours in advance to allow another patient to utilize your slot. Multiple cancellations and no-shows will be addressed on a one-on-one basis.

### **Urgent and Emergent Situations**

We will triage urgent patients within our scope of practice. Patients may be transferred to the nearest emergency department or urgent care as determined by the provider. If you are experiencing a life threatening situation or illness, please call 911.

### **Vaccines Offered**

Please Come to Clinic for verification of pricing.

- Flu shots
- TB testing
- Tetnus
- HEP B

**Hours of Operation are posted at the Clinic.**

**Phone: 303.914.6655 Fax: 303.914.6811**

**As an RRCC 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 Human Resources Director 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 the Title IX/EO Coordinator(s): Bill Dial, Director of Human Resources/Title IX Administrator, 13300 West Sixth Avenue, Lakewood, CO 80228. 303.914.6298. bill.dial@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 Personnel Office). The college has designated the Director of Personnel as its affirmative action officer.

#### **For information contact:**

Personnel Office  
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  
303.595.1549  
or  
Office for Civil Rights  
U.S. Department of Education  
Federal Building,  
1244 Speer Boulevard, Ste. 310  
Denver, CO 80204-3582  
303.894.7822

### **Drug and Alcohol Abuse Information**

#### **The Law**

Red Rocks is a state-system community college governed by the State Board for Community Colleges and Occupational Education. Board policy requires Red Rocks 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 Office of Student Life.

#### **Standard 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.

#### **Legal Sanctions**

There are legal sanctions for violations of the Standard 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 Standard of Conduct. Violators will be subject to disciplinary action under employee and student 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 listing of controlled substances is on file in the Office of the Vice President of Student Services.

#### **Community Resources**

A packet containing a list of community resources is available through the Connect to Success Office, room 1655, 303.914.6317. 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

## 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 with drug addictions. Personal relationships, family dynamics, and the ability to work and study are also at risk.

## Firearms

Firearms of any kind are prohibited on campus, with the exception of those carried by peace officers, guards while working, and with prior approval from the Chief of the Red Rocks Community College Police Department.

## Privacy Notification

The Colorado Community College System considers the following to be directory\* information:

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 activity or sport, height and weight.

\*Directory information is limited to the current academic year only. Red Rocks Community College staff may disclose this information, without prior consent, to anyone inquiring in person, by phone, or in writing.

Additionally, name, address, phone number, date and place of birth, level of education, most recently attended college, field of study, and degree(s) received of students may be released to military recruiters upon request in accordance with the Solomon Amendment. All other information contained in student records is considered private and not open to the public without the student's written consent. Students who do not want their directory/public information released to third parties or students who do not want to be listed in the College online e-Directory should complete a form to suppress directory information. Directory information restrictions will remain in effect until you cancel the restriction. A release form is available in Admissions or Student Records.

## Notification of Rights Under FERPA for Postsecondary Institutions

The Family Educational Rights and Privacy Act (FERPA) affords you certain rights with respect to your education records.

**Information: Student Records 303.914.6356**

### 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 or Coordinator of Student Records. The RRCC official 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 of the decision and advise you of the right to a hearing regarding the request for amendment. 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 Red Rocks Community College discloses personally identifiable information contained in your education records, except to the extent that FERPA authorizes disclosure without consent. One exception which permits disclosure without consent is disclosure to a school official with legitimate educational interests. A school 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, the National Student Clearinghouse; an individual serving on a college advisory committee; 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.
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 Contact: Family Policy Compliance Office, U.S. Department of Education, 600 Independence Avenue, SW, Washington, DC 20202-4605

*The college may share educational records with parents in the following circumstances: for a student who is dependent under I.R.S. tax code; a student under 21 years old who has violated a law or the schools rules or policies governing alcohol or substance abuse; and when the information is needed to protect the health or safety of the student or other individuals in an emergency.*

### **FERPA Annual Notice to Reflect Possible Federal and State Data Collection and Use**

As of January 3, 2012, the U.S. Department of Education's FERPA regulations expand the circumstances under which your education records and personally identifiable information (PII) contained in such records — including your Social Security Number, grades, or other private information — may be accessed without your consent. First, the U.S. Comptroller General, the U.S. Attorney General, the U.S. Secretary of Education, or state and local education authorities ("Federal and State Authorities") may allow access to your records and PII without your consent to any third party designated by a Federal or State Authority to evaluate a federal- or state-supported education program. The evaluation may relate to any program that is "principally engaged in the provision of education," such as early childhood education and job training, as well as any program that is administered by an education agency or institution. Second, Federal and State Authorities may allow access to your education records and PII without your consent to researchers performing certain types of studies, in certain cases even when we object to or do not request such research. Federal and State Authorities must obtain certain use-restriction and data security promises from the entities that they authorize to receive your PII, but the Authorities need not maintain direct control over such entities. In addition, in connection with Statewide Longitudinal Data Systems, State Authorities may collect, compile, permanently retain, and share without your consent PII from your education records, and they may track your participation in education and other programs by linking such PII to other personal information about you that they obtain from other Federal or State data sources, including workforce development, unemployment insurance, child welfare, juvenile justice, military service, and migrant student records systems.

**Information: Student Records, 303.914.6356**

## **Smoking**

Consistent with State of Colorado statute, smoking is not permitted in any Red Rocks building or facility. Signs designating certain outside areas as "smoke free" are posted and enforced accordingly.

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

Please help us protect people and the environment by following the above policies. For questions, please contact Peggy Morgan, VP Administration at [peggy.morgan@rcc.edu](mailto:peggy.morgan@rcc.edu) or 303.914.6337

## **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.

## **Students with Disabilities**

RRCC offers services and accommodations for students with disabilities. The college complies with and fully supports Section 504 of the Rehabilitation Act of 1973, with amendments of 1974, as well as the Americans with Disabilities Amendments Act (ADAAA) of 2008 regarding non-discrimination based on disability.

Reasonable accommodation is provided upon request for persons with disabilities. If you require an accommodation to access class, program, service, or other activity at RRCC, contact the Office of Disability Services (ODS).

Documentation of disability assists the ODS staff in collaborating with the student to determine reasonable accommodations and/or services, which are provided on a case-by-case basis. If the submitted documentation is incomplete or does not support the student's request for accommodations and/or services, the student may be asked to provide additional documentation.

**Information: 303.914.6733 or  
[www.rrcc.edu/disabilityservices](http://www.rrcc.edu/disabilityservices)**

**Students, be sure to pick up the current edition of the Student Handbook located throughout the campus.**

### 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 Probation

If you have completed 13 or more credits with a cumulative GPA of less than 2.0, you will be placed on academic probation. Meet with an advisor at this point. Continued GPA of less than 2.0 after being placed on probation may lead to suspension from enrollment at RRCC. For detailed information, see the current edition of the Student Handbook at

**[www.rrcc.edu/handbook/index.html](http://www.rrcc.edu/handbook/index.html)**

### Academic Renewal

All course work taken at RRCC is reflected on your permanent transcript; however, you can petition to remove up to 15 credit hours of substandard grades earned from your cumulative grade point average (GPA). Before submitting the required written request, you must have been out of school for two years after the substandard course work was completed and you must have completed a minimum of six credit hours of new course work at RRCC with a cumulative GPA of 2.0 or higher.

Only courses taken before you stopped attending are eligible for this process. 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 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.

### 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 need written permission from your advisor or the registrar to enroll for more than 18 credits during any semester.

### Grades

Final course grades are assigned at the end of each course. 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** Failure to achieve or master the learning objectives of the course. A grade of **F** does not apply toward certificates or degrees.
- 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.
- AW** Administrative Withdrawal. The grade of **AW** may be given at the discretion of the individual faculty member.
- W** Withdrawal. Through Admissions, you have officially withdrawn from the course or the college by the approved date and time listed in the current semester's schedule.
- 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 assign a grade of incomplete at his or her discretion. 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 sign an Incomplete Grade Contract. If you do not complete the course work by the agreed-upon deadline, the instructor will change the **I** to the letter grade stipulated in the contract. If no grade change is issued, the **I** will be changed to an **F** at the end of the next full semester, excluding summer.
- S** Satisfactory. Equivalent to a grade of **C** or higher and is available only for certain predesignated courses.
- U** Unsatisfactory. Equivalent to a grade of **D** or **F** and is available only for certain predesignated courses.
- S/A, S/B, S/C** These are satisfactory grades awarded only for developmental courses. The **A**, **B**, and **C** indicate the level of satisfactory performance. These grades are not included in the GPA calculation. The course will count for attempted and earned credits.
- U/D, U/F** These are unsatisfactory grades awarded only for developmental courses. The **D** and **F** indicate the level of unsatisfactory performance. These grades are not included in the GPA calculation. The course will count in attempted credits but will not carry earned credits.
- 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 semester, excluding summer.

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

## 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 (EHRs)

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

Prefix	Grade	AHRs	EHRs	QHRs	QPTS		
ART 131	<b>B</b>	3	3	3	3X3	=	9
BIO 227	<b>W</b>	3	0	0	0X0	=	0
MAT 201	<b>A</b>	5	5	5	4X5	=	20
PHI 111	<b>C</b>	3	3	3	2X3	=	6
PSY 116	<b>F</b>	1	0	1	0X1	=	0
<b>Totals</b>		15	11	12	35		

$$\text{GPA} = \frac{\text{Total QPTS} = 35}{\text{Total QHRs} = 12} = \mathbf{2.917}$$

## 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 also can 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 the college, including payment of tuition, fees, and library fines.

## Graduation Requirements

1. You must earn a 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 100 will not count toward any degree or certificate.
5. You must submit an Application for Graduation during the term in which you intend to graduate according to the deadline published in the class schedule for that semester.

## Petitioning for Waivers/Program Substitutions

If you wish to petition for a waiver and/or substitution of program requirements, you must complete a Waiver/Program Substitution Request form. The form is available in the Student Records office or from a faculty advisor. Complete the request, have it approved by your faculty advisor and 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, which encourage scholarship, service, and leadership. To be eligible for membership, you must be enrolled in college-level classes, have completed at least 12 credits of study (100 level or above) 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 List

The Honors List recognizes those who have achieved an outstanding level of academic success at RRCC. The Honors List designation is recorded on your official academic transcript, and you receive recognition during the college's annual graduation ceremony. The Commencement Program Honors List designation is based on the cumulative GPA for your graduating semester (summer/fall) and at the close of the preceding semester for spring graduates. The diploma and transcript Honors List designation is based on the cumulative GPA achieved after successful completion of all degree/certificate requirements.

To receive this academic honor, you:

- Must be graduating in the current spring semester or have graduated the previous summer or fall semester.
- Must have earned for all credits, a cumulative grade point average (GPA) of 3.85 "or higher" by the graduating term to be recognized during the graduation ceremony.
- Must have earned an overall cumulative GPA of 3.85 for all courses taken at RRCC for designation on the transcript and diploma.
- Must have taken at least 15 credits of course work through RRCC.
- 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.

## Repeating Courses

You may retake any course taken at RRCC. 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. Removed courses 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. There is no limitation on the course grades that are eligible to be repeated. 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 have ramifications that affect Satisfactory Academic Progress, but also can affect students' disbursement amounts. Please contact the Financial Aid office for more information.

**Information: 303.914.6352**

## **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 for one academic term. 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.

**Information:** [www.va.gov](http://www.va.gov)

### Associate of Arts (AA)

#### AA Degrees with Designation

Anthropology  
Business  
Criminal Justice  
Economics  
French  
History  
Political Science  
Psychology  
Sociology  
Spanish

The above degrees have state wide articulation agreements with all public four-year colleges and universities in the state. Students 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 gtPathways curriculum.
- The same graduation requirements as students who begin and complete this degree program at the receiving institution.

The state transfer agreements for the above degrees can be found at the Colorado Department of Higher Education website.

#### AA Degree

The Associate of Arts degree (60 credits) is for the student who intends to transfer to a four-year college or university and wants 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:

Art  
Communication Disorders  
Communication Studies  
Dance  
Early Childhood Education  
English and Literature  
Foreign Languages  
Philosophy

Teacher Education:

Elementary Education  
Secondary Education

Theatre Arts

Victim Assistance

### Associate of Science (AS)

#### AS Degrees with Designation

Mathematics  
Psychology

The above degrees have state wide articulation agreements with all public four-year colleges and universities in the state. Students 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 gtPathways curriculum.
- The same graduation requirements as students 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.

The state transfer agreements for the above degrees can be found at the Colorado Department of Higher Education website.

#### AS Degree

The Associate of Science degree (60 credits) is for the student who intends to transfer to a four-year college or university and wants 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.

#### Areas of Study:

Biology  
Chemistry  
Computer Science  
Pre-Engineering  
Geology  
Physics

## **Associate of General Studies (AGS) – Specialist**

### **Articulated Transfer**

The Associate of General Studies– Specialist degree (60 to 68 credits) is for the student who wants to complete a pre-professional transfer degree in one of the fields specified below. Agreements exist between RRCC and certain four-year colleges for the following career areas:

Graphic Design/Print Production  
Video Production

## **Associate of General Studies (AGS) – Generalist**

### **Career-Oriented**

The Associate of General Studies– Generalist degree (60 credits) is for the student who wants 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.

## **Associate of Applied Science (AAS)**

### **Career-Oriented**

The Associate of Applied Science degree (60-75 credits) is for the student who is 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.

## Associate of Applied Science (AAS) Degrees

### Degree Emphases are available in the following career areas:

The college reserves the right to substitute or delete courses in a degree or certificate program.

#### Accounting:

- Accounting Paraprofessional
- Accounting Technician

#### Air Conditioning, Heating and Refrigeration:

- Air Conditioning, Heating and Refrigeration
- Air Conditioning
- Refrigeration
- Heating
- Hydronic Heating

#### Applied Technology

##### Auto Collision Repair:

- (In cooperation with and taught at WarrenTech)
- Auto Collision Technology

##### Automotive Customization

- (In cooperation with and taught at WarrenTech)

##### Automotive Service Technology

- (In cooperation with and taught at WarrenTech)
- Automotive Service Technology
- Automotive Parts Management

#### Business:

- Interdisciplinary
- Management and Supervision
- Real Estate

#### Computer Information Systems:

- Computer Support Technician
- Cyber Security Specialist
- Game Development
- Microsoft Certified Technology Specialist (MCTS)
- Network Specialist
- PC Applications Specialist
- Programming Specialist
- Web Development

#### Cosmetology

#### Culinary Arts

- (In cooperation with the Rocky Mountain Chefs of Colorado and taught at WarrenTech)

#### Early Childhood Education

#### Electricity Commercial/Industrial/Residential:

- Construction Electrician
- Maintenance Electrician
- Fire Protection Technology
- Construction Electrician/IBEW/NECA
- Power Technology
- Industrial Control & Instrumentation Technology

#### Emergency Management and Planning

#### Emergency Medical Services:

- Paramedicine

#### Engineering Graphics Technology:

- Architectural
- Mechanical
- Civil

#### Environmental Technology (Pending Approval)

#### Fine Woodworking

#### Fire Science Technology:

- Fire Science Technology
- Fire Service Management
- Fire and Emergency Services

#### Holistic Health

#### Law Enforcement

#### Mechanical Trades

#### Medical Office Technology:

- Medical Assisting
- Medical Office

#### Multimedia Graphic Design:

- Graphic Design and Print Production
- Video Production
- Web Design and Development
- Professional Photography: Digital Photography
- Digital Media Journalism

#### Power Equipment and Sports Vehicle Technology

- (In cooperation with and taught at WarrenTech)

#### Precision Machining Technology

- (In cooperation with and taught at WarrenTech)

#### Process Technology (currently suspended)

#### Radiologic Technology

#### Renewable Energy Technology:

- Solar Thermal Specialty
- Solar Photovoltaic Specialty
- Solar Photovoltaic Business Owner Specialty
- Solar Thermal Business Owner Specialty

#### Sonography:

- Diagnostic Medical Sonography
- Vascular Technology
- Diagnostic Cardiac Sonography

#### Theatre Arts:

- Theatre Technology

#### Water Quality Management

#### Welding

- (In cooperation with and taught at WarrenTech)

#### Wind Energy Technology (currently suspended)

## AA Degree Requirements

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

### Communication - 3 courses (9 credits)

ENG 121 English Composition I (3)  
ENG 122 English Composition II (3)  
COM 115 Public Speaking (3)

or

COM 125 Interpersonal Communication (3)

or

COM 220 Intercultural Communication (3)

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

### Mathematics - 1 course (3-5 credits)

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

### Arts and Humanities - 2 courses (6 credits)

Select 2 courses from 2 different categories.

#### • Arts and Expression

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

#### • Literatures and Humanities

HUM 115 World Mythology (3)  
HUM 121 Humanities: Early Civilization (3)  
HUM 122 Humanities: Medieval to Modern (3)  
HUM 123 Humanities: The Modern World (3)  
LIT 115 Introduction to Literature (3)  
LIT 201 World Literature to 1600 (3)  
LIT 202 World Literature after 1600 (3)  
LIT 205 Ethnic Literature (3)  
LIT 211 American Literature to Civil War (3)  
LIT 212 American Literature after Civil War (3)  
LIT 221 British Literature to 1770 (3)  
LIT 222 British Literature since 1770 (3)  
LIT 225 Introduction to Shakespeare (3)  
LIT 268 Celtic Literature (3)

#### • Ways of Thinking

PHI 111 Introduction to Philosophy (3)  
PHI 112 Ethics (3)  
PHI 113 Logic (3)  
PHI 114 Comparative Religion (3)  
PHI 214 Philosophy of Religion (3)  
PHI 218 Philosophy of the Environment (3)

#### • Foreign Languages

(Must be intermediate/200-level)

FL 211 Second Year Foreign Language (3) FRE, GER, ITA, JPN, RUS, SPA  
FL 212 Second Year Foreign Language (3) FRE, GER, ITA, JPN, RUS, SPA

#### Social and Behavioral Science - 2 courses (6 credits)

Select 2 courses from 2 different categories.

#### • Economic & Political Systems

ECO 101 Economics of Social Issues (3)  
ECO 201 Macro Economics (3)  
ECO 202 Micro Economics (3)  
ECO 245 Environmental Economics (3)  
POS 105 Introduction to Political Science (3)  
POS 111 American Government (3)  
POS 125 American State and Local Gov. (3)  
POS 205 International Relations (3)  
POS 215 Current Political Issues (3)  
POS 225 Comparative Government (3)

#### • Geography

GEO 105 World Regional Geography (3)  
GEO 106 Human Geography (3)

#### • Human Behavior, Cultural & Social Frameworks

AGR 260 World Interdependence-Population and Food (3)  
ANT 101 Cultural Anthropology (3)  
ANT 107 Introduction to Archaeology (3)  
ANT 108 Archaeology of World Rock Art (3)  
ANT 111 Physical Anthropology (3)  
ANT 201 Introduction to Forensic Anthropology (3)  
ANT 215 Indians of North America (3)  
ANT 250 Medical Anthropology (3)  
COM 220 Intercultural Communication (3)  
JOU 105 Introduction to Mass Media (3)  
PSY 101 General Psychology I (3)  
PSY 102 General Psychology II (3)  
PSY 205 Psychology of Gender (3)  
PSY 217 Human Sexuality (3)  
PSY 226 Social Psychology (3)  
PSY 227 Psychology of Death and Dying (3)  
PSY 235 Human Growth & Development (3)  
PSY 238 Child Development (3)  
PSY 240 Health Psychology (3)  
PSY 249 Abnormal Psychology (3)  
SOC 101 Introduction to Sociology I (3)  
SOC 102 Introduction to Sociology II (3)  
SOC 205 Sociology of Family Dynamics (3)  
SOC 207 Environmental Sociology (3)  
SOC 215 Contemporary Social Problems (3)  
SOC 216 Sociology of Gender (3)  
SOC 218 Sociology of Diversity (3)  
SOC 220 Sociology of Religion (3)  
SOC 231 Sociology of Deviant Behavior (3)  
SOC 237 Sociology of Death & Dying (3)

### History - 1 course (3 credits)

HIS 101 History of Western Civilization I (3)  
HIS 102 History of Western Civilization II (3)  
HIS 111 World Civilization I (3)  
HIS 112 World Civilization II (3)  
HIS 201 U.S. History I (3)  
HIS 202 U.S. History II (3)  
HIS 207 American Environmental History (3)  
HIS 208 American Indian History (3)  
HIS 215 Women in U.S. History (3)  
HIS 225 Colorado History (3)  
HIS 236 U.S. History Since 1945 (3)  
HIS 244 History of Latin America (3)  
HIS 247 Contemporary World History (3)

### Student Choice - 1 course (3 credits)

Select any guaranteed transfer course (listed above) from the Arts and Humanities, Social and Behavioral Science, or History categories.

### Natural & Physical Sciences - 2 courses (7-10 credits)

Select two courses listed below - including at least one lab course.

AST 101 Astronomy I (4)  
AST 102 Astronomy II (4)  
BIO 105 Science of Biology (4)  
BIO 111 General College Biology I w/Lab (5)  
BIO 112 General College Biology II w/Lab (5)  
BIO 116 Introduction to Human Disease (3)  
BIO 201 Anatomy & Physiology I (4)  
BIO 202 Anatomy & Physiology II (4)  
BIO 204 Microbiology (4)  
BIO 208 General College Microbiology (5)  
BIO 220 General Zoology (5)  
BIO 221 Botany (5)  
CHE 101 Introduction to Chemistry I (5)  
CHE 111 General College Chemistry I (5)  
CHE 112 General College Chemistry II (5)  
ENV 101 Environmental Science (4)  
GEO 111 Physical Geography: Land (4)  
GEO 112 Physical Geography: Weather and Climate (4)  
GEY 111 Physical Geology (4)  
GEY 112 Historical Geology (4)  
GEY 135 Environmental Geology (4)  
MET 150 General Meteorology (4)  
NRE 251 General Oceanography (4)  
PHY 105 Conceptual Physics (4)  
PHY 107 Energy Science and Technology (4)  
PHY 111 Physics: Algebra-Based I w/Lab (5)  
PHY 112 Physics: Algebra-Based II w/ Lab (5)  
PHY 211 Physics: Calculus-Based I w/Lab (5)  
PHY 212 Physics: Calculus-Based II w/Lab (5)  
SCI 105 Science in Society (3)  
SCI 155/156 Integrated Science I/II (4/4) (Both must be taken to satisfy science credit. Recommended for Teacher Education only.)

### Additional AA Catalog 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 the student 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 general education coursework. "D" grades for elective courses will count for degree completion, but will not transfer. In addition, a minimum 2.0 grade point average is required for degree completion. This is an open-ended degree plan, allowing students to tailor their 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.

### Approved AA Electives

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 121 and 122
Anthropology	ANT-All courses
Art	ART-All courses
Astronomy	AST-All courses
Biology	BIO-All courses
Business	BUS 115, 216, 217 and 226
Chemistry	CHE-All courses
Communication Disorders	CMD-All courses
Communication	COM-All courses
Computer Information Systems	CIS 118, 240, 243, 268
Computer Science	CSC 119, 160, 161, 165, 225, 236, 237 and 240
Criminal Justice	CRJ-All courses above 109
Dance	DAN-All courses
<i>(Some Dance courses may transfer as physical education courses.)</i>	
Early Childhood Education	ECE 101, 205, 238, 241 and 260
Economics	ECO-All courses
Education	EDU-All courses above 200
English	ENG-All courses above 122
Environmental Science	ENV 101
Foreign Language	All courses except 101 and 102
Geography	GEO-All courses
Geology	GEY-All courses
Health and Wellness	HWE 100
History	HIS-All courses
Humanities	HUM-All courses

Journalism	JOU 105
Literature	LIT-All courses
Management	MAN 226
Marketing	MAR 216
Mathematics	MAT-All courses 120 and above
Meteorology	MET 150
Music	MUS-All courses
Natural Resources	NRE 251
Philosophy	PHI-All courses
Physical Education	PED-All courses
<i>(Maximum 3 credits from PED apply toward degree)</i>	
Physical Ed. and Recreation	
Physics	PHY-All courses
Political Science	POS-All courses
Psychology	PSY 101, 102, 110, 205, 215, 217, 226, 227, 235, 238, 240, 245, 249, and 265
Science	SCI 105, 155, 156
Sociology	SOC-All courses
Theatre	THE-All courses

- With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.

Many four-year college transfer guides are available via the CDHE website at:

<http://higherred.colorado.gov/Academics/Transfers/Guides/default.html>

### **Other AA Degree Requirements**

- 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 115, 125, or 220 (3 credits), and 18-23 credits in the areas specified above in approved electives.
- You must complete 18-23 semester elective credits. These must be college-level transfer courses and may include no more than 3 credits in physical education (PED) – see approved electives above. Please see an advisor in your area of emphasis for specific course suggestions.
- 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 file an Application for Graduation during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term (file in Admissions). You must apply to graduate within one year of completing degree requirements.
- 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 Red Rocks 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.

# AS Degree Requirements

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

### Communication - 3 courses - (9 credits)

ENG 121 English Composition I (3)  
ENG 122 English Composition II (3)  
and either

COM 115 Public Speaking (3)  
or

COM 125 Interpersonal Communication (3)  
or

COM 220 Intercultural Communication (3)

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

### Mathematics - 1 course - (3-5 credits)

MAT 121 College Algebra (4)  
MAT 122 College Trigonometry (3)  
MAT 166 Pre-Calculus (5)  
MAT 201 Calculus I (5)  
MAT 202 Calculus II (5)  
MAT 204 Calculus III with Engineering Applications (5)  
MAT 261 Differential Equations with Engineering Applications (4)

### Arts and Humanities - 2 courses - (6 credits)

Select 2 courses from 2 different categories.

#### • Arts and Expression

ART 110 Art Appreciation (3)  
ART 111 Art History Ancient to Medieval (3)  
ART 112 Art History Renaissance to Modern (3)  
ART 207 Art History 1900 – Present (3)  
DAN 125 History of Dance I (3)  
MUS 120 Music Appreciation (3)  
MUS 121 Music History Medieval thru Classical (3)  
MUS 122 Music History Romantic to Present (3)  
MUS 123 Survey of World Music (3)  
MUS 125 History of Jazz (3)  
THE 105 Theatre Appreciation (3)  
THE 211 Development of Theatre I (3)  
THE 212 Development of Theatre II (3)

#### • Literature & Humanities

HUM 115 World Mythology (3)  
HUM 121 Humanities: Early Civilization (3)  
HUM 122 Humanities: Medieval to Modern (3)  
HUM 123 Humanities: The Modern World (3)  
LIT 115 Introduction to Literature (3)  
LIT 201 World Literature to 1600 (3)  
LIT 202 World Literature after 1600 (3)  
LIT 205 Ethnic Literature (3)  
LIT 211 American Literature to Civil War (3)  
LIT 212 American Literature after Civil War (3)  
LIT 221 British Literature to 1770 (3)  
LIT 222 British Literature since 1770 (3)  
LIT 225 Introduction to Shakespeare (3)  
LIT 268 Celtic Literature (3)

#### • Ways of Thinking

PHI 111 Introduction to Philosophy (3)  
PHI 112 Ethics (3)  
PHI 113 Logic (3)  
PHI 114 Comparative Religions (3)  
PHI 214 Philosophy of Religion (3)  
PHI 218 Philosophy of the Environment (3)

#### • Foreign Languages

(Must be intermediate/200-level)  
FL 211 Second Year Foreign Language (3)  
FRE, GER, ITA, JPN, RUS, SPA  
FL 212 Second Year Foreign Language (3)  
FRE, GER, ITA, JPN, RUS, SPA

#### History - 1 course - (3 credits)

HIS 101 History of Western Civilization I (3)  
HIS 102 History of Western Civilization II (3)  
HIS 111 World Civilization I (3)  
HIS 112 World Civilization II (3)  
HIS 201 U.S. History I (3)  
HIS 202 U.S. History II (3)  
HIS 207 American Environmental History (3)  
HIS 208 American Indian History (3)  
HIS 215 Women In History (3)  
HIS 225 Colorado History (3)  
HIS 236 U.S. History Since 1945 (3)  
HIS 244 History of Latin America (3)  
HIS 247 Contemporary World History (3)

#### Social and Behavioral Science - 2 courses - (6 credits)

Must cover two different categories

#### • Economic & Political Systems

ECO 101 Economics of Social Issues (3)  
ECO 201 Macro Economics (3)  
ECO 202 Micro Economics (3)  
ECO 245 Environmental Economics (3)  
POS 105 Introduction to Political Science (3)  
POS 111 American Government (3)  
POS 125 American State and Local Government (3)  
POS 205 International Relations (3)  
POS 225 Comparative Government (3)

#### • Geography

GEO 105 World Regional Geography (3)  
GEO 106 Human Geography (3)

#### • Human Behavior, Cultural & Social Frameworks

AGR 260 World Interdependence-Population and Food (3)  
ANT 101 Cultural Anthropology (3)  
ANT 107 Introduction to Archaeology (3)  
ANT 108 Archaeology of World Rock Art (3)  
ANT 111 Physical Anthropology (3)  
ANT 201 Introduction to Forensic Anthropology (3)  
ANT 215 Indians of North America (3)  
ANT 250 Medical Anthropology (3)  
COM 220 Intercultural Communication (3)  
JOU 105 Introduction to Mass Media (3)  
PSY 101 General Psychology I (3)  
PSY 102 General Psychology II (3)  
PSY 205 Psychology of Gender (3)  
PSY 217 Human Sexuality (3)  
PSY 226 Social Psychology (3)  
PSY 227 Psychology of Death and Dying (3)  
PSY 235 Human Growth & Development (3)  
PSY 238 Child Development (3)  
PSY 240 Health Psychology (3)  
PSY 249 Abnormal Psychology (3)  
SOC 101 Introduction to Sociology I (3)  
SOC 102 Introduction to Sociology II (3)  
SOC 207 Environmental Sociology (3)  
SOC 205 Sociology of Family Dynamics (3)  
SOC 215 Contemporary Problems (3)  
SOC 216 Sociology of Gender (3)  
SOC 218 Sociology of Diversity (3)  
SOC 220 Sociology of Religion (3)  
SOC 231 Sociology of Deviant Behavior (3)  
SOC 237 Sociology of Death & Dying (3)

### Natural & Physical Sciences - 3 courses - (12-15 credits)

Must take 2 lab courses in sequence and an additional lab science course.

AST 101 Astronomy I (4)  
AST 102 Astronomy II (4)  
BIO 111 General College Biology I (5)  
BIO 112 General College Biology II (5)  
BIO 201 Anatomy & Physiology I (4)  
BIO 202 Anatomy & Physiology II (4)  
BIO 204 Microbiology (4)  
BIO 208 General College Microbiology (5)  
BIO 220 General Zoology (5)  
BIO 221 Botany (5)  
CHE 111 General College Chemistry I (5)  
CHE 112 General College Chemistry II (5)  
ENV 101 Environmental Science (4)  
GEY 111 Physical Geology (4)  
GEY 112 Historical Geology (4)  
GEY 135 Environmental Geology (4)  
MET 150 General Meteorology (4)  
NRE 251 General Oceanography (4)  
PHY 111 Physics: Algebra Based I (5)  
PHY 112 Physics: Algebra Based II (5)  
PHY 211 Physics: Calculus Based I (5)  
PHY 212 Physics: Calculus Based II (5)

### 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 the student 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 general education coursework. "D" grades for elective courses will count for degree completion but will not transfer. In addition, a minimum 2.0 grade point average is required for degree completion. This is an open-ended degree plan, allowing students to tailor their 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.

### Approved AS Electives

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, student 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 above. These include AST, BIO, CHE, CSC, ENV, GEO 111 & 112, GEY, MET, NRE, PHY and MAT.**

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.

Anthropology	ANT-All courses
Astronomy	AST-All courses
Biology	BIO-All courses except 105, 106 and 116
Chemistry	CHE-All courses
Computer Information Systems	CIS 118, 240, 243, 268
Communication	COM-All courses
Communication Disorders	CMD-All courses
Computer Science	CSC 119, 160, 161, 165, 225, 236, 237 and 240
Economics	ECO-All courses
English	ENG-All courses above ENG 122
Environmental Science	ENV 101
Foreign Language	All courses except 101 and 102
Geography	GEO-All courses
Geology	GEY-All courses
Health and Wellness	HWE 100
Mathematics	MAT-All courses above 121 Except 123, 125, 135, 155, and 156
Meteorology	MET 150
Natural Resources	NRE 251
Physics	PHY-All courses except 105 and 107
Psychology	PSY 235

Many four-year college transfer guides are available via the CCHE website at:

<http://highered.colorado.gov/Academics/Transfers/Guides/default.html>

## **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 115, 125, or 220 (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.
4. You must file an Application for Graduation during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term (file in Admissions). You must apply to graduate within one year of completing degree requirements.
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 Red Rocks 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.
8. With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.

## **AGS – Specialist Degree Requirements**

Completion of the degree with a "C" or higher in every course, guarantees that the student can transfer, upon admission, to the specific Colorado four-year college or university with the appropriate 60 transferable credits. Grades "C" or higher are required for all general education coursework. "D" grades for elective courses will count for degree completion, but will not transfer. In addition, a minimum 2.0 grade point average is required for degree completion.

Meet with a faculty advisor from your area of study to review a degree worksheet. This degree is a pre-professional degree intended to transfer to specific four-year colleges or universities in Colorado with whom RRCC has signed an articulation agreement. Each individual course may be considered for transfer to other colleges and universities.

General education and program specific requirements depend on the transfer agreement in place of the specific degree. You must complete the degree requirements as listed for the specific AGS you are earning. Consult a faculty advisor for course information.

1. A minimum of 60 credits is required for the Associate of General Studies Specialist Degree.
2. You must complete a minimum of 15 credits through Red Rocks Community College.
3. You must file an Application for Graduation during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term. You must apply to graduate within one year of completing degree requirements.
4. No more than 6 credits of independent study course work may be applied toward this degree.
5. 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.
6. The college reserves the right to substitute or delete courses.
7. To earn multiple Red Rocks 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.
8. With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.

### **AGS – Specialist Programs**

**The following programs have a transfer agreement with Metropolitan State University of Denver:**

Graphic Design/Print Production  
Video Production

### **Other AGS – Specialist degree requirements**

1. A minimum of 60 credits is required for the Associate of General Studies degree. Meet with a faculty advisor.
2. You must earn a cumulative grade point average of 2.0 (C average) in order to graduate. The grade in all transfer courses must be a C or higher.
3. You must complete a minimum of 15 credits in your program area at RRCC.
4. You must file an application for graduation during the term in which you intend to graduate according to the deadline published in the class schedule for that semester. You must apply to graduate within one year of completing requirements.
5. No more than six credits of independent study course work may be applied toward an associate degree program.
6. There is no limit on special-topics courses allowed to count toward a degree. In individual cases, the limit will be determined by the program area. If you are taking special-topics courses, consult with your advisor regarding how these credits will apply toward a degree.
7. The college reserves the right to substitute or delete courses.
8. If you are applying for an additional degree at RRCC, you must complete an additional 15 credits at RRCC and the requirements for the degree.
9. With the approval of a faculty advisor, up to three credits of internship may count toward a degree.

# AGS – Generalist Degree Requirements

**General Education Requirements (16 credits). College level electives (14 credits). Select any generally transferable academic courses from the list on the next page. General electives (30 credits). Select any courses numbered 100 or above. 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 121 English Composition I (3)  
ENG 122 English Composition II (3)  
COM 115 Public Speaking (3)  
COM 125 Interpersonal Communication (3)  
COM 220 Intercultural Communication (3)

## Mathematics (3 credits minimum)

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

## Arts and Humanities (3 credits)

ART 110 Art Appreciation (3)  
ART 111 Art History Ancient to Medieval (3)  
ART 112 Art History Renaissance to Modern (3)  
ART 207 Art History 1900 – Present (3)  
DAN 125 History of Dance I (3)  
FL 211 Second Year Foreign Language (3)  
FRE, GER, ITA, JPN, RUS, SPA  
FL 212 Second Year Foreign Language (3)  
FRE, GER, ITA, JPN, RUS, SPA  
HUM 115 World Mythology (3)  
HUM 121 Humanities: Early Civilization (3)  
HUM 122 Humanities: Medieval to Modern (3)  
HUM 123 Humanities: The Modern World (3)  
LIT 115 Introduction to Literature (3)  
LIT 201 World Literature to 1600 (3)  
LIT 202 World Literature after 1600 (3)  
LIT 205 Ethnic Literature (3)  
LIT 211 American Literature to Civil War (3)  
LIT 212 American Literature after Civil War (3)  
LIT 221 British Literature to 1770 (3)  
LIT 222 British Literature since 1770 (3)  
LIT 225 Introduction to Shakespeare (3)  
LIT 268 Celtic Literature (3)  
MUS 120 Music Appreciation (3)  
MUS 121 Music History Medieval thru Classical (3)  
MUS 122 Music History Romantic to Present (3)  
MUS 123 Survey of World Music (3)  
MUS 125 History of Jazz (3)

PHI 111 Introduction to Philosophy (3)  
PHI 112 Ethics (3)  
PHI 113 Logic (3)  
PHI 114 Comparative Religions (3)  
PHI 214 Philosophy of Religion (3)  
PHI 218 Philosophy of the Environment (3)  
THE 105 Theatre Appreciation (3)  
THE 211 Development of Theatre I (3)  
THE 212 Development of Theatre II (3)

## Social and Behavioral Science (3 credits)

AGR 260 World Interdependence-Population and Food (3)  
ANT 101 Cultural Anthropology (3)  
ANT 107 Introduction to Archaeology (3)  
ANT 108 Archaeology of World Rock Art (3)  
ANT 111 Physical Anthropology (3)  
ANT 201 Introduction to Forensic Anthropology (3)  
ANT 215 Indians of North America (3)  
ANT 250 Medical Anthropology (3)  
COM 220 Intercultural Communication (3)  
ECO 101 Economics of Social Issues (3)  
ECO 201 Macro Economics (3)  
ECO 202 Micro Economics (3)  
ECO 245 Environmental Economics (3)  
GEO 105 World Regional Geography (3)  
GEO 106 Human Geography (3)  
HIS 101 History of Western Civilization I (3)  
HIS 102 History of Western Civilization II (3)  
HIS 111 World Civilization I (3)  
HIS 112 World Civilization II (3)  
HIS 201 U.S. History I (3)  
HIS 202 U.S. History II (3)  
HIS 207 American Environmental History (3)  
HIS 208 American Indian History (3)  
HIS 215 Women In History (3)  
HIS 225 Colorado History (3)  
HIS 236 U.S. History Since 1945 (3)  
HIS 244 History of Latin America (3)  
HIS 247 Contemporary World History (3)  
JOU 105 Introduction to Mass Media (3)  
POS 105 Introduction to Political Science (3)  
POS 111 American Government (3)  
POS 125 American State and Local Government (3)  
POS 205 International Relations (3)  
POS 225 Comparative Government (3)  
PSY 101 General Psychology I (3)  
PSY 102 General Psychology II (3)  
PSY 205 Psychology of Gender (3)  
PSY 217 Human Sexuality (3)  
PSY 226 Social Psychology (3)  
PSY 227 Psychology of Death and Dying (3)  
PSY 235 Human Growth & Development (3)  
PSY 238 Child Development (3)  
PSY 249 Abnormal Psychology (3)  
SOC 101 Introduction to Sociology I (3)  
SOC 102 Introduction to Sociology II (3)  
SOC 205 Sociology of Family Dynamics (3)  
SOC 215 Contemporary Problems (3)  
SOC 216 Sociology of Gender (3)  
SOC 220 Sociology of Religion (3)  
SOC 231 Sociology of Deviant Behavior (3)

## Natural & Physical Sciences (4 credits minimum)

AST 101 Astronomy I (4)  
AST 102 Astronomy II (4)  
BIO 105 Science of Biology (4)  
BIO 111 General College Biology I (5)  
BIO 112 General College Biology II (5)  
BIO 201 Anatomy & Physiology I (4)  
BIO 202 Anatomy & Physiology II (4)  
BIO 204 Microbiology (4)

BIO 208 General College Microbiology (5)  
 BIO 220 General Zoology with Lab (5)  
 CHE 101 Introduction to Chemistry I (5)  
 CHE 111 General College Chemistry I (5)  
 CHE 112 General College Chemistry II (5)  
 ENV 101 Environmental Science (4)  
 GEO 111 Physical Geography (4)  
 GEO 112 Physical Geography - Weather and Climate (4)  
 GEY 111 Physical Geology (4)  
 GEY 112 Historical Geology (4)  
 GEY 135 Environmental Geology (4)  
 MET 150 General Meteorology (4)  
 NRE 251 General Oceanography (4)  
 PHY 105 Conceptual Physics (4)  
 PHY 107 Energy Science and Technology (4)  
 PHY 111 Physics: Algebra Based I (5)  
 PHY 112 Physics: Algebra Based II (5)  
 PHY 211 Physics: Calculus Based I (5)  
 PHY 212 Physics: Calculus Based II (5)  
 SCI 155 Integrated Science I (4)  
 SCI 156 Integrated Science II (4)

### Additional AGS – Generalist Catalog Requirements

The State-Guaranteed Colorado Community College General Education requirements and the Approved Elective Transferable courses have been incorporated into this AGS degree.

Completion of the degree with a "C" or higher in every course, guarantees that the student 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 general education coursework. "D" grades for elective courses will count for degree completion, but will not transfer. 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.

### 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 100 will not apply to any degree.*

Accounting	ACC 121 and 122
Anthropology	ANT-All courses
Art	ART-All courses
American Sign Language	ASL 121, 122
Astronomy	AST-All courses
Biology	BIO-All courses
Business	BUS 115, 216, 217 and 226
Chemistry	CHE-All courses
Communication Disorders	CMD-All courses
Communication	COM-All courses
Computer Info. Systems	CIS 118, 240, 243, 268
Computer Science	CSC 119, 160, 161, 165, 225, 236, 237 and 240
Criminal Justice	CRJ-All courses above 109
Dance	DAN-All courses
<i>(Some Dance courses may transfer as Physical Education courses)</i>	
Early Childhood Education	ECE 101, 205, 238, 241 and 260
Economics	ECO-All courses
Education	EDU-All courses above 200
English	ENG-All courses above 122
Environmental Science	ENV 101
Foreign Language	All courses except 101, 102
Geography	GEO-All courses
Geology	GEY-All courses
Health and Wellness	HWE 100
History	HIS-All courses
Humanities	HUM-All courses
Journalism	JOU 105
Literature	LIT-All courses
Management	MAN 226
Marketing	MAR 216
Mathematics	MAT-All courses 120 and above
Meteorology	MET 150
Music	MUS-All courses
Philosophy	PHI-All courses
Physical Education	PED-All courses
<i>(Maximum 3 credits from PED apply toward degree)</i>	
Recreation	REC 100, REC 200, and REC 211
Physics	PHY-All courses
Political Science	POS-All courses
Psychology	PSY 101, 102, 110, 205, 215, 217, 226, 227, 235, 238, 240, 245, 249, and 265
Science	SCI 155, 156
Sociology	SOC-All courses
Theatre	THE-All courses

Many four-year college transfer guides are available via the CCHE website at:

<http://higherred.colorado.gov/Academics/Transfers/Guides/default.html>

## **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 16 semester elective credits. These must be college-level transfer courses and may include no more than 3 credits in physical education (PED) – see approved electives above. 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 during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term. You must apply to graduate within one year of completing degree requirements.
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 Red Rocks 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.
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

## General education courses (15 credits). Total credits (45-60 required).

The Associate of Applied Science degree is for the student who is preparing for entry-level employment in a career-oriented program of study or who is 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.**

*Note: Courses numbered below 100 will not apply to any degree.*

### Communication (3 Credits)

ENG or COM

### Mathematics (3 credits)

MAT 107 and above

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

#### Arts and Humanities (3 credits)

ART, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

#### Natural & Physical Sciences (3 credits)

AST, BIO, CHE, ENV, GEY, PHY, SCI

#### Social and Behavioral Science: (3 credits)

ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC

### Electives from any of the below subjects (3 credits)

CIS 118

ENG, COM (100 and above)

MAT (100 and above)

ART, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE (100 and above)

AST, BIO, CHE, ENV, GEY, PHY, SCI (100 and above)

ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC (100 and above)

6. 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.
7. To earn multiple Red Rocks 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.
8. With the approval of a faculty advisor, no more than five credits of internship may count toward a degree. Some AAS degrees will require internship credits.

## 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 through Red Rocks Community College.
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. You must file an application for graduation during the term in which you intend to graduate according to the deadline published in the class schedule for that semester. You must apply to graduate within one year of completing degree requirements.

### AA - Anthropology Designated Degree Requirements

#### General Education and Major Course Requirements (54-56 credits). Approved Electives (4-6 credits) Total Credits (60 required).

##### Anthropology Major Requirements - 3 courses (9 credits)

ANT 101 Cultural Anthropology (3)  
ANT 107 Introduction to Archaeology (3)  
ANT 111\* Physical Anthropology (3)

\*Some receiving institutions require a lab (ANT 104) to be taken with this course

COM 115 Public Speaking (3)

or

COM 125 Interpersonal Communication (3)

or

COM 220 Intercultural Communication (3)

##### Additional Anthropology Requirements - 1 course (3 credits)

ANT 108 Archaeology of World Rock Art (3)  
ANT 201 Introduction to Forensic Anthropology (3)  
ANT 215 Indians of North America (3)  
ANT 250 Medical Anthropology (3)

*Please note: ANT courses taken in excess of the 4 required courses listed above may not count as Anthropology major credits at four-year institutions.*

##### Communication - 2 courses - (6 credits)

ENG 121 English Composition I (3)  
ENG 122 English Composition II (3)

##### Mathematics - 1 course - (4 credits)

MAT 121 College Algebra (4)

##### Arts and Humanities - 3 courses - (9 credits)

###### • Arts and Expression

ART 110 Art Appreciation (3)  
ART 111 Art History Ancient to Medieval (3)  
ART 112 Art History Renaissance to Modern (3)  
ART 207 Art History 1900 – Present (3)  
DAN 125 History of Dance I (3)  
MUS 120 Music Appreciation (3)  
MUS 121 Music History Medieval thru Classical (3)  
MUS 122 Music History Romantic to Present (3)  
MUS 123 Survey of World Music (3)  
MUS 125 History of Jazz (3)  
THE 105 Theatre Appreciation (3)  
THE 211 Development of Theatre I (3)  
THE 212 Development of Theatre II (3)

###### • Literature & Humanities

HUM 115 World Mythology (3)  
HUM 121 Humanities: Early Civilization (3)  
HUM 122 Humanities: Medieval to Modern (3)  
HUM 123 Humanities: The Modern World (3)  
LIT 115 Introduction to Literature (3)  
LIT 201 World Literature to 1600 (3)  
LIT 202 World Literature after 1600 (3)  
LIT 205 Ethnic Literature (3)  
LIT 211 American Literature to Civil War (3)

LIT 212 American Literature after Civil War (3)  
LIT 221 British Literature to 1770 (3)  
LIT 222 British Literature since 1770 (3)  
LIT 225 Introduction to Shakespeare (3)  
LIT 268 Celtic Literature (3)

###### • Ways of Thinking

PHI 111 Introduction to Philosophy (3)  
PHI 112 Ethics (3)  
PHI 113 Logic (3)  
PHI 114 Comparative Religions (3)  
PHI 214 Philosophy of Religion (3)  
PHI 218 Philosophy of the Environment (3)

###### • Foreign Languages

(Must be intermediate/200-level)

FL 211 Second Year Foreign Language (3) FRE, GER, ITA, JPN, RUS, SPA  
FL 212 Second Year Foreign Language (3) FRE, GER, ITA, JPN, RUS, SPA

###### History - 1 course (3 credits)

Select 1 History course.

HIS 101 History of Western Civilization I (3)  
HIS 102 History of Western Civilization II (3)  
HIS 111 World Civilization I (3)  
HIS 112 World Civilization II (3)  
HIS 201 U.S. History I (3)  
HIS 202 U.S. History II (3)  
HIS 207 American Environmental History (3)  
HIS 208 American Indian History (3)  
HIS 215 Women in U.S. History (3)  
HIS 225 Colorado History (3)  
HIS 236 U.S. History Since 1945 (3)  
HIS 244 History of Latin America (3)  
HIS 247 Contemporary World History (3)

###### Social and Behavioral Science - 3 courses - (9 credits)

Must cover at least 2 different categories

###### • Economic & Political Systems

ECO 101 Economics of Social Issues (3)  
ECO 201 Macro Economics (3)  
ECO 202 Micro Economics (3)  
ECO 245 Environmental Economics (3)  
POS 105 Introduction to Political Science (3)  
POS 111 American Government (3)  
POS 125 American State and Local Gov. (3)  
POS 205 International Relations (3)  
POS 225 Comparative Government (3)

###### • Geography

GEO 105 World Regional Geography (3)  
GEO 106 Human Geography (3)

###### • Human Behavior, Cultural & Social Frameworks

AGR 260 World Interdependence-Population and Food (3)  
ANT 108 Archaeology of World Rock Art (3)  
ANT 201 Introduction to Forensic Anthropology (3)  
ANT 215 Indians of North America (3)  
ANT 250 Medical Anthropology (3)  
COM 220 Intercultural Communication (3)  
JOU 105 Introduction to Mass Media (3)  
PSY 101 General Psychology I (3)  
PSY 102 General Psychology II (3)  
PSY 205 Psychology of Gender (3)  
PSY 217 Human Sexuality (3)  
PSY 226 Social Psychology (3)

PSY 227 Psychology of Death and Dying (3)  
 PSY 235 Human Growth & Development (3)  
 PSY 238 Child Development (3)  
 PSY 240 Health Psychology (3)  
 PSY 249 Abnormal Psychology (3)  
 SOC 101 Introduction to Sociology I (3)  
 SOC 102 Introduction to Sociology II (3)  
 SOC 205 Sociology of Family Dynamics (3)  
 SOC 207 Environmental Sociology (3)  
 SOC 215 Contemporary Social Problems (3)  
 SOC 216 Sociology of Gender (3)  
 SOC 218 Sociology of Diversity (3)  
 SOC 220 Sociology of Religion (3)  
 SOC 231 Sociology of Deviant Behavior (3)

**Natural & Physical Sciences - 2 courses - (8-10 credits)**

AST 101 Astronomy I (4)  
 AST 102 Astronomy II (4)  
 BIO 105 Science of Biology (4)  
 BIO 111 General College Biology I w/Lab (5)  
 BIO 112 General College Biology II w/Lab (5)  
 BIO 201 Anatomy & Physiology I (4)  
 BIO 202 Anatomy & Physiology II (4)  
 BIO 204 Microbiology (4)  
 BIO 208 General College Microbiology (5)  
 BIO 220 General Zoology (5)  
 BIO 221 Botany (5)  
 CHE 101 Introduction to Chemistry I (5)  
 CHE 111 General College Chemistry I (5)  
 CHE 112 General College Chemistry II (5)  
 ENV 101 Environmental Science (4)  
 GEO 111 Physical Geography: Land (4)  
 GEO 112 Physical Geography: Weather and Climate (4)  
 GEY 111 Physical Geology (4)  
 GEY 112 Historical Geology (4)  
 GEY 135 Environmental Geology (4)  
 MET 150 General Meteorology (4)  
 NRE 251 General Oceanography (4)  
 PHY 105 Conceptual Physics (4)  
 PHY 107 Energy Science and Technology (4)  
 PHY 111 Physics: Algebra-Based I w/Lab (5)  
 PHY 112 Physics: Algebra-Based II w/ Lab (5)  
 PHY 211 Physics: Calculus-Based I w/Lab (5)  
 PHY 212 Physics: Calculus-Based II w/Lab (5)  
 SCI 155/156 Integrated Science I/II (4/4) (Both must be taken to satisfy science credit. Recommended for Teacher Education only.)

**Additional AA-Anthropology Catalog 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 the student 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 is required for degree completion.

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.

The Statewide Articulation Agreement for History can be found at the Colorado Department of Higher Education website.

**Approved AA-Anthropology Electives**

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 121 and 122
Anthropology	ANT-All courses
Art	ART-All courses
Astronomy	AST-All courses
Biology	BIO-All courses
Business	BUS 115, 216, 217 and 226
Chemistry	CHE-All courses
Communication Disorders	CMD-All courses
Communication	COM-All courses
Computer Information Systems	CIS 118, 240, 243 and 268
Computer Science	CSC 119, 160, 161, 165, 225, 236, 237 and 240
Criminal Justice	CRJ-All courses above 109
Dance	DAN-All courses
<i>(Some Dance courses may transfer as physical education courses.)</i>	
Early Childhood Education	ECE 101, 205, 238, 241 and 260
Economics	ECO-All courses
Education	EDU-All courses above 200
English	ENG-All courses above 122
Environmental Science	ENV 101
Foreign Language	All courses except 101 and 102
Geography	GEO-All courses
Geology	GEY-All courses
Health and Wellness	HWE 100
History	HIS-All courses
Humanities	HUM-All courses
Journalism	JOU 105
Literature	LIT-All courses
Management	MAN 226
Marketing	MAR 216
Mathematics	MAT-All courses 120 and above
Meteorology	MET 150
Music	MUS-All courses
Natural Resources	NRE 251
Philosophy	PHI-All courses
Physical Education	PED-All courses
<i>(Maximum 3 credits from PED can apply toward degree)</i>	
Recreation	REC 100, REC 200, and REC 211
Physics	PHY-All courses
Political Science	POS-All courses
Psychology	PSY 101, 102, 110, 205, 215, 217, 226, 227, 235, 238, 240, 245, 249, and 265
Science	SCI 105, SCI 155, 156
Sociology	SOC-All courses
Theatre	THE-All courses

## **Other AA-Anthropology Degree Requirements**

1. A minimum of 60 credits is required for the Associate of Arts Degree in Anthropology. This must include 39-41 credits in general education transfer courses, 15 credits in additional required courses, and 4-6 credits in the areas specified above in approved electives.
2. You must complete 4-6 elective credits. These must be college-level transfer courses and may include no more than 3 credits in physical education (PED) – see approved electives above. 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. You must file an Application for Graduation during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term. You must apply to graduate within one year of completing degree requirements.
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 Red Rocks 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.
9. With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.

# AA - Business Designated Degree Requirements

## General Education and Major Course Requirements (60 credits).

### Business Major Requirements - 7 courses (23 credits)

ACC 121 Accounting Principles I (4)  
ACC 122 Accounting Principles II (4)  
BUS 115 Introduction to Business (3)  
BUS 216 Legal Environment of Business (3)  
BUS 217 Business Communication and Report Writing (3)  
BUS 226 Business Statistics (3)  
COM 115 Public Speaking (3)

### Communication - 2 courses - (6 credits)

ENG 121 English Composition I (3)  
ENG 122 English Composition II (3)

### Mathematics - 2 courses - (8 credits)

MAT 121 College Algebra (4)  
or  
MAT 123 Finite Mathematics (4) - See Advisor  
and  
MAT 125 Survey of Calculus (4)  
or a higher level Calculus course

### Arts and Humanities - 2 courses - (6 credits)

#### • Arts and Expression

ART 110 Art Appreciation (3)  
ART 111 Art History Ancient to Medieval (3)  
ART 112 Art History Renaissance to Modern (3)  
ART 207 Art History 1900 – Present (3)  
DAN 125 History of Dance I (3)  
MUS 120 Music Appreciation (3)  
MUS 121 Music History Medieval thru Classical (3)  
MUS 122 Music History Romantic to Present (3)  
MUS 123 Survey of World Music (3)  
MUS 125 History of Jazz (3)  
THE 105 Theatre Appreciation (3)  
THE 211 Development of Theatre I (3)  
THE 212 Development of Theatre II (3)

#### • Literature & Humanities

HUM 115 World Mythology (3)  
HUM 121 Humanities: Early Civilization (3)  
HUM 122 Humanities: Medieval to Modern (3)  
HUM 123 Humanities: The Modern World (3)  
LIT 115 Introduction to Literature (3)  
LIT 201 World Literature to 1600 (3)  
LIT 202 World Literature after 1600 (3)  
LIT 205 Ethnic Literature (3)  
LIT 211 American Literature to Civil War (3)  
LIT 212 American Literature after Civil War (3)  
LIT 221 British Literature to 1770 (3)  
LIT 222 British Literature since 1770 (3)  
LIT 225 Introduction to Shakespeare (3)  
LIT 268 Celtic Literature (3)

#### • Ways of Thinking

PHI 111 Introduction to Philosophy (3)  
PHI 112 Ethics (3)  
PHI 113 Logic (3)  
PHI 114 Comparative Religions (3)  
PHI 214 Philosophy of Religion (3)  
PHI 218 Philosophy of the Environment (3)

#### • Foreign Languages

(Must be intermediate/200-level)  
FL 211 Second Year Foreign Language (3)  
FRE, GER, ITA, JPN, RUS, SPA  
FL 212 Second Year Foreign Language (3)  
FRE, GER, ITA, JPN, RUS, SPA

### History - 1 course - (3 credits)

HIS 101 History of Western Civilization I (3)  
HIS 102 History of Western Civilization II (3)  
HIS 111 World Civilization I (3)  
HIS 112 World Civilization II (3)  
HIS 201 U.S. History I (3)  
HIS 202 U.S. History II (3)  
HIS 207 American Environmental History (3)  
HIS 208 American Indian History (3)  
HIS 215 Women In U.S. History (3)  
HIS 225 Colorado History (3)  
HIS 236 U.S. History Since 1945 (3)  
HIS 244 History of Latin America (3)  
HIS 247 Contemporary World History (3)

### Social and Behavioral Science - 2 courses - (6 credits)

ECO 201 Macro Economics (3)  
ECO 202 Micro Economics (3)

### Natural & Physical Sciences - 2 courses - (8 credits)

Courses can be either GT-SC1 or GT-SC2  
AST 101 Astronomy I (4)  
AST 102 Astronomy II (4)  
BIO 105 Science of Biology (4)  
BIO 111 General College Biology I w/Lab (5)  
BIO 112 General College Biology II w/Lab (5)  
BIO 116 Introduction to Human Disease (3)  
BIO 201 Anatomy & Physiology I (4)  
BIO 202 Anatomy & Physiology II (4)  
BIO 204 Microbiology (4)  
BIO 208 General College Microbiology (5)  
BIO 220 General Zoology (5)  
BIO 221 Botany (5)  
CHE 101 Introduction to Chemistry I (5)  
CHE 111 General College Chemistry I (5)  
CHE 112 General College Chemistry II (5)  
ENV 101 Environmental Science (4)  
GEO 111 Physical Geography: Land (4)  
GEO 112 Physical Geography: Weather and Climate (4)  
GEY 111 Physical Geology (4)  
GEY 112 Historical Geology (4)  
GEY 135 Environmental Geology (4)  
MET 150 General Meteorology (4)  
NRE 251 General Oceanography (4)  
PHY 105 Conceptual Physics (4)  
PHY 107 Energy Science and Technology (4)  
PHY 111 Physics: Algebra-Based I w/Lab (5)  
PHY 112 Physics: Algebra-Based II w/ Lab (5)  
PHY 211 Physics: Calculus-Based I w/Lab (5)  
PHY 212 Physics: Calculus-Based II w/Lab (5)  
SCI 105 Science in Society (3)  
SCI 155/156 Integrated Science I/II (4/4) (Both must be taken to satisfy science credit. Recommended for Teacher Education only.)

## **Additional AA-Business Catalog 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 the student 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 is required for degree completion.

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.

The Statewide Articulation Agreement for Business can be found at the Colorado Department of Higher Education website.

## **Other AA-Business Degree Requirements**

1. A minimum of 60 credits is required for the Associate of Arts in Business Degree. This must include 37 credits in general education transfer courses, and 23 credits in additional required courses.
2. 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.
3. You must complete a minimum of 15 credits through Red Rocks Community College.
4. You must file an Application for Graduation during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term. You must apply to graduate within one year of completing degree requirements.
5. No more than 6 credits of independent study course work may be applied toward this degree.
6. To earn multiple Red Rocks 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.

# AA - Criminal Justice Designated Degree Requirements

## General Education and Major Course Requirements (33 credits). Additional Required Courses (27 credits). Total Credits (60 required).

### Criminal Justice Required Courses – 3 courses (9 credits)

CRJ 110 Introduction to Criminal Justice System (3)  
CRJ 125 Law Enforcement Operations (to be renamed – Policing  
Systems) (3)  
CRJ 145 Correctional Process (3)

### Additional AA-Criminal Justice Requirement - 2 courses (6 credits)

CRJ 127 Crime Scene Investigation  
CRJ 135 Judicial Functions  
CRJ 205 Principles of Criminal Law  
CRJ 209 Criminal Investigations  
CRJ 230 Criminology  
CRJ 231 Introduction to Forensic Science & Criminalistics  
CRJ 235 Delinquent Behavior  
CRJ 236 Criminal Justice Research Methods  
CRJ 257 Victimology  
CRJ 268 Criminal Profiling

*Please note: CRJ courses taken in excess of those listed above  
may not count as Criminal Justice major credits at four-year  
institutions.*

### Communication - 3 courses - (9 credits)

ENG 121 English Composition I (3)  
ENG 122 English Composition II (3)  
COM 115 Public Speaking (3)  
or  
COM 125 Interpersonal Communication (3)

### Mathematics - 1 course (4 credits)

MAT 121 College Algebra

### Arts and Humanities - 2 courses - (6 credits)

Must cover two (2) different categories.

#### • Arts and Expression

ART 110 Art Appreciation (3)  
ART 111 Art History Ancient to Medieval (3)  
ART 112 Art History Renaissance to Modern (3)  
ART 207 Art History 1900 – Present (3)  
DAN 125 History of Dance I (3)  
MUS 120 Music Appreciation (3)  
MUS 121 Music History Medieval thru Classical (3)  
MUS 122 Music History Romantic to Present (3)  
MUS 123 Survey of World Music (3)  
MUS 125 History of Jazz (3)  
THE 105 Theatre Appreciation (3)  
THE 211 Development of Theatre I (3)  
THE 212 Development of Theatre II (3)

#### • Literature & Humanities

HUM 115 World Mythology (3)  
HUM 121 Humanities: Early Civilization (3)  
HUM 122 Humanities: Medieval to Modern (3)  
HUM 123 Humanities: The Modern World (3)  
LIT 115 Introduction to Literature (3)  
LIT 201 World Literature to 1600 (3)  
LIT 202 World Literature after 1600 (3)  
LIT 205 Ethnic Literature (3)  
LIT 211 American Literature to Civil War (3)  
LIT 212 American Literature after Civil War (3)

LIT 221 British Literature to 1770 (3)  
LIT 222 British Literature since 1770 (3)  
LIT 225 Introduction to Shakespeare (3)  
LIT 268 Celtic Literature (3)

#### • Ways of Thinking

PHI 111 Introduction to Philosophy (3)  
PHI 112 Ethics (3)  
PHI 113 Logic (3)  
PHI 114 Comparative Religions (3)  
PHI 214 Philosophy of Religion (3)  
PHI 218 Philosophy of the Environment (3)

#### • Foreign Languages

(Must be intermediate/200-level)  
FL 211 Second Year Foreign Language (3)  
FRE, GER, ITA, JPN, RUS, SPA  
FL 212 Second Year Foreign Language (3)  
FRE, GER, ITA, JPN, RUS, SPA

#### History - 1 course - (3 credits)

HIS 101 History of Western Civilization I (3)  
HIS 102 History of Western Civilization II (3)  
HIS 111 World Civilization I (3)  
HIS 112 World Civilization II (3)  
HIS 201 U.S. History I (3)  
HIS 202 U.S. History II (3)  
HIS 207 American Environmental History (3)  
HIS 208 American Indian History (3)  
HIS 215 Women In U.S. History (3)  
HIS 225 Colorado History (3)  
HIS 236 U.S. History Since 1945 (3)  
HIS 244 History of Latin America (3)  
HIS 247 Contemporary World History (3)

#### Social and Behavioral Science - 2 courses - (6 credits)

SOC 101 Introduction to Sociology (3) \*SOC 101 is required  
and \*one course from the Human Behavior, Cultural & Social  
Frameworks category below:

#### • Human Behavior, Cultural & Social Frameworks

\*One course from the category below:  
ANT 101 Cultural Anthropology (3)  
ANT 107 Introduction to Archaeology (3)  
ANT 108 Archaeology of World Rock Art (3)  
ANT 111 Physical Anthropology (3)  
ANT 201 Introduction to Forensic Anthropology (3)  
ANT 215 Indians of North America (3)  
ANT 250 Medical Anthropology (3)  
COM 220 Intercultural Communication (3)  
JOU 105 Introduction to Mass Media (3)  
PSY 101 General Psychology I (3)  
PSY 102 General Psychology II (3)  
PSY 205 Psychology of Gender (3)  
PSY 217 Human Sexuality (3)  
PSY 226 Social Psychology (3)  
PSY 227 Psychology of Death and Dying (3)  
PSY 235 Human Growth & Development (3)  
PSY 238 Child Development (3)  
PSY 240 Health Psychology (3)  
PSY 249 Abnormal Psychology (3)  
SOC 102 Introduction to Sociology II (3)  
SOC 205 Sociology of Family Dynamics (3)  
SOC 207 Environmental Sociology (3)  
SOC 215 Contemporary Social Problems (3)  
SOC 216 Sociology of Gender (3)  
SOC 218 Sociology of Diversity (3)  
SOC 220 Sociology of Religion (3)  
SOC 231 Sociology of Deviant Behavior (3)  
SOC 237 Sociology of Death & Dying (3)

## **Natural & Physical Sciences - 2 courses - (8 credits)**

\* 1 course must have a lab

AST 101 Astronomy I (4)  
AST 102 Astronomy II (4)  
BIO 105 Science of Biology (4)  
BIO 111 General College Biology I w/Lab (5)  
BIO 112 General College Biology II w/Lab (5)  
BIO 116 Introduction to Human Disease (3)  
BIO 201 Anatomy & Physiology I (4)  
BIO 202 Anatomy & Physiology II (4)  
BIO 204 Microbiology (4)  
BIO 208 General College Microbiology (5)  
BIO 220 General Zoology (5)  
BIO 221 Botany (5)  
CHE 101 Introduction to Chemistry I (5)  
CHE 102 Introduction to Chemistry II (5)  
CHE 111 General College Chemistry I (5)  
CHE 112 General College Chemistry II (5)  
ENV 101 Environmental Science (4)  
GEO 111 Physical Geography: Land (4)  
GEO 112 Physical Geography: Weather and Climate (4)  
GEY 111 Physical Geology (4)  
GEY 112 Historical Geology (4)  
GEY 135 Environmental Geology (4)  
MET 150 General Meteorology (4)  
NRE 251 General Oceanography (4)  
PHY 105 Conceptual Physics (4)  
PHY 107 Energy Science and Technology (4)  
PHY 111 Physics: Algebra-Based I w/Lab (5)  
PHY 112 Physics: Algebra-Based II w/ Lab (5)  
PHY 211 Physics: Calculus-Based I w/Lab (5)  
PHY 212 Physics: Calculus-Based II w/Lab (5)  
SCI 105 Science in Society (3)  
SCI 155/156 Integrated Science I/II (4/4) (Both must be taken to satisfy science credit. Recommended for Teacher Education only.)

### **Additional Required Criminal Justice Designation Courses – (9 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 Criminal Justice 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.

### **Choose three (3) courses from the following (9 credits):**

ANT 201 Introduction to Forensic Anthropology (3)  
CNG 258 Computer Forensics (3)  
COM 217 Group Communication (3)  
COM 225 Organizational Communications (3)  
POS 111 American Government (3)  
POS 125 American/ State and Local Government (3)  
PSY 207 Introduction to Forensic Psychology (3)  
PSY 217 Human Sexuality (3)  
PSY 226 Social Psychology (3)  
PSY 249 Abnormal Psychology (3)  
SOC 231 Sociology of Deviant Behavior (3)

### **Additional AA-Criminal Justice Catalog Requirements**

The State-Guaranteed Colorado Community College General Education requirements and the Approved Elective Transferable courses have been incorporated into this AA Criminal Justice degree. Completion of the degree with a “C” or better in every course, guarantees that the student can transfer, upon admission, to specific Colorado public four-year colleges or universities with the appropriate 60 transferable credits. In addition, a minimum

2.0 cumulative grade point average is required for degree completion.

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.

Participating institutions in the Statewide Transfer Articulation Agreement include Colorado Mesa University, Metropolitan State University of Denver, University of Colorado at Colorado Springs, University of Colorado Denver, and University of Northern Colorado. <http://highered.colorado.gov/academics/transfers>

### **Other AA-Criminal Justice Degree Requirements**

1. A minimum of 60 credits is required for the Associate of Arts in Criminal Justice Designation. This must include 33 credits in general education transfer courses and 27 credits in additional required courses.
2. 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.
3. You must complete a minimum of 15 credits through Red Rocks Community College.
4. You must file an Application for Graduation during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term (file in Admissions). You must apply to graduate within one year of completing requirements.
5. No more than 6 credits of independent study course work may be applied toward this degree.
6. To earn multiple Red Rocks 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.

# AA - Economics Designated Degree Requirements

## General Education and Major Course Requirements (40-42 credits). Approved Electives (18-20 credits) Total Credits (60 required).

### Economics Major Requirements - 1 course (3 credits)

MAT 135 Introduction to Statistics (3)

### Communication - 2 courses - (6 credits)

ENG 121 English Composition I (3)

ENG 122 English Composition II (3)

### Mathematics - 1 course - (5 credits)

MAT 201 Calculus I (5)

### Arts and Humanities - 3 courses - (9 credits)

Select 3 courses.

#### • Arts and Expression

ART 110 Art Appreciation (3)

ART 111 Art History Ancient to Medieval (3)

ART 112 Art History Renaissance to Modern (3)

ART 207 Art History 1900 – Present (3)

DAN 125 History of Dance I (3)

MUS 120 Music Appreciation (3)

MUS 121 Music History Medieval thru Classical (3)

MUS 122 Music History Romantic to Present (3)

MUS 123 Survey of World Music (3)

MUS 125 History of Jazz (3)

THE 105 Theatre Appreciation (3)

THE 211 Development of Theatre I (3)

THE 212 Development of Theatre II (3)

#### • Literature & Humanities

HUM 115 World Mythology (3)

HUM 121 Humanities: Early Civilization (3)

HUM 122 Humanities: Medieval to Modern (3)

HUM 123 Humanities: The Modern World (3)

LIT 115 Introduction to Literature (3)

LIT 201 World Literature to 1600 (3)

LIT 202 World Literature after 1600 (3)

LIT 205 Ethnic Literature (3)

LIT 211 American Literature to Civil War (3)

LIT 212 American Literature after Civil War (3)

LIT 221 British Literature to 1770 (3)

LIT 222 British Literature since 1770 (3)

LIT 225 Introduction to Shakespeare (3)

LIT 268 Celtic Literature (3)

#### • Ways of Thinking

PHI 111 Introduction to Philosophy (3)

PHI 112 Ethics (3)

PHI 113 Logic (3)

PHI 114 Comparative Religions (3)

PHI 214 Philosophy of Religion (3)

PHI 218 Philosophy of the Environment (3)

#### • Foreign Languages

(Must be intermediate/200-level)

FL 211 Second Year Foreign Language (3)

FRE, GER, ITA, JPN, RUS, SPA

FL 212 Second Year Foreign Language (3)

FRE, GER, ITA, JPN, RUS, SPA

#### History - 1 course - (3 credits)

HIS 101 History of Western Civilization I (3)

HIS 102 History of Western Civilization II (3)

HIS 111 World Civilization I (3)

HIS 112 World Civilization II (3)

HIS 201 U.S. History I (3)

HIS 202 U.S. History II (3)

HIS 207 American Environmental History (3)

HIS 208 American Indian History (3)

HIS 215 Women In U.S. History (3)

HIS 225 Colorado History (3)

HIS 236 U.S. History Since 1945 (3)

HIS 244 History of Latin America (3)

HIS 247 Contemporary World History (3)

#### Social and Behavioral Science - 2 courses - (6 credits)

ECO 201 Macro Economics (3)

ECO 202 Micro Economics (3)

#### Natural & Physical Sciences - 2 courses - (8-10 credits)

AST 101 Astronomy I (4)

AST 102 Astronomy II (4)

BIO 105 Science of Biology (4)

BIO 111 General College Biology I w/Lab (5)

BIO 112 General College Biology II w/Lab (5)

BIO 116 Introduction to Human Disease (3)

BIO 201 Anatomy & Physiology I (4)

BIO 202 Anatomy & Physiology II (4)

BIO 204 Microbiology (4)

BIO 208 General College Microbiology (5)

BIO 220 General Zoology (5)

BIO 221 Botany (5)

CHE 101 Introduction to Chemistry I (5)

CHE 111 General College Chemistry I (5)

CHE 112 General College Chemistry II (5)

ENV 101 Environmental Science (4)

GEO 111 Physical Geography: Land (4)

GEO 112 Physical Geography: Weather and Climate (4)

GEY 111 Physical Geology (4)

GEY 112 Historical Geology (4)

GEY 135 Environmental Geology (4)

MET 150 General Meteorology (4)

NRE 251 General Oceanography (4)

PHY 105 Conceptual Physics (4)

PHY 107 Energy Science and Technology (4)

PHY 111 Physics: Algebra-Based I w/Lab (5)

PHY 112 Physics: Algebra-Based II w/ Lab (5)

PHY 211 Physics: Calculus-Based I w/Lab (5)

PHY 212 Physics: Calculus-Based II w/Lab (5)

SCI 105 Science in Society (3)

SCI 155/156 Integrated Science I/II (4/4) (Both must be taken to satisfy science credit. Recommended for Teacher Education only.)

#### Additional AA-Economics Catalog 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 the student 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 is required for degree completion.

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.

The Statewide Articulation Agreement for Economics can be found at the Colorado Department of Higher Education website.

### Approved AA-Economics Electives

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 121 and 122
Anthropology	ANT-All courses
Art	ART-All courses
Astronomy	AST-All courses
Biology	BIO-All courses
Business	BUS 115, 216, 217 and 226
Chemistry	CHE-All courses
Communication Disorders	CMD-All courses
Communication	COM-All courses
Computer Information Systems	CIS 118, 240, 243 and 268
Computer Science	CSC 119, 160, 161, 165, 225, 236, 237 and 240
Criminal Justice	CRJ-All courses above 109
Dance	DAN-All courses
<i>(Some Dance courses may transfer as physical education courses.)</i>	
Early Childhood Education	ECE 101, 205, 238, 241 and 260
Economics	ECO-All courses
Education	EDU-All courses above 200
English	ENG-All courses above 122
Environmental Science	ENV 101
Foreign Language	All courses except 101 and 102
Geography	GEO-All courses
Geology	GEY-All courses
Health and Wellness	HWE 100
History	HIS-All courses
Humanities	HUM-All courses
Journalism	JOU 105
Literature	LIT-All courses
Management	MAN 226
Marketing	MAR 216
Mathematics	MAT-All courses 120 and above
Meteorology	MET 150
Music	MUS-All courses
Philosophy	PHI-All courses
Physical Education	PED-All courses
<i>(Maximum 3 credits from PED apply toward degree)</i>	
Recreation	REC 100, REC 200, and REC 211
Physics	PHY-All courses
Political Science	POS-All courses
Psychology	PSY 101, 102, 110, 205, 215, 217, 226, 227, 235, 238, 240, 245, 249, and 265
Science	SCI 155, 156
Sociology	SOC-All courses
Theatre	THE-All courses

### Other AA-Economics Degree Requirements

1. A minimum of 60 credits is required for the Associate of Arts in Economics Degree. This must include 37-39 credits in general education transfer courses, 3 credits in additional required courses, and 18-22 credits in the areas specified above in approved electives.
2. You must complete 18-20 semester elective credits. These must be college-level transfer courses and may include no more than 3 credits in physical education (PED) – see approved electives above. 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. You must file an Application for Graduation during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term. You must apply to graduate within one year of completing degree requirements.
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 Red Rocks 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.
9. With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.

# AA - French Designated Degree Requirements

## General Education and Major Course Requirements (41-46 credits). Approved Electives (14-19 credits) Total Credits (60 required).

### French Major Requirements - (4 courses 16 credits)

FRE 111 French Language I (5)  
FRE 112 French Language II (5)  
FRE 211 French Language III (3)  
FRE 212 French Language IV (3)

*Please note: FRE 111 and/or FRE 112 may be waived, based on a student's proficiency level.*

### Communication - 2 courses - (6 credits)

ENG 121 English Composition I (3)  
ENG 122 English Composition II (3)

### Mathematics - 1 course - (3-5 credits)

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

### Additional Arts and Humanities - 1 course - (3 credits)

#### • Arts and Expression

ART 110 Art Appreciation (3)  
ART 111 Art History Ancient to Medieval (3)  
ART 112 Art History Renaissance to Modern (3)  
ART 207 Art History 1900 – Present (3)  
DAN 125 History of Dance I (3)  
MUS 120 Music Appreciation (3)  
MUS 121 Music History Medieval thru Classical (3)  
MUS 122 Music History Romantic to Present (3)  
MUS 123 Survey of World Music (3)  
MUS 125 History of Jazz (3)  
THE 105 Theatre Appreciation (3)  
THE 211 Development of Theatre I (3)  
THE 212 Development of Theatre II (3)

#### • Literature & Humanities

HUM 115 World Mythology (3)  
HUM 121 Humanities: Early Civilization (3)  
HUM 122 Humanities: Medieval to Modern (3)  
HUM 123 Humanities: The Modern World (3)  
LIT 115 Introduction to Literature (3)  
LIT 201 World Literature to 1600 (3)  
LIT 202 World Literature after 1600 (3)  
LIT 205 Ethnic Literature (3)  
LIT 211 American Literature to Civil War (3)  
LIT 212 American Literature after Civil War (3)  
LIT 221 British Literature to 1770 (3)  
LIT 222 British Literature since 1770 (3)  
LIT 225 Introduction to Shakespeare (3)  
LIT 268 Celtic Literature (3)

#### • Ways of Thinking

PHI 111 Introduction to Philosophy (3)  
PHI 112 Ethics (3)  
PHI 113 Logic (3)  
PHI 114 Comparative Religions (3)  
PHI 214 Philosophy of Religion (3)  
PHI 218 Philosophy of the Environment (3)

#### • Foreign Languages

(Must be intermediate/200-level)  
FL 211 Second Year Foreign Language (3) FRE, GER, ITA, JPN, RUS, SPA  
FL 212 Second Year Foreign Language (3) FRE, GER, ITA, JPN, RUS, SPA

#### History - 1 course (3 credits)

Select 1 History course.

HIS 101 History of Western Civilization I (3)  
HIS 102 History of Western Civilization II (3)  
HIS 111 World Civilization I (3)  
HIS 112 World Civilization II (3)  
HIS 244 History of Latin America (3)  
HIS 247 Contemporary World History (3)

#### Social and Behavioral Science - 1 course - (3 credits)

#### • Economic & Political Systems

ECO 101 Economics of Social Issues (3)  
ECO 201 Macro Economics (3)  
ECO 202 Micro Economics (3)  
ECO 245 Environmental Economics (3)  
POS 105 Introduction to Political Science (3)  
POS 111 American Government (3)  
POS 125 American State and Local Gov. (3)  
POS 205 International Relations (3)  
POS 225 Comparative Government (3)

#### • Geography

GEO 105 World Regional Geography (3)  
GEO 106 Human Geography (3)

#### • Human Behavior, Cultural & Social Frameworks

ANT 101 Cultural Anthropology (3)  
ANT 107 Introduction to Archaeology (3)  
ANT 108 Archaeology of World Rock Art (3)  
ANT 111 Physical Anthropology (3)  
ANT 201 Introduction to Forensic Anthropology (3)  
ANT 215 Indians of North America (3)  
ANT 250 Medical Anthropology (3)  
COM 220 Intercultural Communication (3)  
JOU 105 Introduction to Mass Media (3)  
PSY 101 General Psychology I (3)  
PSY 102 General Psychology II (3)  
PSY 205 Psychology of Gender (3)  
PSY 217 Human Sexuality (3)  
PSY 226 Social Psychology (3)  
PSY 227 Psychology of Death and Dying (3)  
PSY 235 Human Growth & Development (3)  
PSY 238 Child Development (3)  
PSY 240 Health Psychology (3)  
PSY 249 Abnormal Psychology (3)  
SOC 205 Sociology of Family Dynamics (3)  
SOC 207 Environmental Sociology (3)  
SOC 215 Contemporary Social Problems (3)  
SOC 216 Sociology of Gender (3)  
SOC 218 Sociology of Diversity (3)  
SOC 220 Sociology of Religion (3)  
SOC 231 Sociology of Deviant Behavior (3)  
SOC 237 Sociology of Death & Dying (3)

### Natural & Physical Sciences - 2 courses - (7-10 credits)

AST 101 Astronomy I (4)  
AST 102 Astronomy II (4)  
BIO 105 Science of Biology (4)  
BIO 111 General College Biology I w/Lab (5)  
BIO 112 General College Biology II w/Lab (5)  
BIO 116 Introduction to Human Disease (3)  
BIO 201 Anatomy & Physiology I (4)  
BIO 202 Anatomy & Physiology II (4)  
BIO 204 Microbiology (4)  
BIO 208 General College Microbiology (5)  
BIO 220 General Zoology (5)  
BIO 221 Botany (5)  
CHE 101 Introduction to Chemistry I (5)  
CHE 111 General College Chemistry I (5)  
CHE 112 General College Chemistry II (5)  
ENV 101 Environmental Science (4)  
GEO 111 Physical Geography: Land (4)  
GEO 112 Physical Geography: Weather and Climate (4)  
GEY 111 Physical Geology (4)  
GEY 112 Historical Geology (4)  
GEY 135 Environmental Geology (4)  
MET 150 General Meteorology (4)  
NRE 251 General Oceanography (4)  
PHY 105 Conceptual Physics (4)  
PHY 107 Energy Science and Technology (4)  
PHY 111 Physics: Algebra-Based I w/Lab (5)  
PHY 112 Physics: Algebra-Based II w/ Lab (5)  
PHY 211 Physics: Calculus-Based I w/Lab (5)  
PHY 212 Physics: Calculus-Based II w/Lab (5)  
SCI 105 Science in Society (3)  
SCI 155/156 Integrated Science I/II (4/4) (Both must be taken to satisfy science credit. Recommended for Teacher Education only.)

### Additional AA-French Catalog 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 the student 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 is required for degree completion.

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.

The Statewide Articulation Agreement for History can be found at the Colorado Department of Higher Education website.

### Approved AA-French Electives

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 121 and 122
Anthropology	ANT-All courses
Art	ART-All courses
Astronomy	AST-All courses
Biology	BIO-All courses
Business	BUS 115, 216, 217 and 226
Chemistry	CHE-All courses
Communication Disorders	CMD-All courses
Communication	COM-All courses
Computer Information Systems	CIS 118, 240, 243 and 268
Computer Science	CSC 119, 160, 161, 165, 225, 236, 237 and 240
Criminal Justice	CRJ-All courses above 109
Dance	DAN-All courses
<i>(Some Dance courses may transfer as physical education courses.)</i>	
Early Childhood Education	ECE 101, 205, 238, 241 and 260
Economics	ECO-All courses
Education	EDU-All courses above 200
English	ENG-All courses above 122
Environmental Science	ENV 101
Foreign Language	All courses except 101 and 102
Geography	GEO-All courses
Geology	GEY-All courses
Health and Wellness	HWE 100
History	HIS-All courses
Humanities	HUM-All courses
Journalism	JOU 105
Literature	LIT-All courses
Management	MAN 226
Marketing	MAR 216
Mathematics	MAT-All courses 120 and above
Meteorology	MET 150
Music	MUS-All courses
Natural Resources	NRE 251
Philosophy	PHI-All courses
Physical Education	PED-All courses
<i>(Maximum 3 credits from PED can apply toward degree)</i>	
Recreation	REC 100, REC 200, and REC 211
Physics	PHY-All courses
Political Science	POS-All courses
Psychology	PSY 101, 102, 110, 205, 215, 217, 226, 227, 235, 238, 240, 245, 249, and 265
Science	SCI 105, 155, and 156
Sociology	SOC-All courses
Theatre	THE-All courses

## **Other AA-French Degree Requirements**

1. A minimum of 60 credits is required for the Associate of Arts Degree in French. This must include 31-36 credits in general education transfer courses, 10 credits in additional required courses, and 14-19 credits in the areas specified above in approved electives.
2. You must complete 14-19 semester elective credits. These must be college-level transfer courses and may include no more than 3 credits in physical education (PED) – see approved electives above. 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. You must file an Application for Graduation during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term. You must apply to graduate within one year of completing degree requirements.
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 Red Rocks 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.
9. With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.

# AA - History Designated Degree Requirements

## General Education and Major Course Requirements (49-54 credits). Approved Electives (6-11 credits) Total Credits (60 required).

### History Major Requirements - 5 courses (15 credits)

HIS 101 Western Civilization: Antiquity-1650 (3)\*  
or

HIS 111 The World: Antiquity-1500 (3)\*

HIS 102 Western Civilization: 1650-Present (3)\*  
or

HIS 112 The World: 1500-present (3)\*

HIS 201 U.S. History to Reconstruction (3)

HIS 202 History Since Civil War (3)

COM 115 Public Speaking (3)

or

COM 125 Interpersonal Communication (3)

### Additional History Requirements - 1 course (3 credits)

*\*Students planning to transfer to CU Boulder must take HIS 101 or HIS 102*

HIS 101 History of Western Civilization I (3)

HIS 102 History of Western Civilization II (3)

HIS 111 World Civilization I (3)

HIS 112 World Civilization II (3)

HIS 201 U.S. History I (3)

HIS 202 U.S. History II (3)

HIS 207 American Environmental History (3)

HIS 208 American Indian History (3)

HIS 215 Women in U.S. History (3)

HIS 225 Colorado History (3)

HIS 236 U.S. History Since 1945 (3)

HIS 244 History of Latin America (3)

HIS 247 Contemporary World History (3)

### Communication - 2 courses - (6 credits)

ENG 121 English Composition I (3)

ENG 122 English Composition II (3)

### Mathematics - 1 course - (3-5 credits)

MAT 120 Mathematics for the Liberal Arts (4)

MAT 121 College Algebra (4)

MAT 122 College Trigonometry (3)

MAT 123 Finite Math (4)

MAT 125 Survey of Calculus (4)

MAT 135 Introduction to Statistics (3)

MAT 166 Pre-Calculus (5)

MAT 201 Calculus I (5)

MAT 202 Calculus II (5)

MAT 204 Calculus III with Engineering Applications (5)

MAT 261 Differential Equations with Engineering Applications (4)

### Arts and Humanities - 3 courses - (9 credits)

#### • Arts and Expression

ART 110 Art Appreciation (3)

ART 111 Art History Ancient to Medieval (3)

ART 112 Art History Renaissance to Modern (3)

ART 207 Art History 1900 – Present (3)

DAN 125 History of Dance I (3)

MUS 120 Music Appreciation (3)

MUS 121 Music History Medieval thru Classical (3)

MUS 122 Music History Romantic to Present (3)

MUS 123 Survey of World Music (3)

MUS 125 History of Jazz (3)

THE 105 Theatre Appreciation (3)

THE 211 Development of Theatre I (3)

THE 212 Development of Theatre II (3)

#### • Literature & Humanities

HUM 115 World Mythology (3)

HUM 121 Humanities: Early Civilization (3)

HUM 122 Humanities: Medieval to Modern (3)

HUM 123 Humanities: The Modern World (3)

LIT 115 Introduction to Literature (3)

LIT 201 World Literature to 1600 (3)

LIT 202 World Literature after 1600 (3)

LIT 205 Ethnic Literature (3)

LIT 211 American Literature to Civil War (3)

LIT 212 American Literature after Civil War (3)

LIT 221 British Literature to 1770 (3)

LIT 222 British Literature since 1770 (3)

LIT 225 Introduction to Shakespeare (3)

LIT 268 Celtic Literature (3)

#### • Ways of Thinking

PHI 111 Introduction to Philosophy (3)

PHI 112 Ethics (3)

PHI 113 Logic (3)

PHI 114 Comparative Religions (3)

PHI 214 Philosophy of Religion (3)

PHI 218 Philosophy of the Environment (3)

#### • Foreign Languages

(Must be intermediate/200-level)

FL 211 Second Year Foreign Language (3) FRE, GER, ITA, JPN, RUS, SPA

FL 212 Second Year Foreign Language (3) FRE, GER, ITA, JPN, RUS, SPA

### Social and Behavioral Science - 2 courses - (6 credits)

#### • Economic & Political Systems

ECO 101 Economics of Social Issues (3)

ECO 201 Macro Economics (3)

ECO 202 Micro Economics (3)

ECO 245 Environmental Economics (3)

POS 105 Introduction to Political Science (3)

POS 111 American Government (3)

POS 125 American State and Local Gov. (3)

POS 205 International Relations (3)

POS 225 Comparative Government (3)

#### • Geography

GEO 105 World Regional Geography (3)

GEO 106 Human Geography (3)

#### • Human Behavior, Cultural & Social Frameworks

ANT 101 Cultural Anthropology (3)

ANT 107 Introduction to Archaeology (3)

ANT 108 Archaeology of World Rock Art (3)

ANT 111 Physical Anthropology (3)

ANT 201 Introduction to Forensic Anthropology (3)

ANT 215 Indians of North America (3)

ANT 250 Medical Anthropology (3)

COM 220 Intercultural Communication (3)

JOU 105 Introduction to Mass Media (3)

PSY 101 General Psychology I (3)

PSY 102 General Psychology II (3)

PSY 205 Psychology of Gender (3)

PSY 217 Human Sexuality (3)

PSY 226 Social Psychology (3)

PSY 227 Psychology of Death and Dying (3)

PSY 235 Human Growth & Development (3)

PSY 238 Child Development (3)

PSY 240 Health Psychology (3)

PSY 249 Abnormal Psychology (3)

SOC 101 Introduction to Sociology I (3)  
 SOC 102 Introduction to Sociology II (3)  
 SOC 205 Sociology of Family Dynamics (3)  
 SOC 207 Environmental Sociology (3)  
 SOC 215 Contemporary Social Problems (3)  
 SOC 216 Sociology of Gender (3)  
 SOC 218 Sociology of Diversity (3)  
 SOC 220 Sociology of Religion (3)  
 SOC 231 Sociology of Deviant Behavior (3)

**Natural & Physical Sciences - 2 courses - (7-10 credits)**

AST 101 Astronomy I (4)  
 AST 102 Astronomy II (4)  
 BIO 105 Science of Biology (4)  
 BIO 111 General College Biology I w/Lab (5)  
 BIO 112 General College Biology II w/Lab (5)  
 BIO 116 Introduction to Human Disease (3)  
 BIO 201 Anatomy & Physiology I (4)  
 BIO 202 Anatomy & Physiology II (4)  
 BIO 204 Microbiology (4)  
 BIO 208 General College Microbiology (5)  
 BIO 220 General Zoology (5)  
 BIO 221 Botany (5)  
 CHE 101 Introduction to Chemistry I (5)  
 CHE 111 General College Chemistry I (5)  
 CHE 112 General College Chemistry II (5)  
 ENV 101 Environmental Science (4)  
 GEO 111 Physical Geography: Land (4)  
 GEO 112 Physical Geography: Weather and Climate (4)  
 GEY 111 Physical Geology (4)  
 GEY 112 Historical Geology (4)  
 GEY 135 Environmental Geology (4)  
 MET 150 General Meteorology (4)  
 NRE 251 General Oceanography (4)  
 PHY 105 Conceptual Physics (4)  
 PHY 107 Energy Science and Technology (4)  
 PHY 111 Physics: Algebra-Based I w/Lab (5)  
 PHY 112 Physics: Algebra-Based II w/ Lab (5)  
 PHY 211 Physics: Calculus-Based I w/Lab (5)  
 PHY 212 Physics: Calculus-Based II w/Lab (5)  
 SCI 105 Science in Society (3)  
 SCI 155/156 Integrated Science I/II (4/4) (Both must be taken to satisfy science credit. Recommended for Teacher Education only.)

**Additional AA-History Catalog 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 the student 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 is required for degree completion.

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.

The Statewide Articulation Agreement for History can be found at the Colorado Department of Higher Education website.

**Approved AA-History Electives\***

*\*Students planning on transferring to Colorado State University-Fort Collins are advised to complete at least two semesters of one college level foreign language.*

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 121 and 122
Anthropology	ANT-All courses
Art	ART-All courses
Astronomy	AST-All courses
Biology	BIO-All courses
Business	BUS 115, 216, 217 and 226
Chemistry	CHE-All courses
Communication Disorders	CMD-All courses
Communication	COM-All courses
Computer Information Systems	CIS 118, 240, 243 and 268
Computer Science	CSC 119, 160, 161, 165, 225, 236, 237 and 240
Criminal Justice	CRJ-All courses above 109
Dance	DAN-All courses
<i>(Some Dance courses may transfer as physical education courses.)</i>	
Early Childhood Education	ECE 101, 205, 238, 241 and 260
Economics	ECO-All courses
Education	EDU-All courses above 200
English	ENG-All courses above 122
Environmental Science	ENV 101
Foreign Language	All courses except 101 and 102
Geography	GEO-All courses
Geology	GEY-All courses
Health and Wellness	HWE 100
History	HIS-All courses
Humanities	HUM-All courses
Journalism	JOU 105
Literature	LIT-All courses
Management	MAN 226
Marketing	MAR 216
Mathematics	MAT-All courses 120 and above
Meteorology	MET 150
Music	MUS-All courses
Natural Resources	NRE 251
Philosophy	PHI-All courses
Physical Education	PED-All courses
<i>(Maximum 3 credits from PED can apply toward degree)</i>	
Recreation	REC 100, REC 200, and REC 211
Physics	PHY-All courses
Political Science	POS-All courses
Psychology	PSY 101, 102, 110, 205, 215, 217, 226, 227, 235, 238, 240, 245, 249, and 265
Science	SCI 105, SCI 155, 156
Sociology	SOC-All courses
Theatre	THE-All courses

### **Other AA-History Degree Requirements**

1. A minimum of 60 credits is required for the Associate of Arts Degree in History. This must include 34-39 credits in general education transfer courses, 15 credits in additional required courses, and 6-11 credits in the areas specified above in approved electives.
2. You must complete 6-11 elective credits. These must be college-level transfer courses and may include no more than 3 credits in physical education (PED) – see approved electives above. 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. You must file an Application for Graduation during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term. You must apply to graduate within one year of completing degree requirements.
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 Red Rocks 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.
9. With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.

# AA - Political Science Designated Degree Requirements

## General Education and Major Course Requirements (44-48 credits). Approved Electives (12-16 credits) Total Credits (60 required).

### Political Science Major Requirements - 4 courses (12 credits)

POS 105 Introduction to Political Science (3)  
POS 111 American Government (3)  
POS 205 International Relations (3)  
POS 225 Comparative Government (3)

*Please note: POS courses taken in excess of the 4 required courses (12 credit hours) listed above may not count as Sociology major credits at four-year institutions.*

### Communication - 2 courses - (6 credits)

ENG 121 English Composition I (3)  
ENG 122 English Composition II (3)

### Mathematics - 1 course - (3-5 credits)

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

### Arts and Humanities - 2 courses - (6 credits)

#### • Arts and Expression

ART 110 Art Appreciation (3)  
ART 111 Art History Ancient to Medieval (3)  
ART 112 Art History Renaissance to Modern (3)  
ART 207 Art History 1900 – Present (3)  
DAN 125 History of Dance I (3)  
MUS 120 Music Appreciation (3)  
MUS 121 Music History Medieval thru Classical (3)  
MUS 122 Music History Romantic to Present (3)  
MUS 123 Survey of World Music (3)  
MUS 125 History of Jazz (3)  
THE 105 Theatre Appreciation (3)  
THE 211 Development of Theatre I (3)  
THE 212 Development of Theatre II (3)

#### • Literature & Humanities

HUM 115 World Mythology (3)  
HUM 121 Humanities: Early Civilization (3)  
HUM 122 Humanities: Medieval to Modern (3)  
HUM 123 Humanities: The Modern World (3)  
LIT 115 Introduction to Literature (3)  
LIT 201 World Literature to 1600 (3)  
LIT 202 World Literature after 1600 (3)  
LIT 205 Ethnic Literature (3)  
LIT 211 American Literature to Civil War (3)  
LIT 212 American Literature after Civil War (3)  
LIT 221 British Literature to 1770 (3)  
LIT 222 British Literature since 1770 (3)  
LIT 225 Introduction to Shakespeare (3)  
LIT 268 Celtic Literature (3)

#### • Ways of Thinking

PHI 111 Introduction to Philosophy (3)  
PHI 112 Ethics (3)  
PHI 113 Logic (3)  
PHI 114 Comparative Religions (3)  
PHI 214 Philosophy of Religion (3)  
PHI 218 Philosophy of the Environment (3)

#### • Foreign Languages

(Must be intermediate/200-level)  
FL 211 Second Year Foreign Language (3) FRE, GER, ITA, JPN, RUS, SPA  
FL 212 Second Year Foreign Language (3) FRE, GER, ITA, JPN, RUS, SPA

#### History - 1 course (3 credits)

Select 1 History course.

HIS 101 History of Western Civilization I (3)  
HIS 102 History of Western Civilization II (3)  
HIS 111 World Civilization I (3)  
HIS 112 World Civilization II (3)  
HIS 201 U.S. History I (3)  
HIS 202 U.S. History II (3)  
HIS 207 American Environmental History (3)  
HIS 208 American Indian History (3)  
HIS 215 Women in U.S. History (3)  
HIS 225 Colorado History (3)  
HIS 236 U.S. History Since 1945 (3)  
HIS 244 History of Latin America (3)  
HIS 247 Contemporary World History (3)

#### Social and Behavioral Science - 2 courses - (6 credits)

#### • Economic & Political Systems

ECO 201 Macro Economics (3)  
ECO 202 Micro Economics (3)

#### Natural & Physical Sciences - 2 courses - (8-10 credits)

AST 101 Astronomy I (4)  
AST 102 Astronomy II (4)  
BIO 105 Science of Biology (4)  
BIO 208 General College Microbiology (5)  
BIO 111 General College Biology I w/Lab (5)  
BIO 112 General College Biology II w/Lab (5)  
BIO 201 Anatomy & Physiology I (4)  
BIO 202 Anatomy & Physiology II (4)  
BIO 204 Microbiology (4)  
BIO 220 General Zoology (5)  
BIO 221 Botany (5)  
CHE 101 Introduction to Chemistry I (5)  
CHE 111 General College Chemistry I (5)  
CHE 112 General College Chemistry II (5)  
ENV 101 Environmental Science (4)  
GEO 111 Physical Geography: Land (4)  
GEO 112 Physical Geography: Weather and Climate (4)  
GEY 111 Physical Geology (4)  
GEY 112 Historical Geology (4)  
GEY 135 Environmental Geology (4)  
MET 150 General Meteorology (4)  
NRE 251 General Oceanography (4)  
PHY 105 Conceptual Physics (4)  
PHY 107 Energy Science and Technology (4)  
PHY 111 Physics: Algebra-Based I w/Lab (5)  
PHY 112 Physics: Algebra-Based II w/ Lab (5)  
PHY 211 Physics: Calculus-Based I w/Lab (5)  
PHY 212 Physics: Calculus-Based II w/Lab (5)  
SCI 155/156 Integrated Science I/II (4/4) (Both must be taken to satisfy science credit. Recommended for Teacher Education only.)

## Additional AA-Political Science Catalog 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 the student 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 is required for degree completion.

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.

The Statewide Articulation Agreement for History can be found at the Colorado Department of Higher Education website.

## Approved AA-Political Science Electives

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 121 and 122
Anthropology	ANT-All courses
Art	ART-All courses
Astronomy	AST-All courses
Biology	BIO-All courses
Business	BUS 115, 216, 217 and 226
Chemistry	CHE-All courses
Communication Disorders	CMD-All courses
Communication	COM-All courses
Computer Information Systems	CIS 118, 240, 243 and 268
Computer Science	CSC 119, 160, 161, 165, 225, 236, 237 and 240
Criminal Justice	CRJ-All courses above 109
Dance	DAN-All courses
<i>(Some Dance courses may transfer as physical education courses.)</i>	
Early Childhood Education	ECE 101, 205, 238, 241 and 260
Economics	ECO-All courses
Education	EDU-All courses above 200
English	ENG-All courses above 122
Environmental Science	ENV 101
Foreign Language	All courses except 101 and 102
Geography	GEO-All courses
Geology	GEY-All courses
Health and Wellness	HWE 100
History	HIS-All courses
Humanities	HUM-All courses
Journalism	JOU 105
Literature	LIT-All courses
Management	MAN 226

Marketing	MAR 216
Mathematics	MAT-All courses 120 and above
Meteorology	MET 150
Music	MUS-All courses
Natural Resources	NRE 251
Philosophy	PHI-All courses
Physical Education	PED-All courses
<i>(Maximum 3 credits from PED can apply toward degree)</i>	
Recreation	REC 100, REC 200, and REC 211
Physics	PHY-All courses
Political Science	POS-All courses

(POS courses taken in excess of the 4 required courses (12 credit hours) may not count as Political Science major credits at four-year institutions.)

Psychology	PSY 101, 102, 110, 205, 215, 217, 226, 227, 235, 238, 240, 245, 249, and 265
Science	SCI 155, 156
Sociology	SOC-All courses
Theatre	THE-All courses

## Other AA-Political Science Degree Requirements

1. A minimum of 60 credits is required for the Associate of Arts Degree in Political Science. This must include 32-36 credits in general education transfer courses, 12 credits in additional required courses, and 12-16 credits in the areas specified above in approved electives.
2. You must complete 12-16 semester elective credits. These must be college-level transfer courses and may include no more than 3 credits in physical education (PED) – see approved electives above. 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. You must file an Application for Graduation during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term. You must apply to graduate within one year of completing degree requirements.
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 Red Rocks 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.
9. With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.

# AA - Psychology Designated Degree Requirements

## General Education and Major Course Requirements (54-56 credits). Approved Electives (4-6 credits) Total Credits (60 required).

### Psychology Major Requirements - 3 courses (9 credits)

PSY 101 General Psychology I (3)

PSY 102 General Psychology II (3)

COM 115 Public Speaking (3)

or

COM 125 Interpersonal Communication (3)

### Additional Psychology Requirements - 3 courses (9 credits)

PSY 205 Psychology of Gender (3)

PSY 217 Human Sexuality (3)

PSY 226 Social Psychology (3)

PSY 227 Psychology of Death and Dying (3)

PSY 235 Human Growth & Development (3)

PSY 238 Child Development (3)

PSY 240 Health Psychology (3)

PSY 249 Abnormal Psychology (3)

### Communication - 2 courses - (6 credits)

ENG 121 English Composition I (3)

ENG 122 English Composition II (3)

### Mathematics - 1 course - (3-4 credits)

MAT 121 College Algebra (3-4)

### Arts and Humanities - 3 courses - (9 credits)

No more than 2 courses from any one category

#### • Arts and Expression

ART 110 Art Appreciation (3)

ART 111 Art History Ancient to Medieval (3)

ART 112 Art History Renaissance to Modern (3)

ART 207 Art History 1900 – Present (3)

DAN 125 History of Dance I (3)

MUS 120 Music Appreciation (3)

MUS 121 Music History Medieval thru Classical (3)

MUS 122 Music History Romantic to Present (3)

MUS 123 Survey of World Music (3)

MUS 125 History of Jazz (3)

THE 105 Theatre Appreciation (3)

THE 211 Development of Theatre I (3)

THE 212 Development of Theatre II (3)

#### • Literature & Humanities

HUM 115 World Mythology (3)

HUM 121 Humanities: Early Civilization (3)

HUM 122 Humanities: Medieval to Modern (3)

HUM 123 Humanities: The Modern World (3)

LIT 115 Introduction to Literature (3)

LIT 201 World Literature to 1600 (3)

LIT 202 World Literature after 1600 (3)

LIT 205 Ethnic Literature (3)

LIT 211 American Literature to Civil War (3)

LIT 212 American Literature after Civil War (3)

LIT 221 British Literature to 1770 (3)

LIT 222 British Literature since 1770 (3)

LIT 225 Introduction to Shakespeare (3)

LIT 268 Celtic Literature (3)

#### • Ways of Thinking

PHI 111 Introduction to Philosophy (3)

PHI 112 Ethics (3)

PHI 113 Logic (3)

PHI 114 Comparative Religions (3)

PHI 214 Philosophy of Religion (3)

PHI 218 Philosophy of the Environment (3)

#### • Foreign Languages

(Must be intermediate/200-level)

FL 211 Second Year Foreign Language (3) FRE, GER, ITA, JPN,

RUS, SPA

FL 212 Second Year Foreign Language (3) FRE, GER, ITA, JPN,

RUS, SPA

#### History - 1 course - (3 credits)

HIS 101 History of Western Civilization I (3)

HIS 102 History of Western Civilization II (3)

HIS 111 World Civilization I (3)

HIS 112 World Civilization II (3)

HIS 201 U.S. History I (3)

HIS 202 U.S. History II (3)

HIS 207 American Environmental History (3)

HIS 208 American Indian History (3)

HIS 215 Women In U.S. History (3)

HIS 225 Colorado History (3)

HIS 236 U.S. History Since 1945 (3)

HIS 244 History of Latin America (3)

HIS 247 Contemporary World History (3)

#### Social and Behavioral Science - 2 courses - (6 credits)

#### • Economic & Political Systems

ECO 101 Economics of Social Issues (3)

ECO 201 Macro Economics (3)

ECO 202 Micro Economics (3)

ECO 245 Environmental Economics (3)

POS 105 Introduction to Political Science (3)

POS 111 American Government (3)

POS 125 American State and Local Gov. (3)

POS 205 International Relations (3)

POS 225 Comparative Government (3)

#### • Geography

GEO 105 World Regional Geography (3)

GEO 106 Human Geography (3)

#### • Human Behavior, Cultural & Social Frameworks

ANT 101 Cultural Anthropology (3)

ANT 107 Introduction to Archaeology (3)

ANT 108 Archaeology of World Rock Art (3)

ANT 111 Physical Anthropology (3)

ANT 201 Introduction to Forensic Anthropology (3)

ANT 215 Indians of North America (3)

ANT 250 Medical Anthropology (3)

COM 220 Intercultural Communication (3)

JOU 105 Introduction to Mass Media (3)

PSY 101 General Psychology I (3)

PSY 102 General Psychology II (3)

PSY 205 Psychology of Gender (3)

PSY 217 Human Sexuality (3)

PSY 226 Social Psychology (3)

PSY 227 Psychology of Death and Dying (3)

PSY 235 Human Growth & Development (3)

PSY 238 Child Development (3)

PSY 240 Health Psychology (3)

PSY 249 Abnormal Psychology (3)

SOC 101 Introduction to Sociology I (3)

SOC 102 Introduction to Sociology II (3)

SOC 205 Sociology of Family Dynamics (3)

SOC 207 Environmental Sociology (3)

SOC 215 Contemporary Social Problems (3)

SOC 216 Sociology of Gender (3)  
 SOC 218 Sociology of Diversity (3)  
 SOC 220 Sociology of Religion (3)  
 SOC 231 Sociology of Deviant Behavior (3)

### Natural & Physical Sciences - 2 courses - (8-10 credits)

*One Biology course required with a Lab.*

AST 101 Astronomy I (4)  
 AST 102 Astronomy II (4)  
 BIO 105 Science of Biology (4)  
 BIO 111 General College Biology I w/Lab (5)  
 BIO 112 General College Biology II w/Lab (5)  
 BIO 201 Anatomy & Physiology I (4)  
 BIO 202 Anatomy & Physiology II (4)  
 BIO 204 Microbiology (4)  
 BIO 208 General College Microbiology (5)  
 BIO 220 General Zoology (5)  
 BIO 221 Botany (5)  
 CHE 101 Introduction to Chemistry I (5)  
 CHE 111 General College Chemistry I (5)  
 CHE 112 General College Chemistry II (5)  
 ENV 101 Environmental Science (4)  
 GEO 111 Physical Geography: Land (4)  
 GEO 112 Physical Geography: Weather and Climate (4)  
 GEY 111 Physical Geology (4)  
 GEY 112 Historical Geology (4)  
 GEY 135 Environmental Geology (4)  
 MET 150 General Meteorology (4)  
 NRE 251 General Oceanography (4)  
 PHY 105 Conceptual Physics (4)  
 PHY 107 Energy Science and Technology (4)  
 PHY 111 Physics: Algebra-Based I w/Lab (5)  
 PHY 112 Physics: Algebra-Based II w/ Lab (5)  
 PHY 211 Physics: Calculus-Based I w/Lab (5)  
 PHY 212 Physics: Calculus-Based II w/Lab (5)  
 SCI 155/156 Integrated Science I/II (4/4) (Both must be taken to satisfy science credit. Recommended for Teacher Education only.)

### Additional AA-Psychology Catalog 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 the student 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 is required for degree completion.

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.

The Statewide Articulation Agreement for Psychology can be found at the Colorado Department of Higher Education website.

### Approved AA-Psychology Electives

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 121 and 122
Anthropology	ANT-All courses
Art	ART-All courses
Astronomy	AST-All courses
Biology	BIO-All courses
Business	BUS 115, 216, 217 and 226
Chemistry	CHE-All courses
Communication Disorders	CMD-All courses
Communication	COM-All courses
Computer Information Systems	CIS 118, 240, 243 and 268
Computer Science	CSC 119, 160, 161, 165, 225, 236, 237 and 240
Criminal Justice	CRJ-All courses above 109
Dance	DAN-All courses
<i>(Some Dance courses may transfer as physical education courses.)</i>	
Early Childhood Education	ECE 101, 205, 238, 241 and 260
Economics	ECO-All courses
Education	EDU-All courses above 200
English	ENG-All courses above 122
Environmental Science	ENV 101
Foreign Language	All courses except 101 and 102
Geography	GEO-All courses
Geology	GEY-All courses
Health and Wellness	HWE 100
History	HIS-All courses
Humanities	HUM-All courses
Journalism	JOU 105
Literature	LIT-All courses
Management	MAN 226
Marketing	MAR 216
Mathematics	MAT-All courses 120 and above
Meteorology	MET 150
Music	MUS-All courses
Natural Resources	NRE 251
Philosophy	PHI-All courses
Physical Education	PED-All courses
<i>(Maximum 3 credits from PED apply toward degree)</i>	
Recreation	REC 100, REC 200, and REC 211
Physics	PHY-All courses
Political Science	POS-All courses
Psychology	PSY 101, 102, 110, 205, 215, 217, 226, 227, 235, 238, 240, 245, 249, and 265
Science	SCI 155, 156
Sociology	SOC-All courses
Theatre	THE-All courses

## **Other AA-Psychology Degree Requirements**

1. A minimum of 60 credits is required for the Associate of Arts Degree in Psychology. This must include 36-38 credits in general education transfer courses, 18 credits in additional required courses, and 4-6 credits in the areas specified above in approved electives.
2. You must complete 6-11 semester elective credits. These must be college-level transfer courses and may include no more than 3 credits in physical education (PED) – see approved electives above. 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. You must file an Application for Graduation during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term. You must apply to graduate within one year of completing degree requirements.
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 Red Rocks 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.
9. With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.

# AA - Sociology Designated Degree Requirements

## General Education and Major Course Requirements (53-56 credits). Approved Electives (4-7 credits) Total Credits (60 required).

### Sociology Major Requirements - 3 courses (9 credits)

SOC 101 Introduction to Sociology I (3)  
SOC 102 Introduction to Sociology II (3)  
COM 115 Public Speaking (3)

or

COM 125 Interpersonal Communication (3)

### Additional Sociology Requirements - 3 courses (9 credits)

SOC 205 Sociology of Family Dynamics (3)  
SOC 207 Environmental Sociology (3)  
SOC 215 Contemporary Social Problems (3)  
SOC 216 Sociology of Gender (3)  
SOC 218 Sociology of Diversity (3)  
SOC 220 Sociology of Religion (3)  
SOC 231 Sociology of Deviant Behavior (3)  
SOC 237 Sociology of Death and Dying (3)

*Please note: SOC courses taken in excess of the 5 required courses (15 credit hours) listed above may not count as Sociology major credits at four-year institutions.*

### Communication - 2 courses - (6 credits)

ENG 121 English Composition I (3)  
ENG 122 English Composition II (3)

### Mathematics - 1 course - (3-4 credits)

MAT 121 College Algebra (4)

or

MAT 135 Statistics (3)

### Arts and Humanities - 3 courses - (9 credits)

#### • Arts and Expression

ART 110 Art Appreciation (3)  
ART 111 Art History Ancient to Medieval (3)  
ART 112 Art History Renaissance to Modern (3)  
ART 207 Art History 1900 – Present (3)  
DAN 125 History of Dance I (3)  
MUS 120 Music Appreciation (3)  
MUS 121 Music History Medieval thru Classical (3)  
MUS 122 Music History Romantic to Present (3)  
MUS 123 Survey of World Music (3)  
MUS 125 History of Jazz (3)  
THE 105 Theatre Appreciation (3)  
THE 211 Development of Theatre I (3)  
THE 212 Development of Theatre II (3)

#### • Literature & Humanities

HUM 115 World Mythology (3)  
HUM 121 Humanities: Early Civilization (3)  
HUM 122 Humanities: Medieval to Modern (3)  
HUM 123 Humanities: The Modern World (3)  
LIT 115 Introduction to Literature (3)  
LIT 201 World Literature to 1600 (3)  
LIT 202 World Literature after 1600 (3)  
LIT 205 Ethnic Literature (3)  
LIT 211 American Literature to Civil War (3)  
LIT 212 American Literature after Civil War (3)  
LIT 221 British Literature to 1770 (3)  
LIT 222 British Literature since 1770 (3)  
LIT 225 Introduction to Shakespeare (3)  
LIT 268 Celtic Literature (3)

#### • Ways of Thinking

PHI 111 Introduction to Philosophy (3)

PHI 112 Ethics (3)

PHI 113 Logic (3)

PHI 114 Comparative Religions (3)

PHI 214 Philosophy of Religion (3)

PHI 218 Philosophy of the Environment (3)

#### • Foreign Languages

(Must be intermediate/200-level)

FL 211 Second Year Foreign Language (3) FRE, GER, ITA, JPN, RUS, SPA

FL 212 Second Year Foreign Language (3) FRE, GER, ITA, JPN, RUS, SPA

#### History - 1 course (3 credits)

Select 1 History course.

HIS 101 History of Western Civilization I (3)

HIS 102 History of Western Civilization II (3)

HIS 111 World Civilization I (3)

HIS 112 World Civilization II (3)

HIS 201 U.S. History I (3)

HIS 202 U.S. History II (3)

HIS 207 American Environmental History (3)

HIS 208 American Indian History (3)

HIS 215 Women in U.S. History (3)

HIS 225 Colorado History (3)

HIS 236 U.S. History Since 1945 (3)

HIS 244 History of Latin America (3)

HIS 247 Contemporary World History (3)

#### Social and Behavioral Science - 2 courses - (6 credits)

#### • Economic & Political Systems

ECO 101 Economics of Social Issues (3)

ECO 201 Macro Economics (3)

ECO 202 Micro Economics (3)

ECO 245 Environmental Economics (3)

POS 105 Introduction to Political Science (3)

POS 111 American Government (3)

POS 125 American State and Local Gov. (3)

POS 205 International Relations (3)

POS 225 Comparative Government (3)

#### • Geography

GEO 105 World Regional Geography (3)

GEO 106 Human Geography (3)

#### • Human Behavior, Cultural & Social Frameworks

ANT 101 Cultural Anthropology (3)

ANT 107 Introduction to Archaeology (3)

ANT 108 Archaeology of World Rock Art (3)

ANT 111 Physical Anthropology (3)

ANT 201 Introduction to Forensic Anthropology (3)

ANT 215 Indians of North America (3)

ANT 250 Medical Anthropology (3)

COM 220 Intercultural Communication (3)

JOU 105 Introduction to Mass Media (3)

PSY 101 General Psychology I (3)

PSY 102 General Psychology II (3)

PSY 205 Psychology of Gender (3)

PSY 217 Human Sexuality (3)

PSY 226 Social Psychology (3)

PSY 227 Psychology of Death and Dying (3)

PSY 235 Human Growth & Development (3)

PSY 238 Child Development (3)

PSY 240 Health Psychology (3)

PSY 249 Abnormal Psychology (3)

SOC 205 Sociology of Family Dynamics (3)

SOC 207 Environmental Sociology (3)

SOC 215 Contemporary Social Problems (3)

SOC 216 Sociology of Gender (3)

SOC 218 Sociology of Diversity (3)

SOC 220 Sociology of Religion (3)

SOC 231 Sociology of Deviant Behavior (3)  
 SOC 237 Sociology of Death & Dying (3)

**Natural & Physical Sciences - 2 courses - (8-10 credits)**

AST 101 Astronomy I (4)  
 AST 102 Astronomy II (4)  
 BIO 105 Science of Biology (4)  
 BIO 111 General College Biology I w/Lab (5)  
 BIO 112 General College Biology II w/Lab (5)  
 BIO 201 Anatomy & Physiology I (4)  
 BIO 202 Anatomy & Physiology II (4)  
 BIO 204 Microbiology (4)  
 BIO 208 General College Microbiology (5)  
 BIO 220 General Zoology (5)  
 BIO 221 Botany (5)  
 CHE 101 Introduction to Chemistry I (5)  
 CHE 111 General College Chemistry I (5)  
 CHE 112 General College Chemistry II (5)  
 ENV 101 Environmental Science (4)  
 GEO 111 Physical Geography: Land (4)  
 GEO 112 Physical Geography: Weather and Climate (4)  
 GEY 111 Physical Geology (4)  
 GEY 112 Historical Geology (4)  
 GEY 135 Environmental Geology (4)  
 MET 150 General Meteorology (4)  
 NRE 251 General Oceanography (4)  
 PHY 105 Conceptual Physics (4)  
 PHY 107 Energy Science and Technology (4)  
 PHY 111 Physics: Algebra-Based I w/Lab (5)  
 PHY 112 Physics: Algebra-Based II w/ Lab (5)  
 PHY 211 Physics: Calculus-Based I w/Lab (5)  
 PHY 212 Physics: Calculus-Based II w/Lab (5)  
 SCI 155/156 Integrated Science I/II (4/4) (Both must be taken to satisfy science credit. Recommended for Teacher Education only.)

**Additional AA-Sociology Catalog 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 the student 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 is required for degree completion.

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.

The Statewide Articulation Agreement for History can be found at the Colorado Department of Higher Education website.

**Approved AA-Sociology Electives**

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 121 and 122
Anthropology	ANT-All courses
Art	ART-All courses
Astronomy	AST-All courses
Biology	BIO-All courses
Business	BUS 115, 216, 217 and 226
Chemistry	CHE-All courses
Communication Disorders	CMD-All courses
Communication	COM-All courses
Computer Information Systems	CIS 118, 240, 243 and 268
Computer Science	CSC 119, 160, 161, 165, 225, 236, 237 and 240
Criminal Justice	CRJ-All courses above 109
Dance	DAN-All courses
<i>(Some Dance courses may transfer as physical education courses.)</i>	
Early Childhood Education	ECE 101, 205, 238, 241 and 260
Economics	ECO-All courses
Education	EDU-All courses above 200
English	ENG-All courses above 122
Environmental Science	ENV 101
Foreign Language	All courses except 101 and 102
Geography	GEO-All courses
Geology	GEY-All courses
Health and Wellness	HWE 100
History	HIS-All courses
Humanities	HUM-All courses
Journalism	JOU 105
Literature	LIT-All courses
Management	MAN 226
Marketing	MAR 216
Mathematics	MAT-All courses 120 and above
Meteorology	MET 150
Music	MUS-All courses
Natural Resources	NRE 251
Philosophy	PHI-All courses
Physical Education	PED-All courses
<i>(Maximum 3 credits from PED can apply toward degree)</i>	
Recreation	REC 100, REC 200, and REC 211
Physics	PHY-All courses
Political Science	POS-All courses
Psychology	PSY 101, 102, 110, 205, 215, 217, 226, 227, 235, 238, 240, 245, 249, and 265
Science	SCI 155, 156
Sociology	SOC-All courses
Theatre	THE-All courses

## **Other AA-Sociology Degree Requirements**

1. A minimum of 60 credits is required for the Associate of Arts Degree in Sociology. This must include 35-38 credits in general education transfer courses, 18 credits in additional required courses, and 4-7 credits in the areas specified above in approved electives.
2. You must complete 4-7 semester elective credits. These must be college-level transfer courses and may include no more than 3 credits in physical education (PED) – see approved electives above. 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. You must file an Application for Graduation during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term. You must apply to graduate within one year of completing degree requirements.
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 Red Rocks 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.
9. With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.

# AA - Spanish Designated Degree Requirements

## General Education and Major Course Requirements (47-52 credits). Approved Electives (8-13 credits) Total Credits (60 required).

### Spanish Major Requirements - 3 courses (13 credits)

SPA 111 Spanish Language I (5)

SPA 112 Spanish Language II (5)

COM 115 Public Speaking (3)

or

COM 125 Interpersonal Communication (3)

### Communication - 2 courses - (6 credits)

ENG 121 English Composition I (3)

ENG 122 English Composition II (3)

### Mathematics - 1 course - (3-5 credits)

MAT 120 Mathematics for the Liberal Arts (4)

MAT 121 College Algebra (4)

MAT 122 College Trigonometry (3)

MAT 123 Finite Math (4)

MAT 125 Survey of Calculus (4)

MAT 135 Introduction to Statistics (3)

MAT 166 Pre-Calculus (5)

MAT 201 Calculus I (5)

MAT 202 Calculus II (5)

MAT 204 Calculus III with Engineering Applications (5)

MAT 261 Differential Equations with Engineering Applications (4)

### Arts and Humanities - 3 courses - (9 credits)

Both Spanish classes below are required.

#### • Foreign Languages

SPA 211 Spanish Language III (3)

SPA 212 Spanish Language IV (3)

#### Choose 1 course from any category below

#### • Arts and Expression

ART 110 Art Appreciation (3)

ART 111 Art History Ancient to Medieval (3)

ART 112 Art History Renaissance to Modern (3)

ART 207 Art History 1900 – Present (3)

DAN 125 History of Dance I (3)

MUS 120 Music Appreciation (3)

MUS 121 Music History Medieval thru Classical (3)

MUS 122 Music History Romantic to Present (3)

MUS 123 Survey of World Music (3)

MUS 125 History of Jazz (3)

THE 105 Theatre Appreciation (3)

THE 211 Development of Theatre I (3)

THE 212 Development of Theatre II (3)

#### • Literature & Humanities

HUM 115 World Mythology (3)

HUM 121 Humanities: Early Civilization (3)

HUM 122 Humanities: Medieval to Modern (3)

HUM 123 Humanities: The Modern World (3)

LIT 115 Introduction to Literature (3)

LIT 201 World Literature to 1600 (3)

LIT 202 World Literature after 1600 (3)

LIT 205 Ethnic Literature (3)

LIT 211 American Literature to Civil War (3)

LIT 212 American Literature after Civil War (3)

LIT 221 British Literature to 1770 (3)

LIT 222 British Literature since 1770 (3)

LIT 225 Introduction to Shakespeare (3)

LIT 268 Celtic Literature (3)

#### • Ways of Thinking

PHI 111 Introduction to Philosophy (3)

PHI 112 Ethics (3)

PHI 113 Logic (3)

PHI 114 Comparative Religions (3)

PHI 214 Philosophy of Religion (3)

PHI 218 Philosophy of the Environment (3)

#### History - 1 course - (3 credits)

HIS 244 History of Latin America (3)

#### Social and Behavioral Science - 2 courses - (6 credits)

#### • Economic & Political Systems

ECO 101 Economics of Social Issues (3)

ECO 201 Macro Economics (3)

ECO 202 Micro Economics (3)

ECO 245 Environmental Economics (3)

POS 105 Introduction to Political Science (3)

POS 111 American Government (3)

POS 125 American State and Local Gov. (3)

POS 205 International Relations (3)

POS 225 Comparative Government (3)

#### • Geography

GEO 105 World Regional Geography (3)

GEO 106 Human Geography (3)

#### • Human Behavior, Cultural & Social Frameworks

ANT 101 Cultural Anthropology (3)

ANT 107 Introduction to Archaeology (3)

ANT 108 Archaeology of World Rock Art (3)

ANT 111 Physical Anthropology (3)

ANT 201 Introduction to Forensic Anthropology (3)

ANT 215 Indians of North America (3)

ANT 250 Medical Anthropology (3)

COM 220 Intercultural Communication (3)

JOU 105 Introduction to Mass Media (3)

PSY 101 General Psychology I (3)

PSY 102 General Psychology II (3)

PSY 205 Psychology of Gender (3)

PSY 217 Human Sexuality (3)

PSY 226 Social Psychology (3)

PSY 227 Psychology of Death and Dying (3)

PSY 235 Human Growth & Development (3)

PSY 238 Child Development (3)

PSY 240 Health Psychology (3)

PSY 249 Abnormal Psychology (3)

SOC 101 Introduction to Sociology I (3)

SOC 102 Introduction to Sociology II (3)

SOC 205 Sociology of Family Dynamics (3)

SOC 207 Environmental Sociology (3)

SOC 215 Contemporary Social Problems (3)

SOC 216 Sociology of Gender (3)

SOC 218 Sociology of Diversity (3)

SOC 220 Sociology of Religion (3)

SOC 231 Sociology of Deviant Behavior (3)

#### Natural & Physical Sciences - 2 courses - (7-10 credits)

One course must have a laboratory

AST 101 Astronomy I (4)

AST 102 Astronomy II (4)

BIO 105 Science of Biology (4)

BIO 111 General College Biology I w/Lab (5)

BIO 112 General College Biology II w/Lab (5)

BIO 116 Introduction to Human Disease (3)

BIO 201 Anatomy & Physiology I (4)

BIO 202 Anatomy & Physiology II (4)

BIO 204 Microbiology (4)

BIO 208 General College Microbiology (5)

BIO 220 General Zoology (5)

BIO 221 Botany (5)

CHE 101 Introduction to Chemistry I (5)

CHE 111 General College Chemistry I (5)  
 CHE 112 General College Chemistry II (5)  
 ENV 101 Environmental Science (4)  
 GEO 111 Physical Geography: Land (4)  
 GEO 112 Physical Geography: Weather and Climate (4)  
 GEY 111 Physical Geology (4)  
 GEY 112 Historical Geology (4)  
 GEY 135 Environmental Geology (4)  
 MET 150 General Meteorology (4)  
 NRE 251 General Oceanography (4)  
 PHY 105 Conceptual Physics (4)  
 PHY 107 Energy Science and Technology (4)  
 PHY 111 Physics: Algebra-Based I w/Lab (5)  
 PHY 112 Physics: Algebra-Based II w/ Lab (5)  
 PHY 211 Physics: Calculus-Based I w/Lab (5)  
 PHY 212 Physics: Calculus-Based II w/Lab (5)  
 SCI 105 Science in Society (3)  
 SCI 155/156 Integrated Science I/II (4/4) (Both must be taken to satisfy science credit. Recommended for Teacher Education only.)

### Additional AA-Spanish Catalog 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 the student 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 is required for degree completion.

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.

The Statewide Articulation Agreement for Spanish can be found at the Colorado Department of Higher Education website.

### Approved AA-Spanish Electives

Suggested elective course: Any 200-level Spanish course; courses outside the Spanish department with content related to the Spanish-speaking world.

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 121 and 122
Anthropology	ANT-All courses
Art	ART-All courses
Astronomy	AST-All courses
Biology	BIO-All courses
Business	BUS 115, 216, 217 and 226
Chemistry	CHE-All courses
Communication Disorders	CMD-All courses

Communication	COM-All courses
Computer Information Systems	CIS 118, 240, 243 and 268
Computer Science	CSC 119, 160, 161, 165, 225, 236, 237 and 240
Criminal Justice	CRJ-All courses above 109
Dance	DAN-All courses
<i>(Some Dance courses may transfer as physical education courses.)</i>	
Early Childhood Education	ECE 101, 205, 238, 241 and 260
Economics	ECO-All courses
Education	EDU-All courses above 200
English	ENG-All courses above 122
Environmental Science	ENV 101
Foreign Language	All courses except 101 and 102
Geography	GEO-All courses
Geology	GEY-All courses
Health and Wellness	HWE 100
History	HIS-All courses
Humanities	HUM-All courses
Journalism	JOU 105
Literature	LIT-All courses
Management	MAN 226
Marketing	MAR 216
Mathematics	MAT-All courses 120 and above
Meteorology	MET 150
Music	MUS-All courses
Natural Resources	NRE 251
Philosophy	PHI-All courses
Physical Education	PED-All courses
<i>(Maximum 3 credits from PED courses can apply toward degree)</i>	
Recreation	REC 100, REC 200, and REC 211
Physics	PHY-All courses
Political Science	POS-All courses
Psychology	PSY 101, 102, 110, 205, 215, 217, 226, 227, 235, 238, 240, 245, 249, and 265
Science	SCI 105, SCI 155, 156
Sociology	SOC-All courses
Theatre	THE-All courses

### Other AA-Spanish Degree Requirements

1. A minimum of 60 credits is required for the Associate of Arts Degree in Spanish. This must include 34-39 credits in general education transfer courses, 13 credits in additional required courses, and 8-13 credits in the areas specified above in approved electives.
2. You must complete 8-13 semester elective credits. These must be college-level transfer PED courses and may include no more than 3 credits in physical education (PED) – see approved electives above. 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. You must file an Application for Graduation during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term. You must apply to graduate within one year of completing degree requirements.

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 Red Rocks 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.
9. With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.

### AS - Mathematics Designated Degree Requirements

**General Education and Major Course Requirements (56 credits). Approved Electives (4 credits) Total Credits (60 required).**

**Mathematics Major Requirements - 4 courses (17 credits)**

MAT 202 Calculus II (5)  
MAT 204 Calculus III with Engineering Applications (5)  
CSC 160 Computer Science I\*  
COM 115 Public Speaking (3)

or

COM 125 Interpersonal Communication (3)

**Communication - 2 courses - (6 credits)**

ENG 121 English Composition I (3)  
ENG 122 English Composition II (3)

**Mathematics - 1 course - (5 credits)**

MAT 201 Calculus I (5)

**Arts and Humanities - 3 courses - (9 credits)**

Select 3 courses, with no more than 2 courses from any 1 category.

**• Arts and Expression**

ART 110 Art Appreciation (3)  
ART 111 Art History Ancient to Medieval (3)  
ART 112 Art History Renaissance to Modern (3)  
ART 207 Art History 1900 – Present (3)  
DAN 125 History of Dance I (3)  
MUS 120 Music Appreciation (3)  
MUS 121 Music History Medieval thru Classical (3)  
MUS 122 Music History Romantic to Present (3)  
MUS 123 Survey of World Music (3)  
MUS 125 History of Jazz (3)  
THE 105 Theatre Appreciation (3)  
THE 211 Development of Theatre I (3)  
THE 212 Development of Theatre II (3)

**• Literature & Humanities**

HUM 115 World Mythology (3)  
HUM 121 Humanities: Early Civilization (3)  
HUM 122 Humanities: Medieval to Modern (3)  
HUM 123 Humanities: The Modern World (3)  
LIT 115 Introduction to Literature (3)  
LIT 201 World Literature to 1600 (3)  
LIT 202 World Literature after 1600 (3)  
LIT 205 Ethnic Literature (3)  
LIT 211 American Literature to Civil War (3)  
LIT 212 American Literature after Civil War (3)  
LIT 221 British Literature to 1770 (3)  
LIT 222 British Literature since 1770 (3)  
LIT 225 Introduction to Shakespeare (3)  
LIT 268 Celtic Literature (3)

**• Ways of Thinking**

PHI 111 Introduction to Philosophy (3)  
PHI 112 Ethics (3)  
PHI 113 Logic (3)  
PHI 114 Comparative Religions (3)  
PHI 214 Philosophy of Religion (3)  
PHI 218 Philosophy of the Environment (3)

**• Foreign Languages**

(Must be intermediate/200-level)  
FL 211 Second Year Foreign Language (3)  
FRE, GER, ITA, JPN, RUS, SPA  
FL 212 Second Year Foreign Language (3)  
FRE, GER, ITA, JPN, RUS, SPA

**History - 1 course - (3 credits)**

HIS 101 History of Western Civilization I (3)  
HIS 102 History of Western Civilization II (3)  
HIS 111 World Civilization I (3)  
HIS 112 World Civilization II (3)  
HIS 201 U.S. History I (3)  
HIS 202 U.S. History II (3)  
HIS 207 American Environmental History (3)  
HIS 208 American Indian History (3)  
HIS 215 Women In U.S. History (3)  
HIS 225 Colorado History (3)  
HIS 236 U.S. History Since 1945 (3)  
HIS 244 History of Latin America (3)  
HIS 247 Contemporary World History (3)

**Social and Behavioral Science - 2 courses - (6 credits)**

**• Economic & Political Systems**

ECO 101 Economics of Social Issues (3)  
ECO 201 Macro Economics (3)  
ECO 202 Micro Economics (3)  
ECO 245 Environmental Economics (3)  
POS 105 Introduction to Political Science (3)  
POS 111 American Government (3)  
POS 125 American State and Local Government (3)  
POS 205 International Relations (3)  
POS 225 Comparative Government (3)

**• Geography**

GEO 105 World Regional Geography (3)  
GEO 106 Human Geography (3)

**• Human Behavior, Cultural & Social Frameworks**

ANT 101 Cultural Anthropology (3)  
ANT 107 Introduction to Archaeology (3)  
ANT 108 Archaeology of World Rock Art (3)  
ANT 111 Physical Anthropology (3)  
ANT 201 Introduction to Forensic Anthropology (3)  
ANT 215 Indians of North America (3)  
ANT 250 Medical Anthropology (3)  
COM 220 Intercultural Communication(3)  
JOU 105 Introduction to Mass Media (3)  
PSY 101 General Psychology I (3)  
PSY 102 General Psychology II (3)  
PSY 205 Psychology of Gender (3)  
PSY 217 Human Sexuality (3)  
PSY 226 Social Psychology (3)  
PSY 227 Psychology of Death and Dying (3)  
PSY 235 Human Growth & Development (3)  
PSY 238 Child Development (3)  
PSY 240 Health Psychology (3)  
PSY 249 Abnormal Psychology (3)  
SOC 101 Introduction to Sociology I (3)

SOC 102 Introduction to Sociology II (3)  
 SOC 207 Environmental Sociology (3)  
 SOC 205 Sociology of Family Dynamics (3)  
 SOC 215 Contemporary Problems (3)  
 SOC 216 Sociology of Gender (3)  
 SOC 218 Sociology of Diversity (3)  
 SOC 220 Sociology of Religion (3)  
 SOC 231 Sociology of Deviant Behavior (3)

**Natural & Physical Sciences - 2 courses - (10 credits)**

PHY 211 Physics: Calculus Based I (5)  
 PHY 212 Physics: Calculus Based II (5)

**Additional AS-Mathematics Catalog 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 the student 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 is required for degree completion.

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.

The Statewide Articulation Agreement for Mathematics can be found at the Colorado Department of Higher Education website.

**Approved AS-Mathematics Electives**

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.

Anthropology	ANT-All courses
Astronomy	AST-All courses
Biology	BIO-All courses except 105, 106, and 116
Chemistry	CHE-All courses
Computer Information Systems	CIS 118, 240, 243 and 268
Communication	COM-All courses
Communication Disorders	CMD-All courses
Computer Science	CSC 119, 160, 161, 165, 225, 236, 237 and 240
Economics	ECO-All courses
English	ENG-All courses above ENG 122
Environmental Science	ENV 101
Foreign Language	All courses except 101 and 102
Geography	GEO-All courses
Geology	GEY-All courses
Health and Wellness	HWE 100

Mathematics	MAT-All courses above 121 Except 123, 125, 135, 155, and 156
Meteorology	MET 150
Physics	PHY-All courses except 105 and 107
Psychology	PSY 235

**Other AS-Mathematics Degree Requirements**

1. A minimum of 60 credits is required for the Associate of Science in Mathematics Degree. This must include 39 credits in general education transfer courses, 17 credits in additional required courses, and 4 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 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.
4. You must file an Application for Graduation during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term (file in Admissions). You must apply to graduate within one year of completing degree requirements.
5. No more than 6 credits of independent study course work may be applied toward this degree.
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 Red Rocks 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.
8. With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.

# AS - Psychology Designated Degree Requirements

## General Education and Major Course Requirements (47 credits). Approved Electives (13 credits) Total Credits (60 required).

### Psychology Major Requirements - 3 courses - (9 credits)

PSY 101 General Psychology I (3)

PSY 102 General Psychology II (3)

COM 115 Public Speaking (3)

or

COM 125 Interpersonal Communication (3)

### Communication - 2 courses - (6 credits)

ENG 121 English Composition I (3)

ENG 122 English Composition II (3)

### Mathematics - 1 course - (4 credits)

MAT 121 College Algebra (4)

### Arts and Humanities - 3 courses - (9 credits)

Required Course

PHI 111 Introduction to Philosophy (3)

or

PHI 112 Ethics (3)

Remaining 2 courses must come from 2 different categories below.

#### • Arts and Expression

ART 110 Art Appreciation (3)

ART 111 Art History Ancient to Medieval (3)

ART 112 Art History Renaissance to Modern (3)

ART 207 Art History 1900 – Present (3)

DAN 125 History of Dance I (3)

MUS 120 Music Appreciation (3)

MUS 121 Music History Medieval thru Classical (3)

MUS 122 Music History Romantic to Present (3)

MUS 123 Survey of World Music (3)

MUS 125 History of Jazz (3)

THE 105 Theatre Appreciation (3)

THE 211 Development of Theatre I (3)

THE 212 Development of Theatre II (3)

#### • Literature & Humanities

HUM 115 World Mythology (3)

HUM 121 Humanities: Early Civilization (3)

HUM 122 Humanities: Medieval to Modern (3)

HUM 123 Humanities: The Modern World (3)

LIT 115 Introduction to Literature (3)

LIT 201 World Literature to 1600 (3)

LIT 202 World Literature after 1600 (3)

LIT 205 Ethnic Literature (3)

LIT 211 American Literature to Civil War (3)

LIT 212 American Literature after Civil War (3)

LIT 221 British Literature to 1770 (3)

LIT 222 British Literature since 1770 (3)

LIT 225 Introduction to Shakespeare (3)

LIT 268 Celtic Literature (3)

#### • Ways of Thinking

PHI 111 Introduction to Philosophy (3)

PHI 112 Ethics (3)

PHI 113 Logic (3)

PHI 114 Comparative Religions (3)

PHI 214 Philosophy of Religion (3)

PHI 218 Philosophy of the Environment (3)

#### • Foreign Languages

(Must be intermediate/200-level)

FL 211 Second Year Foreign Language (3)

FRE, GER, ITA, JPN, RUS, SPA

FL 212 Second Year Foreign Language (3)

FRE, GER, ITA, JPN, RUS, SPA

#### History - 1 course - (3 credits)

HIS 101 History of Western Civilization I (3)

HIS 102 History of Western Civilization II (3)

HIS 111 World Civilization I (3)

HIS 112 World Civilization II (3)

HIS 201 U.S. History I (3)

HIS 202 U.S. History II (3)

HIS 207 American Environmental History (3)

HIS 208 American Indian History (3)

HIS 215 Women In U.S. History (3)

HIS 225 Colorado History (3)

HIS 236 U.S. History Since 1945 (3)

HIS 244 History of Latin America (3)

HIS 247 Contemporary World History (3)

#### Social and Behavioral Science - 6 courses - (6 credits)

##### • Economic & Political Systems

ECO 101 Economics of Social Issues (3)

ECO 201 Macro Economics (3)

ECO 202 Micro Economics (3)

ECO 245 Environmental Economics (3)

POS 105 Introduction to Political Science (3)

POS 111 American Government (3)

POS 125 American State and Local Government (3)

POS 205 International Relations (3)

POS 225 Comparative Government (3)

##### • Geography

GEO 105 World Regional Geography (3)

GEO 106 Human Geography (3)

##### • Human Behavior, Cultural & Social Frameworks

ANT 101 Cultural Anthropology (3)

ANT 107 Introduction to Archeology (3)

ANT 108 Archaeology of World Rock Art (3)

ANT 111 Physical Anthropology (3)

ANT 201 Introduction to Forensic Anthropology (3)

ANT 215 Indians of North America (3)

ANT 250 Medical Anthropology (3)

COM 220 Intercultural Communication(3)

JOU 105 Introduction to Mass Media (3)

PSY 101 General Psychology I (3)

PSY 102 General Psychology II (3)

PSY 205 Psychology of Gender (3)

PSY 217 Human Sexuality (3)

PSY 226 Social Psychology (3)

PSY 227 Psychology of Death and Dying (3)

PSY 235 Human Growth & Development (3)

PSY 238 Child Development (3)

PSY 240 Health Psychology (3)

PSY 249 Abnormal Psychology (3)

SOC 101 Introduction to Sociology I (3)

SOC 102 Introduction to Sociology II (3)

SOC 207 Environmental Sociology (3)

SOC 205 Sociology of Family Dynamics (3)

SOC 215 Contemporary Problems (3)

SOC 216 Sociology of Gender (3)

SOC 218 Sociology of Diversity (3)

SOC 220 Sociology of Religion (3)

SOC 231 Sociology of Deviant Behavior (3)

#### Natural & Physical Sciences - 2 courses - (10 credits)

BIO 111 General College Biology I (5)

CHE 111 General College Chemistry I (5)

## Additional AS-Psychology Catalog 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 the student 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 is required for degree completion.

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.

The Statewide Articulation Agreement for Psychology can be found at the Colorado Department of Higher Education website.

## Approved AS-Psychology Electives

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.

Astronomy	AST-All courses
Biology	BIO - All courses except 105, 106, and 116
Chemistry	CHE-All courses
Computer Science	CSC 119, 160, 161, 165, 225, 236, 237 and 240
Environmental Science	ENV 101
Geography	111 and 112
Geology	GEY-All courses
Health and Wellness	HWE 100
Mathematics	MAT-All courses above 121 Except 123, 125, 135, 155, and 156
Meteorology	MET 150
Physics	PHY-All courses except 105 and 107

Students planning to transfer to the University of Colorado at Denver should complete both BIO 112 and CHE 112 as electives.

## Other AS-Psychology Degree Requirements

1. A minimum of 60 credits is required for the Associate of Science in Mathematics Degree. This must include 36 credits in general education transfer courses, 9 credits in additional required courses, and 15 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 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.
4. You must file an Application for Graduation during the term in which you intend to graduate, according to the deadline published in the Class Schedule for that term (file in Admissions). You must apply to graduate within one year of completing degree requirements.
5. No more than 6 credits of independent study course work may be applied toward this degree.
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 Red Rocks 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.
8. With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.

**Certificates can require as few as five credits and also may count toward a two- or four-year degree.**

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

**Accounting:**

- Accounting Fundamentals
- Bookkeeping Clerk
- Accounting Clerk

**Air Conditioning, Heating and Refrigeration:**

- Air Conditioning
- Level I Refrigeration
- Level II Refrigeration
- Refrigeration
- HVAC Fundamentals
- HVAC Controls Technician
- Forced-Air Heating
- Hydronic Heating
- HVAC Energy Efficiency
- Energy and HVAC

**Auto Collision Technology:**

- (In cooperation with and taught at WarrenTech)
- Automotive Collision Industry Introduction
- NATEF Non-Structural Analysis and Damage Repair
- NATEF Painting and Refinishing
- NATEF Structural Analysis and Damage Repair
- Estimating and Management

**Automotive Customization**

- (In cooperation with and taught at WarrenTech)
- Metal Fabrication
- Chassis Fabrication
- Custom Body Work
- Custom Refinishing

**Automotive Service Technology:**

- (In cooperation with and taught at WarrenTech)
- Lubrication and Tire Service
- Manual Drive Train and Axles
- Brake Specialist
- Automatic Transmission/Transaxles
- Suspension and Steering
- Engine Performance
- Heating and Air Conditioning
- Electrical and Electronic Systems
- Engine Repair
- Auto Parts Specialist

**Business:**

- Business Foundations
- Management and Supervision
- Real Estate
- Registered Appraiser
- Small Business Start Up

**Carpentry**

- Residential Remodeling
- Advanced Remodeling
- Home Energy Efficiency

**Computer Information Systems:**

- CISCO Network Associate
- Computer Support Technician
- Cyber Security Specialist
- Game Development
- Microsoft Certified Technology Specialist (MCTS)
- Microsoft SQL Server Administrator
- Microsoft Windows Server
- Network Specialist
- PC Applications Specialist
- Programming Specialist
- Web Development

**Cosmetology:**

- (In cooperation with and taught at WarrenTech)
- Cosmetologist
- Hairstylist
- Manicurist
- Esthetician (skin)

**Culinary Arts**

- (In cooperation with the Rocky Mountain Chefs of Colorado and taught at WarrenTech)

**Early Childhood Education:**

- Preschool Early Childhood Teacher
- Infant/Toddler Early Childhood Teacher
- Director, Early Childhood Education

**Electricity Commercial/Industrial/Residential:**

- Electrical Installation
- National Electrical Code
- Electrical Codes and Standards
- Residential Construction Electrician
- Construction Electrician
- Advanced Construction Electrician
- Maintenance Electrician
- Introduction to Instrumentation and Controls Technician
- Advanced Instrumentation and Controls Technician
- Advanced Maintenance Electrician
- Fire Alarm Code
- Introduction to Fire Alarm Technician
- Fire Alarm and Detection Technician
- Post-Degree Specialization for Advanced Fire Code
- Post-Degree Specialization for Advanced Construction Electrician
- Post-Degree Specialization for Advanced Maintenance Electrician

**Emergency Management and Planning**

- Emergency Management and Planning
- Fundamentals of Emergency Management

**Emergency Medical Services:**

- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Paramedic

**Engineering Graphics Technology:**

- Architectural
- Civil
- Mechanical
- Intro to AutoCAD
- Revit
- Drafting (pending approval)
- SolidWorks
- Sustainable Design Applications

**Fine Woodworking:**

Woodworking Fundamentals  
Craftsman  
Cabinetmaker  
Joiner  
Contemporary Furniture Fundamentals  
Fine Furniture Craftsman  
Contemporary Furniture Craftsman  
Artisan  
Post-Degree Advanced Craftsman  
Woodturner  
Advanced Wood Turner  
Luthier Technician  
Luthier Fundamentals

**Fire Science Technology:**

Fire Fighter I  
Fire Instructor  
Fire Officer I  
Fire Officer II  
Fire Officer III  
Fire Inspector

**Holistic Health:**

Holistic Health Practitioner  
Reflexology

**Law Enforcement:**

Basic Law Enforcement Academy (P.O.S.T. Certification)

**Mechanical Trades:**

Basic Mechanical Skills  
Advanced Mechanical Skills  
Heating Specialties

**Medical Office Technology:**

Medical Assisting  
Medical Office  
Medical Billing/Coding

**Multimedia Graphics Design:**

Graphic Design and Print Production  
Video Production  
Web Design  
Advanced Web Design  
Professional Photography: Traditional Film  
Professional Photography: Digital Photography  
Professional Photography: Traditional Film and Digital  
Photography  
Digital Media Journalism

**Nursing:**

Nurse Aide  
RN Refresher Program

**Outdoor Recreation Leadership:**

Winter Skills Specialist  
Water-based Skills Specialist  
Mountaineering Skills Specialist  
Outdoor Recreation Generalist

**Park Ranger Technology:**

Law Enforcement  
Introduction to Park Ranger Technology  
Outdoor Recreation  
Resource Interpretation

**Phlebotomy****Physician Assistant****Plumbing**

Plumbing Service

**Power Equipment and Sports Vehicle Technology:**

Power Equipment Maintenance Technician  
Sports Vehicle Maintenance Technician

**Precision Machining Technology:**

(In cooperation with and taught at WarrenTech)  
Machine Shop Fundamentals  
Lathe Operator  
Mill Operator  
CNC Lathe Operator  
CNC Mill Operator

**Process Technology: (currently suspended)**

Introduction to Process Plant Safety (currently suspended)

**Radiologic Technology:**

Computed Tomography (CT)  
Magnetic Resonance Imaging (MRI)  
Mammography  
Bone Densitometry

**Renewable Energy Technology:**

Grid Tie Entry Level  
Advanced Photovoltaic Installation  
Solar Photovoltaic Designer  
Solar Thermal Entry Level  
Solar Thermal Installer  
Solar Thermal Designer  
Post EIC Degree Solar Photovoltaic  
Post HVA Degree Solar Thermal  
Energy Auditing  
Energy Efficiency Weatherization

**Sonography:**

Diagnostic Medical Sonography  
Vascular Technology  
Diagnostic Cardiac Sonography

**Teacher Education:**

Paraeducator  
Adult Basic Education Authorization (ABEA)

**Theatre Arts:**

Costume Basics  
Costume and Fashion  
Stagehand Basics  
Stagecraft

**Water Quality Management:**

Education and Experience  
Introduction to Water Treatment  
Introduction to Wastewater Treatment  
Mathematics in Water Quality  
Laboratory Analysis  
Distribution and Collection Systems  
Advanced Water Treatment Certification  
Advanced Wastewater Treatment Certification  
Source Control and Water Audit

**Welding:**

(In cooperation with and taught at WarrenTech)  
OFW and OFC Certificate  
SMAW Certificate  
GMAW Certificate  
FCAW Certificate  
GTAW Certificate

**Wind Energy Technology: (currently suspended)**

Introduction to Wind Energy Technology  
Wind Energy Safety  
Wind Energy Basic Electro-Mechanical  
Wind Energy Advanced Electrical  
Wind Energy Advanced Mechanical

### **Rocky Mountain Education Center (RMEC)**

#### **Work Force Training Solutions**

As the continuing education department of Red Rocks Community College, and the OSHA Region VIII Training Institute, RMEC is dedicated to providing customized education services at our location or that of our clients. Our instructor pool includes leadership professionals with a wide range of technical backgrounds with expertise in change management required in today's highly complex industries. Thanks to our employer partners our newest laboratory and classrooms include replicas of industrial operations equipment and instrumentation digital control software. RMEC partners with major providers of technical certifications to include pre-employment testing services using WorkKeys®, and hands-on test prep courses and test proctoring to ensure building contractors are current in energy efficiency and alternative energy installation and operations.

**Phone: 303.914.6420**

**Email: [rmecc@rrcc.edu](mailto:rmecc@rrcc.edu)**

Searchable Course Catalog and Online Registration: **[www.rmecosha.com](http://www.rmecosha.com)**

## 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.

### Accounting

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.

### Degrees: Associate of Applied Science

**Accounting Paraprofessional**  
**Accounting Technician**

### Certificates:

**Accounting Fundamentals**  
**Bookkeeping Clerk**  
**Accounting Clerk**

### Accounting Degrees

#### Accounting Paraprofessional AAS Degree

This program prepares you to work as an accounting paraprofessional or accounting assistant.

Required Courses	Credits
ACC 121 Accounting Principles I	4
ACC 122 Accounting Principles II	4
ACC 135 Spreadsheet Applications for Accounting or *CIS 155 PC Spreadsheet Concepts: MS Excel (*pending approval)	3
ACC 138 Payroll and Sales Tax	3
ACC 211 Intermediate Accounting I	4
ACC 212 Intermediate Accounting II	4
ACC 245 Computerized Accounting with a Professional Package	3
BTE 108 Ten-Key by Touch or faculty advisor-approved elective	1
BUS 115 Introduction to Business	3
BUS 116 Personal Finance or faculty advisor approved elective	3
BUS 216 Legal Environment of Business	3
BUS 217 Business Communication & Report Writing	3
CIS 145 Complete PC Database: Access	3
<b>Faculty advisor-approved business electives</b>	<b>4</b>
<b>(Recommended: ACC, BUS, MAN, MAR, REE, SBM)</b>	
Required General Education Courses:	
COM 105 Career Communication or COM 125 Interpersonal Communication	3
ENG 121 English Composition I	3

MAT 107 Career Math/Business or any higher MAT course	3
<b>Credit from two of the following areas:</b>	
Social and Behavioral Science, Arts and Humanities, Natural & Physical Sciences	6
<b>Total Credits</b>	<b>60</b>

#### Accounting Technician AAS Degree

This program prepares you to perform bookkeeping and accounting tasks.

Required Courses	Credits
ACC 101 Fundamentals of Accounting or faculty advisor-approved elective	3
ACC 121 Accounting Principles I	4
ACC 122 Accounting Principles II	4
ACC 135 Spreadsheet Applications for Accounting or *CIS 155 PC Spreadsheet Concepts: MS Excel (*pending approval)	3
ACC 138 Payroll and Sales Tax	3
ACC 245 Computerized Accounting with a Professional Package	3
BTE 108 Ten-Key by Touch or faculty advisor approved elective	1
BUS 115 Introduction to Business	3
BUS 116 Personal Finance or faculty advisor approved elective	3
BUS 216 Legal Environment of Business	3
BUS 217 Business Communication & Report Writing	3
CIS 135 Complete PC Word Processing	3
CIS 145 Complete PC Database: Access	3
<b>Faculty advisor-approved business electives</b>	<b>6</b>
<b>(Recommended: ACC, BUS, MAN, MAR, REE, SBM)</b>	
<b>General Education Courses Required:</b>	
COM 105 Career Communication or COM 125 Interpersonal Communication	3
ENG 121 English Composition I	3
MAT 107 Career Math/Business or any higher MAT course	3
<b>Credit from two of the following areas:</b>	
Social and Behavioral Science, Arts and Humanities, Natural & Physical Sciences	6
<b>Total Credits</b>	<b>60</b>

## Accounting Certificates

### Accounting Fundamentals Certificate

This certificate provides students with the basic accounting concepts of business. The certificate can be used as a standalone, to gain general knowledge, or as a stepping-stone to another Accounting or Business certificate or degree.

Required Courses		Credits
ACC 121	Accounting Principles I	4
ACC 122	Accounting Principles II	4
<b>Total Credits</b>		<b>8</b>

### Bookkeeping Clerk Certificate

Completing this program prepares you to perform entry-level bookkeeping and accounting tasks.

Required Courses		Credits
ACC 101	Fundamentals of Accounting or ACC 121 Accounting Principles I	3 or 4
ACC 138	Payroll and Sales Tax	3
BTE 100	Computer Keyboarding or faculty advisor-approved elective	1
BTE 108	Ten-Key by Touch or faculty advisor-approved elective	1
BUS 115	Introduction to Business	3
CIS 118	Introduction to PC Applications	3
<b>Total Credits</b>		<b>14-15</b>

### Accounting Clerk Certificate

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		Credits
ACC 101	Fundamentals of Accounting or faculty advisor-approved elective	3
ACC 121	Accounting Principles I	4
ACC 122	Accounting Principles II	4
ACC 135	Spreadsheet Applications for Accounting or *CIS 155 PC Spreadsheet Concepts: MS Excel (*pending approval)	3
ACC 138	Payroll and Sales Tax	3
ACC 245	Computerized Accounting with a Professional Package	3
BTE 100	Computer Keyboarding or faculty advisor-approved elective	1
BTE 108	Ten-Key by Touch or faculty advisor-approved elective	1
BUS 115	Introduction to Business	3
BUS 116	Personal Finance or faculty advisor approved elective	3
CIS 118	Introduction to PC Applications	3
<b>Total Credits</b>		<b>31</b>

## Air Conditioning, Heating and Refrigeration

These certificates are part of the State of Colorado program approval for Building and Apartment Maintenance. Please see Plumbing and Carpentry for additional degrees and certificates under this category.

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. New students should contact Sarah Burger at 303.914.6273. Current students should contact Larry Snyder at 303.914.6306 or larry.snyder@rcc.edu.

### Related course work may be found under:

Carpentry, Electricity, Plumbing, and Renewable Energy Technology.

## Degrees: Associate of Applied Science

### Air Conditioning, Heating and Refrigeration

#### Air Conditioning

#### Refrigeration

#### Heating

#### Hydronic Heating

## Certificates:

### Air Conditioning

### Level I Refrigeration

### Level II Refrigeration

### Refrigeration

### HVAC Fundamentals

### HVAC Controls Technician

### Forced-Air Heating

### Hydronic Heating

### HVAC Energy Efficiency

### Energy and HVAC

## Air Conditioning, Heating and Refrigeration Degrees

### Air Conditioning, Heating and Refrigeration AAS Degree

Required Courses	Credits
Level I Refrigeration Certificate	10.5
HVA 110 Fundamentals of Gas Heating	4
HVA 111 Piping Skills	4
HVA 132 Air Conditioning and Refrigeration Controls	4
HVA 134 Air Conditioning Systems	4
HVA 162 Heating Controls	4
HVA 206 Mechanical Codes	4
HVA 240 Servicing Forced Air Systems	4
HVA 247 Hot Water Heating Systems	4
<b>Core Requirements</b>	<b>4</b>

Choose a minimum of 4 credits from the following course prefixes: ENT, ENY, AEC, HVA, EIC, CAR, or OSH

<b>General Education Courses</b> (See AAS Degree Requirements on page 44)	<b>15</b>
<b>Total Credits</b>	<b>61.5</b>

### Air Conditioning AAS Degree

Required Courses	Credits
Air Conditioning Certificate	34.5
HVA 263 Chillers	4
<b>Core Requirements</b>	<b>8</b>

Choose a minimum of 8 credits from the following course prefixes: ENT, ENY, AEC, HVA, EIC, CAR, or OSH

<b>General Education Courses</b> (See AAS Degree Requirements on page 44)	<b>15</b>
<b>Total Credits</b>	<b>61.5</b>

### Refrigeration AAS Degree

Required Courses	Credits
Refrigeration Certificate	30.5
HVA 231 Pneumatic Controls	4
HVA Electives	4
<b>Core Requirements</b>	<b>8</b>

Choose a minimum of 8 credits from the following course prefixes: ENT, ENY, AEC, HVA, EIC, CAR, or OSH

<b>General Education Courses</b> (See AAS Degree Requirements on page 44)	<b>15</b>
<b>Total Credits</b>	<b>61.5</b>

### Heating AAS Degree

Required Courses	Credits
HWE 113 First Aid and Adult CPR	0.5
OSH 127 10-HR Construction Industry Standards	1
HVA 111 Piping Skills	4
HVA 105 Electricity for HVAC/R	4
HVA 110 Fundamentals of Gas Heating	4
HVA 140 Basic Sheet Metal	4
HVA 162 Heating Controls	4
HVA 206 Mechanical Codes	4
PLU 208 International Fuel Gas Code	4
HVA 240 Servicing Forced Air Systems	4
HVA 247 Hot Water Heating Systems	4
HVA 257 Low Pressure Steam Heating	4
<b>Core Requirements</b>	<b>4</b>

Choose a minimum of 4 credits from the following course prefixes: ENT, ENY, AEC, HVA, EIC, CAR, or OSH

<b>General Education Courses</b> (See AAS Degree Requirements on page 44)	<b>15</b>
<b>Total Credits</b>	<b>60.5</b>

### Hydronic Heating AAS Degree

Required Courses	Credits
Hydronic Heating Certificate	37.5
<b>Core Requirements</b>	<b>10</b>

Choose a minimum of 10 credits from the following course prefixes: ENT, ENY, AEC, HVA, EIC, CAR, or OSH

<b>General Education Courses</b> (See AAS Degree Requirements on page 44)	<b>15</b>
<b>Total Credits</b>	<b>62.5</b>

### Air Conditioning, Heating and Refrigeration Certificates

#### Air Conditioning Certificate

Required Courses	Credits
Level 1 Refrigeration Certificate	10.5
HVA 111 Piping Skills	4
HVA 132 Air Conditioning and Refrigeration Controls	4
HVA 134 Air Conditioning Systems	4
HVA 140 Basic Sheet Metal	4
HVA 206 Mechanical Codes	4
HVA 261 Air Conditioning Systems Service and Repair	4
<b>Total Credits</b>	<b>34.5</b>

#### Level I Refrigeration Certificate

Required Courses	Credits
HWE 113 First Aid and Adult CPR	0.5
OSH 127 10-HR Construction Industry Standards	1
HVA 102 Basic Refrigeration	4
HVA 105 Electricity for HVAC/R	4
HVA 113 Refrigerant Recovery Training	1
<b>Total Credits</b>	<b>10.5</b>

#### Level II Refrigeration Certificate

Required Courses	Credits
Level I Refrigeration Certificate	10.5
HVA 111 Piping Skills	4
HVA 132 Air Conditioning and Refrigeration Controls	4
HVA 233 Advanced Refrigeration or HVA 261 A/C Systems Service and Repair	4
<b>Total Credits</b>	<b>22.5</b>

#### Refrigeration Certificate

Required Courses	Credits
Level I Refrigeration Certificate	10.5
HVA 111 Piping Skills	4
HVA 233 Advanced Refrigeration	4
HVA 132 Air Conditioning and Refrigeration Controls	4
HVA 206 Mechanical Codes	4
HVA Electives	4
<b>Total Credits</b>	<b>30.5</b>

## HVAC Fundamentals Certificate

Required Courses		Credits
HWE 113	First Aid and Adult CPR	0.5
OSH 127	10-HR Construction Industry Standards	1
HVA 102	Basic Refrigeration	4
HVA 105	Electricity for HVAC/R	4
HVA 110	Fundamentals of Gas Heating	4
HVA 113	Refrigerant Recovery Training	1
<b>Total Credits</b>		<b>14.5</b>

## HVAC Controls Technician Certificate

Required Courses		Credits
HWE 113	First Aid and Adult CPR	0.5
OSH 127	10-HR Construction Industry Standards	1
HVA 105	Electricity for HVAC/R	4
HVA 110	Fundamentals of Gas Heating	4
HVA 132	Air Conditioning and Refrigeration Controls	4
HVA 162	Heating Controls	4
HVA 231	Pneumatic Controls	4
<b>Total Credits</b>		<b>21.5</b>

## Forced-Air Heating Certificate

Required Courses		Credits
HWE 113	First Aid and Adult CPR	0.5
OSH 127	10-HR Construction Industry Standards	1
HVA 105	Electricity for HVAC/R	4
HVA 110	Fundamentals of Gas Heating	4
HVA 111	Piping Skills	4
HVA 140	Basic Sheet Metal	4
HVA 162	Heating Controls	4
HVA 206	Mechanical Codes	4
PLU 208	Fuel Gas Code	4
HVA 240	Servicing Forced Air Systems	4
<b>Total Credits</b>		<b>33.5</b>

## Hydronic Heating Certificate

Required Courses		Credits
HWE 113	First Aid and Adult CPR	0.5
OSH 127	10-HR Construction Industry Standards	1
HVA 105	Electricity for HVAC/R	4
HVA 110	Fundamentals of Gas Heating	4
HVA 111	Piping Skills	4
HVA 162	Heating Controls	4
HVA 206	Mechanical Codes	4
HVA 247	Hot Water Heating Systems	4
HVA 257	Low Pressure Steam Heating	4
HVA 267	Radiant Heating Systems	4
PLU 208	Fuel Gas Code	4
<b>Total Credits</b>		<b>37.5</b>

## HVAC Energy Efficiency Certificate

Required Courses		Credits
HWE 113	First Aid and Adult CPR	0.5
OSH 127	10-HR Construction Industry Standards	1
HVA 102	Basic Refrigeration	4
HVA 105	Electricity for HVAC/R	4
HVA 110	Fundamentals of Gas Heating	4
HVA 113	Refrigerant Recovery Training	1
HVA 261	Air Conditioning Systems Service and Repair	4
ENY 102	Building Energy Audit Techniques	3
<b>Total Credits</b>		<b>21.5</b>

## Energy and HVAC (Advanced) Certificate

Required Courses		Credits
HWE 113	First Aid and Adult CPR	0.5
OSH 127	10-HR Construction Industry Standards	1
HVA 102	Basic Refrigeration	4
HVA 105	Electricity for HVAC/R	4
HVA 110	Fundamentals of Gas Heating	4
HVA 113	Refrigerant Recovery Training	1
HVA 261	Air Conditioning Systems Service and Repair	4
ENY 101	Introduction to Energy Technologies	3
ENY 102	Building Energy Audit Techniques	3
ENY 130	Solar Photovoltaic Grid-Tie	2
ENY 131	Advanced Solar PV	2
ENY 132	NABCEP Entry-Level Prep Class	1
ENY 120	Solar Thermal System Install	4
EIC 211	IECC Energy Conservation Code	4
<b>Total Credits</b>		<b>37.5</b>

## Anthropology

### Degree: Associate of Arts

The completion of the following courses are 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

See AA - Anthropology Designated Degree Requirements on page 45

## Applied Technology

### Degree: Associate of Applied Science

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.

## Applied Technology AAS Degree

Required General Education Courses	Credits
<b>Arts &amp; Humanities</b>	
Any course	3
<b>Communication</b>	3
COM 115 or ENG 121 or ENG 131 or higher	3
<b>Mathematics</b>	
MAT 107 or higher	3
<b>Natural &amp; Physical Sciences</b>	
Any course	3
<b>Social and Behavioral Science</b>	
Institution Specific GEN ED requirements	3
<b>Total Credits</b>	<b>18</b>

## Art

### Degree: Associate of Arts

The completion of the following suggested courses is for those planning to transfer to a four-year college or university to complete a major in Art. Consult with a faculty advisor before beginning this area of study.

## Art

Suggested Courses for Transfer	Credits
ART 111 Art History Ancient to Medieval*	3
ART 112 Art History Renaissance to Modern*	3
ART 121 Drawing I	3
ART 221 Drawing II	3
ART 131 2D Design	3
ART 132 3D Design	3
ART 151 Painting I	3
*Fulfills General Education requirements	
<b>General Education Courses</b>	
<b>(See AA Degree Requirements on page 34)</b>	<b>32</b>

## Auto Collision Repair

(In cooperation with and taught at WarrenTech)

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 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.

### Degree: Associate of Applied Science

#### Auto Collision Technology

### Certificates:

- Automotive Collision Industry Introduction
- NATEF Non-Structural Analysis and Damage Repair

## NATEF Painting and Refinishing

### NATEF Structural Analysis and Damage Repair Estimating and Management

## Auto Collision Repair Degrees

### Auto Collision Technology AAS Degree

Required Courses	Credits
A minimum of 45 credits from the following courses:	
ACT 101 Introduction to Automotive Collision Tech	4
ACT 110 Safety in Collision Repair	2
ACT 111 Metal Welding and Cutting I	3
ACT 121 Non-Structural Repair Preparation	3
ACT 122 Panel Repair and Replacement	3
ACT 123 Metal Finishing and Body Filling	3
ACT 124 Exterior Panel Replacement (Weld-on)	3
ACT 131 Structural Damage Diagnosis	3
ACT 132 Structural Damage Repair	3
ACT 141 Refinishing Safety	1
ACT 142 Surface Preparation I	2
ACT 143 Spray Equipment Operation	2
ACT 144 Refinishing I	2
ACT 170 Auto Collision Technology Lab Experiences I	1-9
ACT 171 Auto Collision Technology Lab Experiences II	1-9
ACT 172 Auto Collision Technology Lab Experiences III 1-9	
ACT 175 Special Topics	0.5-9
ACT 180 Auto Collision Repair Internship Level I	1-9
ACT 181 Auto Collision Repair Internship Level II	1-9
ACT 205 Estimating and Shop Management	3
ACT 211 Metal Welding and Cutting II	2
ACT 220 Structural Repair II	4
ACT 226 Production	4
ACT 231 Advanced Structural Damage Diagnosis and Repair	3
ACT 232 Fixed Glass Repair	2
ACT 241 Paint Defects	3
ACT 242 Surface Preparation II	2
ACT 243 Refinishing II	2
ACT 244 Final Detail	2
<b>General Education Courses</b>	
<b>(See AAS Degree Requirements on page 44)</b>	<b>15</b>
<b>Total Credits</b>	<b>60</b>

## Auto Collision Repair Certificates

### Automotive Collision Industry Introduction Certificate

Required Courses	Credits
ACT 101 Introduction to Automotive Collision Tech	4
ACT 110 Safety in Collision Repair	2
ACT 121 Non-Structural Repair Preparation	3
ACT 141 Refinishing Safety	1
ACT 142 Surface Preparation I	2
<b>Total Credits</b>	<b>12</b>

### Auto Collision Repair Certificates (NATEF)

For the following certificates, you must successfully complete the following CORE courses (prerequisites) or obtain faculty consent:

ACT 101	Introduction to Automotive Collision Tech	4
ACT 110	Safety in Collision Repair	2

### Non-Structural Analysis and Damage Repair Certificate

Required Courses		Credits
ACT 111	Metal Welding and Cutting I	3
ACT 121	Non-Structural Repair Preparation	3
ACT 122	Panel Repair and Replacement	3
ACT 123	Metal Finishing and Body Filling	3
ACT 124	Exterior Panel Replacement (Weld-on)	3

Choose from the following to complete credit requirements:

ACT 170	Auto Collision Technology Lab Experiences I	1-9
ACT 171	Auto Collision Technology Lab Experiences II	1-9
ACT 172	Auto Collision Technology Lab Experiences III	1-9
ACT 175	Special Topics	0.5-9
ACT 180	Auto Collision Repair Internship Level I	1-9
ACT 181	Auto Collision Repair Internship Level II	1-9
<b>Total Credits</b>		<b>30</b>

### Painting and Refinishing Certificate

Required Courses		Credits
ACT 141	Refinishing Safety	1
ACT 142	Surface Preparation I	2
ACT 143	Spray Equipment Operation	2
ACT 144	Refinishing I	2
ACT 241	Paint Defects	3
ACT 242	Surface Preparation II	2
ACT 243	Refinishing II	2
ACT 244	Final Detail	2

Choose from the following to complete credit requirements:

ACT 170	Auto Collision Technology Lab Experiences I	1-9
ACT 171	Auto Collision Technology Lab Experiences II	1-9
ACT 172	Auto Collision Technology Lab Experiences III	1-9
ACT 175	Special Topics	0.5-9
ACT 180	Auto Collision Repair Internship Level I	1-9
ACT 181	Auto Collision Repair Internship Level II	1-9
<b>Total Credits</b>		<b>27</b>

### Structural Analysis and Damage Repair Certificate

Required Courses		Credits
ACT 111	Metal Welding and Cutting I	3
ACT 131	Structural Damage Diagnosis	3
ACT 132	Structural Damage Repair	3
ACT 211	Metal Welding and Cutting II	2
ACT 220	Structural Repair II	4
ACT 231	Advanced Structural Damage Diagnosis and Repair	3
ACT 232	Fixed Glass Repair	2

Choose from the following to complete credit requirements:

ACT 170	Auto Collision Technology Lab Experiences I	1-9
---------	---------------------------------------------	-----

ACT 171	Auto Collision Technology Lab Experiences II	1-9
ACT 172	Auto Collision Technology Lab Experiences III	1-9
ACT 175	Special Topics	0.5-9
ACT 180	Auto Collision Repair Internship Level I	1-9
ACT 181	Auto Collision Repair Level II Internship	1-9
<b>Total Credits</b>		<b>24</b>

### Estimating and Management Certificate

Required Courses		Credits
ACT 205	Estimating and Shop Management	3
ACT 226	Production	4
ACT 244	Final Detail	2

Choose from the following to complete credit requirements:

ACT 170	Auto Collision Technology Lab Experiences I	1-9
ACT 171	Auto Collision Technology Lab Experiences II	1-9
ACT 172	Auto Collision Technology Lab Experiences III	1-9
ACT 175	Special Topics	0.5-9
ACT 180	Auto Collision Repair Internship Level I	1-9
ACT 181	Auto Collision Repair Internship Level II	1-9
<b>Total Credits</b>		<b>20</b>

## Automotive Customization

(In cooperation with and taught at WarrenTech)

This two-year program is designed to give students basic and advanced skill training needed for successful entry into the automotive customizing and refinishing industry through theory and lab experiences.

## Degree: Associate of Applied Science

### Automotive Customization

### Certificates:

- Metal Fabrication
- Chassis Fabrication
- Custom Body Work
- Custom Refinishing

## Automotive Customization Degrees

### Automotive Customization AAS Degree

Required Courses		Credits
ACT 101	Intro to Auto Collision Tech	4
ACT 110	Safety in Collision Repair	2
ACT 111	Metal Welding and Cutting	3
ACT 165	Automotive Body Customizing I	3
AUT 109	High Performance Suspension & Chassis Design	2
AUT 110	High Performance Suspension & Chassis Setup	4

AUT 116	High Performance Brake Systems	2
ACT 211	Metal Welding And Cutting II	2
ACT 166	Automotive Body Customizing II	3
ACT 122	Panel Repair And Replacement	3
ACT 123	Metal Finishing and Body Filling	3
ACT 142	Surface Prep I	2
ACT 167	Auto Customizing II	3
ACT 141	Refinishing Safety	1
ACT 242	Surface Prep II	2
ACT 143	Spray Equipment Operation	2
ACT 144	Refinishing I	2
ACT 243	Refinishing II	2
ACT 160	Custom Paint	3
<b>General Education Courses</b>		
<b>(See AAS Degree Requirements on page 44)</b>		<b>15</b>
<b>Total Credits</b>		<b>63</b>

## Automotive Customization Certificates

### Metal Fabrication Certificate

Required Courses		Credits
ACT 101	Into to Auto Collision Tech	4
ACT 110	Safety in Collision Repair	2
ACT 111	Metal Welding and Cutting	3
ACT 165	Automotive Body Customizing I	3
<b>Total Credits</b>		<b>11</b>

### Chassis Fabrication Certificate

Required Courses		Credits
AUT 109	High Performance Suspension & Chassis Design	2
AUT 110	High Performance Suspension & Chassis Setup	4
AUT 116	High Performance Brake Systems	2
ACT 211	Metal Welding And Cutting II	2
ACT 166	Automotive Body Customizing II	3
<b>Total Credits</b>		<b>13</b>

### Custom Body Work Certificate

Required Courses		Credits
ACT 122	Panel Repair and Replacement	3
ACT 123	Metal Finishing and Body Filling	3
ACT 142	Surface Prep I	2
ACT 167	Auto Customizing II	3
<b>Total Credits</b>		<b>11</b>

### Custom Refinishing Certificate

Required Courses		Credits
ACT 141	Refinishing Safety	1
ACT 242	Surface Prep II	2
ACT 143	Spray Equipment Operation	2
ACT 144	Refinishing I	2
ACT 243	Refinishing II	2
ACT 160	Custom Paint	3
<b>Total Credits</b>		<b>12</b>

## Automotive Service Technology

(In cooperation with and taught at WarrenTech)

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 WarrenTech automotive classroom/lab. The instructors are ASE Certified Master Technicians. Consult with an automotive service technology advisor before beginning your program of study.

## Degrees: Associate of Applied Science

Automotive Service Technology

Automotive Parts Management

### Certificates:

Lubrication and Tire Service

Manual Drive Train and Axles

Brake Specialist

Automatic Transmission/Transaxles

Suspension and Steering

Engine Performance

Heating and Air Conditioning

Electrical and Electronic Systems

Engine Repair

Auto Parts Specialist

## Automotive Service Technology Degrees

### Automotive Service Technology AAS Degree

A minimum of 60 credits must be taken from the following courses.

Required Courses		Credits
ASE 101	Auto Shop Orientation	2
ASE 102	Introduction to the Auto Shop	2
ASE 110	Brakes I	3
ASE 210	Brakes II	3
ASE 140	Suspension and Steering I	3
ASE 240	Suspension and Steering II	3
ASE 265	Heating and A/C	5
ASE 150	U joint and Axle Shaft Service	2
ASE 151	Manual Transmission/Transaxles	2
ASE 152	Differentials and 4WD/AWD	2
ASE 250	Auto Trans/Transaxle Service	1
ASE 251	Auto Trans/Transaxle Diagnosis	5
ASE 130	General Engine Diagnosis	2
ASE 132	Ignition System Diagnosis/Repair	2
ASE 134	Automotive Emissions	2
ASE 233	Fuel Injection/Exhaust	4
ASE 235	Drivability Diagnosis	1
ASE 120	Basic Automotive Electricity	2
ASE 123	Automotive Battery, Starting, Charging	2

ASE 221	Auto Body Electrical	4
ASE 231	Automotive Computers	2
ASE 160	Engine Removal and Install	1
ASE 161	Engine Repair and Rebuild	5
ASE 170	Auto Parts Lab I	2
ASE 201	Automotive Parts Management I	1
ASE 203	Automotive Parts Management II	2
ASE 282	Internship: General I	0.5-6
DPM 106	Diesel Fuel System	3

#### General Education Courses

(See AAS Degree Requirements on page 43)

**Total Credits** 15

**83.5**

### Automotive Parts Management AAS Degree

A minimum of 60 credits must be taken from the following courses.

Required Courses	Credits	
ASE 101	Auto Shop Orientation	2
ASE 102	Introduction to the Auto Shop	2
ASE 110	Brakes I	3
ASE 120	Basic Automotive Electricity	2
ASE 123	Automotive Battery, Starting, Charging	2
ASE 132	Ignition System Diagnosis/Repair	2
ASE 134	Automotive Emissions	2
ASE 140	Suspension and Steering I	3
ASE 151	Manual Transmission/Transaxles	2
ASE 152	Differentials and 4WD/AWD	2
ASE 161	Engine Repair and Rebuild	5
ASE 221	Auto Body Electrical	4
ASE 231	Automotive Computers	2
ASE 233	Fuel Injection/Exhaust	4
ASE 251	Auto Trans/Transaxle Diagnosis	5
ASE 171	Auto Parts Lab II	2
ASE 201	Automotive Parts Management I	1
ASE 203	Automotive Parts Management II	2

**Total Automotive Credits** 47

#### General Education Courses

(See AAS Degree Requirements on page 44)

ENG 121	English Composition I	3
ENG 122	English Composition II	3
HUM	Statewide General Ed Core (2 courses)	6
HIS	History	3
ECO 201	Principles of Macroeconomics	3
ECO 202	Principles of Macroeconomics	3
MAT 135	Introduction to Statistics	3
SCI	Natural/Physical Science w/Labs.	8
	Statewide General Ed Core (2 Courses)	

**Total General Education Credits** 25

**Total Credits** 72

### Automotive Service Technology NATEF Specialty Area Certificates

#### Lubrication and Tire Service Certificate

Required Courses	Credits	
ASE 101	Auto Shop Orientation	2
ASE 102	Introduction to the Auto Shop	2
ASE 170	Auto Parts Lab I	1

**Total Credits** 5

#### Manual Drive Train and Axles Certificate

Required Courses	Credits	
ASE 150	U-joint and Axle Shaft Service	2
ASE 151	Manual Transmission/Transaxles	2
ASE 152	Differentials and 4WD/AWD	2

**Total Credits** 6

#### Brake Specialist Certificate

Required Courses	Credits	
ASE 110	Brakes I	3
ASE 210	Brakes II	3

**Total Credits** 6

#### Automatic Transmission/Transaxles Certificate

Required Courses	Credits	
ASE 250	Auto Trans/Transaxle Service	1
ASE 251	Auto Trans/Transaxle Diagnosis	5

**Total Credits** 6

#### Suspension and Steering Certificate

Required Courses	Credits	
ASE 140	Suspension and Steering I	3
ASE 240	Suspension and Steering II	3

**Total Credits** 6

#### Engine Performance Certificate

Required Courses	Credits	
ASE 130	General Engine Diagnosis	2
ASE 132	Ignition System Diagnosis/Repair	2
ASE 134	Automotive Emissions	2
ASE 233	Fuel Injection/Exhaust	4
ASE 235	Drivability Diagnosis	1

**Total Credits** 11

#### Heating and Air Conditioning Certificate

Required Courses	Credits	
ASE 265	Heating and A/C	5

**Total Credits** 5

#### Electrical and Electronic Systems Certificate

Required Courses	Credits	
ASE 120	Basic Automotive Electricity	2
ASE 123	Automotive Battery, Starting, Charging	2
ASE 221	Auto Body Electrical	4
ASE 231	Automotive Computers	2

**Total Credits** 10

#### Engine Repair Certificate

Required Courses	Credits	
ASE 160	Engine Removal and Install	1
ASE 161	Engine Repair and Rebuild	5

**Total Credits** 6

## Auto Parts Specialist Certificate

Required Courses		Credits
ASE 171	Auto Parts Lab II	2
ASE 201	Automotive Parts Management I	1
ASE 203	Automotive Parts Management II	2
<b>Total Credits</b>		<b>5</b>

## Biology

### Degree: Associate of Science

The completion of the following suggested courses is for those planning to transfer to a four-year college or university to complete a major in Biology. Consult with a faculty advisor before beginning this area of study. These courses provide the basic preparation leading to biology-related careers. Some courses might not be offered each semester.

## Biology

Suggested Courses for Transfer		Credits
BIO 111	General College Biology I*	5
BIO 112	General College Biology II*	5
MAT 121	College Algebra*	4
BIO 201	Human Anatomy and Physiology I	4
BIO 202	Human Anatomy and Physiology II	4
BIO 204	Microbiology	4
*Fulfills General Education requirements		
<b>General Education Courses</b>		<b>27</b>
<b>(See AS Degree Requirements on page 37)</b>		

## 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 management & supervision, real estate, or small business. Credits may transfer to a four-year college or university and apply toward a major in a business-related field.

### Degree: Associate of Arts

#### Business

### Degrees: Associate of Applied Science

#### Business - Management and Supervision

#### Business - Interdisciplinary

#### Business - Real Estate

### Certificates:

#### Business Foundations

#### Management and Supervision

#### Real Estate

#### Registered Appraiser

#### Small Business Startup

## Business Degrees

### Business AA Degree

**See AA - Business Designated Degree Requirements on page 47**

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 Designated 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.

### Business - Management and Supervision AAS Degree

The Business - Management and Supervision Degree allows students to translate skills into practical careers whether working in, managing, or owning a business.

Required Courses		Credits
ACC 121	Accounting Principles I	4
ACC 122	Accounting Principles II	4
BUS 115	Introduction to Business	3
BUS 116	Personal Finance or faculty approved elective	3
BUS 120	Introduction to E-Commerce	3
BUS 216	Legal Environment of Business	3
BUS 217	Business Communication and Report Writing	3
CIS 118	Introduction to PC Applications	3
MAN 116	Principles of Supervision	3
MAN 226	Principles of Management	3
MAR 216	Principles of Marketing	3
<b>Faculty advisor-approved business electives</b>		<b>10</b>
(Recommended: ACC, BUS, MAN, MAR, REE, SBM)		
<b>Required General Education Courses:</b>		
ENG 121	English Composition I	3
MAT 107	Career Math/Business or any MAT course 100 or higher	3
ECO 201	Principles of Macroeconomics	3
PHI 112	Ethics	3
<b>Faculty advisor-approved general education elective</b>		<b>3</b>
<b>Total Credits</b>		<b>60</b>

### Business - Interdisciplinary AAS Degree

The Business - Interdisciplinary Degree gives students the opportunity to apply and blend career and technical skills with core business courses. Students acquire the knowledge and background to understand the various components required to operate a successful business.

Required Courses		Credits
ACC 121	Accounting Principles I	4
ACC 122	Accounting Principles II	4
BUS 102	Entrepreneurial Operations	3
BUS 115	Introduction to Business	3
BUS 116	Personal Finance or faculty approved elective	3
BUS 216	Legal Environment of Business	3
BUS 217	Business Communication and Report Writing	3
MAN 226	Principles of Management	3
MAR 216	Principles of Marketing	3

<b>Faculty advisor-approved business electives</b> (Recommended ACC, BUS, MAN, MAR, REE, SBM)	<b>1</b>
<b>Interdisciplinary credits</b>	<b>15</b>
<b>Fifteen credits 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.)</b>	
<b>Required General Education Courses:</b>	
ENG 121 English Composition I or ENG 131 Technical Writing	3
MAT 107 Career Math/Business or any MAT course 100 or higher	3
ECO 201 Principles of Macroeconomics	3
PHI 112 Ethics	3
<b>Faculty advisor-approved general education elective</b>	<b>3</b>
<b>Total Credits</b>	<b>60</b>

### Business – Real Estate AAS Degree

The Business - Real Estate Degree combines real estate expertise with the foundational business concepts so the students can operate successfully in a real estate-related business.

<b>Required Courses</b>	<b>Credits</b>
ACC 121 Accounting Principles I	4
ACC 122 Accounting Principles II	4
BUS 115 Introduction to Business	3
BUS 116 Personal Finance or faculty approved elective	3
BUS 120 Introduction to E-Commerce	3
BUS 216 Legal Environment of Business	3
BUS 217 Business Communication and Report Writing	3
CIS 118 Introduction to PC Applications	3
MAN 116 Principles of Supervision	3
MAN 226 Principles of Management	3
MAR 216 Principles of Marketing	3
REE 201 Real Estate Brokers I	6
REE 202 Real Estate Brokers II	6
<b>Required General Education Courses:</b>	
ENG 121 English Composition I	3
MAT 107 Career Math/Business or any MAT course 100 or higher	3
ECO 201 Principles of Macroeconomics	3
PHI 112 Ethics	3
<b>Faculty advisor-approved general education elective</b>	<b>3</b>
<b>Total Credits</b>	<b>62</b>

### 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.

<b>Required Courses</b>	<b>Credits</b>
BUS 115 Introduction to Business	3
BUS 216 Legal Environment of Business	3
BUS 217 Business Communications	3
<b>Total Credits</b>	<b>9</b>

### Management and Supervision Certificate

Students gain a broad perspective of topics that affect managing people and operations in business.

<b>Required Courses</b>	<b>Credits</b>
ACC 121 Accounting Principles I	4
BUS 115 Introduction to Business	3
BUS 116 Personal Finance or faculty approved elective	3
BUS 216 Legal Environment of Business	3
BUS 217 Business Communication and Report Writing	3
CIS 118 Introduction to PC Applications	3
MAN 116 Principles of Supervision	3
MAN 226 Principles of Management	3
MAR 216 Principles of Marketing	3
<b>Total Credits</b>	<b>28</b>

### Real Estate Certificate

These courses meet the educational requirements of the Colorado Real Estate Commission for a Colorado Real Estate Broker's license.

<b>Required Courses</b>	<b>Credits</b>
REE 201 Real Estate Brokers I	6
REE 202 Real Estate Brokers II	6
<b>Total Credits</b>	<b>12</b>

### Registered Appraiser Certificate

These courses meet the educational requirements to become a Colorado registered appraiser.

<b>Required Courses</b>	<b>Credits</b>
REE 119 15-Hour National USPAP Course	1
REE 120 Basic Appraisal Principles	2
REE 121 Basic Appraisal Procedures	2
<b>Total Credits</b>	<b>5</b>

### Small Business Startup Certificate

This condensed program offers students the opportunity to obtain an overview of small business concepts to get them started on the road to establishing their own small business.

<b>Required Courses</b>	<b>Credits</b>
SBM 101 Starting a Small Business	1
SBM 103 Legal Aspects of a Small Business	1
SBM 106 Recordkeeping for a Small Business	1
SBM 108 Marketing for a Small Business	1
SBM 110 Managing a Small Business	1
SBM 112 Financing a Small Business	1
SBM 113 Writing a Business Plan	1
SBM 175 Special Topics or MAN 117 Time Management or faculty advisor-approved program elective	1
<b>Total Credits</b>	<b>8</b>

## Carpentry

These carpentry certificates are part of the State of Colorado program approval for Building and Apartment Maintenance. Please see Air Conditioning, Heating and Refrigeration and Plumbing for additional degrees and certificates under this category.

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:** New students should contact Sarah Burger at 303.914.6273. Current students should contact Larry Snyder at 303.914.6306 or larry.snyder@rcc.edu.

### Related course work may be found under:

Air Conditioning, Heating and Refrigeration, Electricity, Fine Woodworking, Plumbing, and Renewable Energy Technology.

## Certificates:

**Residential Remodeling**

**Advanced Remodeling**

**Home Energy Efficiency**

## Carpentry Certificates

### Residential Remodeling Certificate

Required Courses	Credits
OSH 127 10-HR Construction Industry Standards	1
HWE 113 First Aid and Adult CPR	0.5
CAR 103 Carpentry Basics	4
CAR 136 Remodeling, Renovation, and Additions	4
CAR 115 Form & Foundation Systems	1
CAR 122 Wall Framing	1
CAR 123 Roof Framing	1
CAR 125 Roofing Materials & Methods	1
CAR 130 Windows and Exterior Doors	1
CAR 134 Exterior Finishes and Trim	4
CAR 135 Thermal/Moisture Methods/Materials	1
CAR 150 Interior Trim - General	1
<b>Total Credits</b>	<b>20.5</b>

### Advanced Remodeling Certificate

Required Courses	Credits
OSH 127 10-HR Construction Industry Standards	1
HWE 113 First Aid and Adult CPR	0.5
CAR 102 Hand and Power Tools	1
CAR 103 Carpentry Basics	4
CAR 136 Remodeling, Renovation, and Additions	4
CAR 115 Form & Foundation Systems	1
CAR 122 Wall Framing	1
CAR 123 Roof Framing	1
CAR 125 Roofing Materials & Methods	1
CAR 130 Windows and Exterior Doors	1
CAR 134 Exterior Finishes and Trim	4
CAR 135 Thermal/Moisture Methods/Materials	1
CAR 146 Interior Finish/Drywall Construction	1
CAR 153 Interior Trim: Cabinet/Countertops	1
CAR 155 Interior Trim and Built-ins	4
CAR 160 Floor Finishes	1
CAR 166 Stair Design & Construction	4
<b>Total Credits</b>	<b>31.5</b>

### Home Energy Efficiency Certificate

Required Courses	Credits
OSH 127 10-HR Construction Industry Standards	1
HWE 113 First Aid and Adult CPR	0.5
HVA 105 Electricity for HVAC/R	4
HVA 110 Fundamentals of Gas Heating	4
CAR 102 Hand and Power Tools	1
CAR 122 Wall Framing	1
CAR 130 Windows and Exterior Doors	1
CAR 135 Thermal/Moisture Methods/Materials	1
ENY 102 Building Energy Auditing Techniques	3
ENY 120 Solar Thermal System Install	4
<b>Total Credits</b>	<b>20.5</b>

## Chemistry

### Degree: Associate of Science

The completion of the following suggested courses is 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. These courses provide the basic preparation leading to chemistry-related careers. Some courses might not be offered each semester.

### Chemistry

Suggested Courses for Transfer	Credits
CHE 111 General College Chemistry I *	5
CHE 112 General College Chemistry II *	5
CHE 211 Organic Chemistry I	5
CHE 212 Organic Chemistry II	5
MAT 201 Calculus I *	5
MAT 202 Calculus II	5

\*Fulfills General Education requirements

**General Education Courses** **27**  
**(See AS Degree Requirements on page 37)**

## Communication

### Degrees: Associate of Arts

#### Areas of Study:

**Communication Disorders (*Speech – Language Pathology and Audiology*)**

**Communication Studies**

#### Communication Disorders

This program is designed to provide orientation into a course of study in communication disorders, which usually includes speech-language pathology or audiology. The program will prepare you to pursue an undergraduate degree in the speech-language pathology or audiology areas. An articulation agreement is in place with the University of Northern Colorado for students who complete this degree. Consult with a faculty advisor before beginning this area of study.

<b>Suggested Courses for Transfer</b>		<b>Credits</b>
CMD 160	Introduction to Human Communication Disorders	3
CMD 260	Introduction to Phonetics	2
CMD 265	Physiological and Biological Acoustics	2
CMD 266	Normal Language Development	3
CMD 267	Anatomy and Physiology of the Speech and Hearing Mechanism	3
ASL 121	American Sign Language	5
COM 125	Interpersonal Communication* or COM 126 Communication in Healthcare	3
BIO 201	Human Anatomy and Physiology I	4
*Fulfills General Education requirement		
<b>General Education Courses</b>		<b>35</b>
<b>(See AA Degree Requirements on page 34)</b>		
<b>Recommended General Education courses:</b>		
BIO 111	General College Biology	5
MAT 121	College Algebra	4
<b>Highly recommended for transfer to UNC</b>		
(Consult a faculty advisor):		
BIO 202	Human Anatomy and Physiology II	4

#### Communication Studies

The study of communication helps you develop oral and written communication skills. Critical thinking, problem-solving, interpersonal skills, presentation skills, and teamwork are some of the concepts addressed. This program provides basic preparation leading to communication-related careers in organizations and corporations dealing with education, business, public service, tourism, journalism, public relations, politics, broadcasting, and sales.

The completion of the following suggested courses is for those planning to transfer to a four-year college or university to complete a major in Communication Studies. Consult with a faculty advisor before beginning this area of study.

<b>Suggested Courses for Transfer</b>		<b>Credits</b>
COM 115	Public Speaking*	3
COM 125	Interpersonal Communication*	3
COM 216	Principles of Speech Communication II	3

COM 217	Group Communication	3
COM 220	Intercultural Communication*	3
COM 225	Organizational Communication	3
*Fulfills General Education requirement		
<b>General Education Courses</b>		<b>35</b>
<b>(See AA Degree Requirements on page 34)</b>		
<b>Recommended Approved Elective course:</b>		
ASL 121	American Sign Language	5

## Computer Information Systems

### Degrees: Associate of Applied Science

**Computer Support Technician**

**Cyber Security Specialist**

**Game Development**

**Microsoft Certified Technology Specialist (MCTS)**

**Network Specialist**

**PC Applications Specialist**

**Programming Specialist**

**Web Development**

#### Certificates:

**CISCO Network Associate**

**Computer Support Technician**

**Cyber Security Specialist**

**Game Development**

**Microsoft Certified Technology Specialist (MCTS)**

**Microsoft SQL Server Administrator**

**Microsoft Windows Server**

**Network Specialist**

**PC Applications Specialist**

**Programming Specialist**

**Web Development**

### Computer Information Systems Requirements for all AAS Degrees

The Computer Information Systems associate of applied science degree prepares you for entry-level positions in all areas of emphasis that are listed following the core requirements. You must earn a minimum grade of "C" in all CIS, CNG, CSC, CWB, and MGD courses required for a certificate or degree.

<b>Required Courses</b>		<b>Credits</b>
Faculty advisor-approved business course or ACC 121 Accounting Principles I		3 (4)
ENG 121	English Composition I	3
ENG 122	English Composition II or ENG 131 Technical Writing	3
MAT 121	College Algebra (or higher)	4

COM 115	Public Speaking or COM 125 Interpersonal Communication or THE 118 Acting Skills: Trades/Business	3
CIS 268	System Analysis and Design I	3
CIS 289	Capstone	3
<b>Credit from any two of the following three areas:</b>		<b>6</b>
Humanities (ART, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE)		
Natural & Physical Sciences (AST, BIO, CHE, ENV, GEY, PHY, SCI)		
Social and Behavioral Science (ANT, ECO, GEO, HIS, POS, PSY, SOC)		
<b>Total Credits</b>		<b>28-29</b>

## Computer Information Systems Degrees

### Computer Support Technician 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.

Required Courses	Credits	
CIS 118	Introduction to PC Applications: MS Office	3
CIS 220	Fundamentals of UNIX	3
CNG 121	Computer Technician I: A+	4
CNG 122	Computer Technician II: A+	4
CNG 124	Networking I: Net+	3
CNG 125	Networking II: Net+	3
CNG 131	Principles of Information Assurance	3
CNG 211	Windows Configuration: Win OS	3
<b>Choose 9 credit hours from the following:</b>		<b>9</b>
CIS 222	UNIX System Administration	
CNG 132	Network Security Fundamentals	
CNG 136	Guide to Disaster Recovery	
CNG 209	MS Server Active Directory Configuration	
CNG 210	MS Network Infrastructure Configuration	
CNG 280	Internship (3-4 credits)	
CSC 119	Introduction to Programming	
<b>Required Credits</b>		<b>35</b>
<b>Computer Information Systems Requirements</b>		<b>28-29</b>
<b>Total Credits</b>		<b>63-64</b>

### Cyber Security Specialist 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.

Required Courses	Credits	
CIS 220	Fundamentals of UNIX	3
CIS 222	UNIX System Administration	3
CNG 131	Principles of Information Assurance	3
CNG 132	Network Security Fundamentals	3
CNG 136	Guide to Disaster Recovery	3
CNG 253	Firewalls and How They Work	3
CNG 257	Network Defense/Countermeasures	3
CNG 258	Computer Forensics	4
CNG 259	Enterprise Security	4
Faculty advisor-approved electives		6
<b>Required Credits</b>		<b>35</b>
<b>Computer Information Systems Requirements</b>		<b>28-29</b>
<b>Total Credits</b>		<b>63-64</b>

## 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.

Required Courses	Credits	
CSC 119	Introduction to Programming	3
CSC 160	Computer Science I: C++	4
CSC 161	Computer Science II: C++	4
CIS 220	Fundamentals of UNIX	3
CSC 126	Game Design and Development	3
MGD 111	Adobe Photoshop I	3
MGD 211	Adobe Photoshop II	3
<b>Choose three from the following:</b>		<b>9</b>
CSC 237	Advanced C# Programming	
CSC 240	Java Programming	
CSC 241	Advanced Java Programming	
CSC 246	Mobile App Development	
CSC 280	Internship (3-4 credits)	
or faculty advisor-approved elective		
<b>Required Credits</b>		<b>32</b>
<b>Computer Information Systems Requirements</b>		<b>28-29</b>
<b>Total Credits</b>		<b>60-61</b>

## Microsoft Certified Technology Specialist (MCTS) AAS Degree

This area of emphasis provides you with the skill set necessary to complete the MCTS (Microsoft Certified Technology Specialist). Students will design, implement, build, troubleshoot, debug and maintain Windows and Web applications that use the .NET Framework, Visual Studio and MS SQL Server database.

Required Courses	Credits	
CSC 119	Introduction to Programming	3
CSC 236	C# Programming	4
CIS 220	Fundamentals of Unix	3
CWB 110	Complete Web Authoring: HTML	3
CIS 240	Database Design and Development	3
CIS 243	Introduction to SQL	3
CSC 237	Advanced C# Programming	4
CWB 164	XML	3
<b>Choose three from the following:</b>		<b>9</b>
CSC 250	Programming with MS ADO .NET	
CSC 253	MS ASP .NET Web Application Development: C#	
CSC 262	VS.NET Application Development: C#	
CIS 252	Implement and Maintain SQL Server Database	
CIS 253	Programming Microsoft SQL Server Database	
CIS 280	Internship (3-4 credits)	
CSC 280	Internship (3-4 credits)	
or faculty advisor-approved elective		
<b>Required Credits</b>		<b>35</b>
<b>Computer Information Systems Requirements</b>		<b>28-29</b>
<b>Total Credits</b>		<b>63-64</b>

## Network Specialist 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. 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, the student will have the needed background to prepare to take one or more of the following exams: Network+; Security+; MCITP (Microsoft Certified Information Technology Professional); MCTS (Microsoft Certified Technology Specialist); or CISCO (CCNA).

Required Courses	Credits
CIS 220 Fundamentals of UNIX	3
CNG 124 Networking I: Net+	3
CNG 125 Networking II: Net+	3
CNG 131 Principles of Information Assurance	3
CNG 132 Network Security Fundamentals	3
CNG 211 Windows Configuration: Win OS	3
<b>Choose 15 credit hours from the following:</b>	<b>15</b>
CIS 222 UNIX System Administration	
CNG 136 Guide to Disaster Recovery	
CNG 209 MS Server Active Directory Configuration	
CNG 210 MS Network Infrastructure Configuration	
CNG 212 Manage a MS Windows Server Environment	
CNG 253 Firewalls and How They Work	
CNG 257 Network Defense and Counter Measures	
CNG 260 CISCO Network Associate I	
CNG 261 CISCO Network Associate II	
CNG 262 CISCO Network Associate III	
CNG 263 CISCO Network Associate IV	
CNG 280 Internship (3-4 credits)	
<b>Required Credits</b>	<b>33</b>
<b>Computer Information Systems Requirements</b>	<b>28-29</b>
<b>Total Credits</b>	<b>61-62</b>

## PC Applications Specialist AAS Degree

This area of emphasis prepares you for an entry-level position and/or advancement in businesses that employ people in office occupations. Upon completion of the course work, you will be prepared to sit for the Microsoft Office Certification examinations.

Required Courses	Credits
BTE 100 Computer Keyboarding I	1
BTE 125 Records Management	3
BTE 166 Business Editing Skills	3
CIS 118 Introduction to PC Applications: MS Office	3
CIS 128 Windows Complete	3
CIS 140 Microsoft Outlook	1
CIS 135 Complete PC Word Processing: MS Word	3
CIS 145 Complete PC Database: MS Access	3
CIS 155 PC Spreadsheet Concepts: MS Excel	3
CIS 165 Complete Presentation Graphics: MS PowerPoint	3
CWB 110 Complete Web Authoring: HTML	3
<b>Choose two from the following:</b>	<b>6</b>
CSC 119 Introduction to Programming	
CNG 101 Introduction to Networking	
CIS 280 Internship (3-4 credits)	
or faculty advisor-approved electives	
<b>Required Credits</b>	<b>35</b>
<b>Computer Information Systems Requirements</b>	<b>28-29</b>
<b>Total Credits</b>	<b>63-64</b>

## Programming Specialist 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 language. Programs will range from simple business programs to the design and completion of a complex business system.

Required Courses	Credits
CSC 119 Introduction to Programming	3
CSC 160 Computer Science I: C++ or CSC 236 C# Programming	4
CIS 240 Database Design and Development	3
CNG 101 Introduction to Networking	3
CIS 220 Fundamentals of UNIX	3
<b>Choose three object-oriented programming courses with at least one second semester course</b>	<b>9</b>
CSC 161 Computer Science II: C++	
CSC 237 Advanced C# Programming	
CSC 240 Java Programming	
CSC 241 Advanced Java Programming	
CSC 246 Mobile App Development	
or any OOP faculty advisor-approved course	
<b>Choose three Faculty advisor-approved electives</b>	<b>9</b>
Any CSC prefixed faculty-advisor approved course	
CSC 225 Computer Architecture / Assembly Language Programming	
CIS 243 Introduction to SQL	
CSC 280 Internship (3-4 credits)	
or faculty advisor-approved elective	
<b>Required Credits</b>	<b>34</b>
<b>Computer Information Systems Requirements</b>	<b>28-29</b>
<b>Total Credits</b>	<b>62-63</b>

## 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.

Required Courses	Credits
CWB 110 Complete Web Authoring: HTML	3
CWB 130 Dreamweaver	3
or faculty advisor-approved elective	
CWB 204 Cascading Style Sheets	3
CSC 119 Introduction to Programming	3
CSC 160 Computer Science I: C++ or CSC 236 C# Programming	4
CIS 220 Fundamentals of UNIX	3
CIS 240 Database Design and Development	3
CIS 243 Introduction to SQL	3
CWB 205 Complete Web Scripting: JavaScript	3
<b>Choose two from the following</b>	<b>6</b>
CSC 237 Advanced C# Programming	
CSC 240 Java Programming	
CSC 241 Advanced Java Programming	
CSC 253 MS ASP .NET Web Application Development: C#	
CWB 164 XML	
CWB 208 Web Application Development: PHP	
CWB 280 Internship (3-4 credits)	
or faculty advisor-approved elective	
<b>Required Credits</b>	<b>34</b>
<b>Computer Information Systems Requirements</b>	<b>28-29</b>
<b>Total Credits</b>	<b>62-63</b>

## Computer Information Systems Certificates

### 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

Required Courses	Credits
CNG 131 Principles of Information Assurance	3
CNG 260 CISCO Network Associate I	5
CNG 261 CISCO Network Associate II	5
CNG 262 CISCO Network Associate III	5
CNG 263 CISCO Network Associate IV	5
CNG 280 Internship	3
<b>Total Credits</b>	<b>26</b>

### Computer Support Technician Certificate

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.

Required Courses	Credits
CIS 118 Introduction to PC Applications: MS Office	3
CIS 220 Fundamentals of UNIX	3
CNG 121 Computer Technician I: A+	4
CNG 122 Computer Technician II: A+	4
CNG 124 Networking I: Net+	3
CNG 125 Networking II: Net+	3
CNG 131 Principles of Information Assurance	3
CNG 132 Network Security Fundamentals	3
CNG 211 Windows Configuration: Win OS	3
CNG 280 Internship	3
<b>Total Credits</b>	<b>26</b>

### Cyber Security Specialist 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.

Required Courses	Credits
CNG 131 Principles of Information Assurance	3
CNG 132 Network Security Fundamentals	3
CNG 136 Guide to Disaster Recovery	3
CNG 253 Firewalls and How They Work	3
CNG 257 Network Defense/Counter measures	3
CNG 258 Computer Forensics	4
CNG 259 Enterprise Security	4
CNG 280 Internship	3
<b>Total Credits</b>	<b>26</b>

## 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.

Required Courses	Credits
CSC 119 Introduction to Programming	3
CSC 160 Computer Science I: C++	4
CSC 161 Computer Science II: C++	4
CIS 220 Fundamentals of UNIX	3
CSC 126 Game Design and Development	3
MGD 111 Adobe Photoshop I	3
MGD 211 Adobe Photoshop II	3
<b>Choose three from the following:</b>	<b>9</b>
CSC 237 Advanced C# Programming	
CSC 240 Java Programming	
CSC 241 Advanced Java Programming	
CSC 246 Mobile App Development	
CSC 280 Internship (3-4 credits)	
or faculty advisor-approved electives	
<b>Total Credits</b>	<b>32</b>

## Microsoft Certified Technology Specialist (MCTS) Certificate

This area of emphasis provides you with the skill set necessary to complete the MCTS (Microsoft Certified Technology Specialist). Students will design, implement, build, troubleshoot, debug and maintain Windows and Web applications that use the .NET Framework, Visual Studio and MS SQL Server database.

Required Courses	Credits
CSC 119 Introduction to Programming	3
CSC 236 C# Programming	4
CIS 220 Fundamentals of Unix	3
CWB 110 Complete Web Authoring: HTML	3
CIS 240 Database Design and Development	3
CIS 243 Introduction to SQL	3
CSC 237 Advanced C# Programming	4
CWB 164 XML	3
<b>Choose three from the following</b>	<b>9</b>
CSC 250 Programming with MS ADO .NET	
CSC 253 MS ASP .NET Web Application Development: C#	
CSC 262 VS.NET Application Development: C#	
CIS 252 Implement and Maintain SQL Server Database	
CIS 253 Programming Microsoft SQL Server Database	
CIS 280 Internship	
CSC 280 Internship	
or faculty advisor-approved elective	
<b>Total Credits</b>	<b>35</b>

## Microsoft SQL Server Administrator Certificate

This certificate prepares you for the Microsoft Certified Solution Administrator (MCSA). The MS SQL Server area of emphasis provides the essential skills in developing and maintaining the mission critical MS SQL database environment.

Required Courses		Credits
CIS 240	Database Design and Development	3
CIS 243	Introduction to SQL	3
CIS 252	Implement and Maintain SQL Server Database	3
CIS 253	Programming Microsoft SQL Server Database	3
CNG 131	Principles of Information Assurance	3
CIS 280	Internship	3
<b>Total Credits</b>		<b>18</b>

## Microsoft Windows Server Certificate

This certificate prepares you for the Microsoft Certified Solution Administrator (MCSA). The MS Windows Server area of emphasis provides the skills necessary to design, implement, configure, and manage a Windows Server and Desktop. Content includes, active directory, networking, user experience.

Required Courses		Credits
CNG 132	Network Security Fundamentals	3
CNG 209	MS Server Active Directory Configuration	4
CNG 210	MS Network Infrastructure Configuration	4
CNG 211	Windows Configuration: Win OS	3
CNG 212	Manage a MS Windows Server Environment	4
CNG 280	Internship	3
<b>Total Credits</b>		<b>21</b>

## Network Specialist Certificate

This area of emphasis prepares you for entry level positions in the networking field. Students gain hands-on experience with network technologies, installation and configuration, media and topologies, management, and security. Upon successful completion of the program, the student will have the needed background to prepare to take the Network + exam.

Required Courses		Credits
CIS 220	Fundamentals of Unix	3
CNG 124	Networking I: Net+	3
CNG 125	Networking II: Net+	3
CNG 131	Principles of Information Assurance	3
CNG 132	Network Security Fundamentals	3
CNG 211	Windows Configuration: Win OS	3
CNG 280	Internship	3
<b>Total Credits</b>		<b>21</b>

## PC Applications Specialist Certificate

This area of emphasis prepares you for an entry-level position and/or advancement in businesses that employ people in office occupations. Upon completion of the course work, you will be prepared to sit for the Microsoft Office certification examinations.

Required Courses		Credits
BTE 100	Computer Keyboarding I	1
BTE 125	Records Management	3
BTE 166	Business Editing Skills	3
CIS 118	Introduction to PC Applications: MS Office	3
CIS 128	Windows Complete	3

CIS 140	Microsoft Outlook	1
CIS 135	Complete PC Word Processing: MS Word	3
CIS 145	Complete PC Database: MS Access	3
CIS 155	PC Spreadsheet Concepts: MS Excel	3
CIS 165	Complete Presentation Graphics: MS PowerPoint	3
CWB 110	Complete Web Authoring: HTML	3
<b>Choose two from the following</b>		<b>6</b>
CSC 119	Introduction to Programming	
CNG 101	Introduction to Networking	
CIS 280	Internship (3-4 credits)	
or faculty advisor-approved elective		
<b>Total Credits</b>		<b>35</b>

## Programming Specialist Certificate

This area of emphasis prepares you to become an entry-level programmer. You will design, develop, 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.

Required Courses		Credits
CSC 119	Introduction to Programming	3
CSC 160	Computer Science I: C++ or CSC 236 C# Programming	4
CIS 220	Fundamentals of UNIX	3
CIS 240	Database Design and Development	3
CNG 101	Introduction to Networking	3
CIS 268	System Analysis and Design	3
<b>Choose three object-oriented programming courses with at least one, second-semester course</b>		<b>9</b>
CSC 161	Computer Science II: C++	
CSC 237	Advanced C# Programming	
CSC 240	Java Programming	
CSC 241	Advanced Java Programming	
CSC 246	Mobile App Development	
or any OOP faculty advisor-approved course		
<b>Choose two Faculty advisor-approved electives</b>		<b>6</b>
Any CSC prefixed faculty-advisor approved		
CSC 225	Computer Architecture/Assembly Language Programming	
CIS 243	Introduction to SQL	
CSC 280	Internship (3-4 credits)	
or any faculty advisor-approved		
<b>Total Credits</b>		<b>34</b>

## Web Development Certificate

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.

Required Courses		Credits
CWB 110	Complete Web Authoring: HTML	3
CWB 130	Dreamweaver	3
or faculty advisor-approved elective		
CWB 204	Cascading Style Sheets	3
CSC 119	Introduction to Programming	3
CSC 160	Computer Science I: C++ or CSC 236 Introduction to C# Programming	4
CIS 220	Fundamentals of UNIX	3
CIS 240	Database Design and Development	3
CIS 243	Introduction to SQL	3
CWB 205	Complete Web Scripting: JavaScript	3
<b>Choose two from the following</b>		<b>6</b>
CSC 237	Advanced C# Programming	

CSC 240	Java Programming	
CSC 241	Advanced Java Programming	
CSC 253	MS ASP .NET Web Application Development: C#	
CWB 164	XML	
CWB 208	Web Application Development: PHP	
CWB 280	Internship	
or faculty advisor-approved elective		
<b>Total Credits</b>		<b>34</b>

## Computer Science

### Degree: Associate of Science

The completion of the following suggested courses is 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

Suggested Courses for Transfer		Credits
CSC 160	Computer Science I: C++	4
CSC 161	Computer Science II: C++	4
CSC 225	Computer Architecture/Assembly Language Programming	4
MAT 201	Calculus I*	5
MAT 202	Calculus II*	5
PHY 211	Physics: Calculus-Based I*	5
PHY 212	Physics: Calculus-Based II*	5
*Fulfills General Education Requirements		
<b>General Education Courses</b>		<b>24</b>
<b>(See AS Degree Requirements on page 37)</b>		

## Cosmetology

(In cooperation with and taught at WarrenTech)

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).

### Degree: Associate of Applied Science

#### Cosmetology

#### Certificates:

##### Cosmetologist

##### Hairstylist

##### Manicurist

##### Esthetician (skin)

#### Cosmetology AAS Degree

Required Courses		Credits
Courses from any of the following prefixes: COS, EST, or NAT		45
<b>General Education Courses:</b>		
ENG 121	English Composition I or COM (100 or higher)	3
MAT 107	Career Math (or higher)	3

#### Courses from any two of the following three areas (100 or higher):

Art/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	
Electives from any of the above subject areas or CIS 118	3
Introduction to PC Applications	
<b>Total Credits</b>	<b>60</b>

### Cosmetology Certificates

#### Cosmetologist Certificate

The comprehensive Cosmetologist Certificate is designed to develop the skills necessary for entry-level employment in areas of the cosmetology field to include hairstylist, esthetician (skin), and manicurist (nail technology). In order to obtain this certificate, the hairstylist, manicurist, and esthetician programs must all be completed.

Required Courses		Credits
COS 103	Shampoo/Rinses/Conditioners I	1
COS 203	Shampoo/Rinse/Conditioners II	1
COS 110	Intro to Hair Coloring	1
COS 111	Intermediate I: Hair Coloring	2
COS 210	Intermediate II: Hair Coloring	2
COS 211	Advanced Hair Coloring	2
COS 120	Introduction to Hair Cutting	2
COS 121	Intermediate I: Hair Cutting	2
COS 220	Intermediate II: Hair Cutting	2
COS 221	Advanced Hair Cutting	2
COS 130	Intro to Hair Styling	2
COS 131	Intermediate I: Hair Styling	2
COS 230	Intermediate II: Hair Styling	2
COS 231	Advanced Hair Styling	1
COS 140	Intro to Chemical Texture	1
COS 141	Intermediate I: Chemical Texture	1
COS 240	Intermediate II: Chemical Texture	1
COS 241	Advanced Chemical Texture	1
NAT 110	Intro to Manicures & Pedicures	3
NAT 111	Intermediate Manicures & Pedicures	2
NAT 210	Advanced Manicures & Pedicures	2
NAT 211	Application of Artificial Nails	5
EST 110	Intro to Facials & Skin Care	3
EST 111	Intermediate Facials & Skin Care	2
EST 210	Advanced Massage & Skin Care	2
EST 211	Facial Makeup	1
EST 212	Hair Removal	3
COS 150	Laws, Rules and Regulations	1
COS 250	Mgmt, Ethics, Interpersonal Skills & Sales	1
COS 160	Intro to Disinfection, Sanitation & Safety	2
COS 161	Intermediate I: Disinfection, Sanitation & Safety	1
COS 260	Intermediate II: Disinfection, Sanitation & Safety	2
COS 261	Advanced Disinfection, Sanitation & Safety	1
COS 262	Advanced II: Disinfection, Sanitation & Safety	3
NAT 230	Nail Tech Prep - State Board	4
EST 160	Intro to Disinfection, Sanitation and Safety	2
EST 161	Intermediate Disinfection, Sanitation and Safety	3
EST 230	Preparation for State Board	2
EST 260	Advanced Disinfection, Sanitation and Safety	2
<b>Total Credits</b>		<b>78</b>

## Hairstylist Certificate

The Hairstylist Certificate is designed to develop the skills necessary for entry-level employment as a hairstylist.

Required Courses		Credits
COS 103	Shampoo/Rinses/Conditioners I	1
COS 203	Shampoo/Rinse/Conditioners II	1
COS 110	Intro to Hair Coloring	1
COS 111	Intermediate I: Hair Coloring	2
COS 210	Intermediate II: Hair Coloring	2
COS 211	Advanced Hair Coloring	2
COS 120	Introduction to Hair Cutting	2
COS 121	Intermediate I: Hair Cutting	2
COS 220	Intermediate II: Hair Cutting	2
COS 221	Advanced Hair Cutting	2
COS 130	Intro to Hair Styling	2
COS 131	Intermediate I: Hair Styling	2
COS 230	Intermediate II: Hair Styling	2
COS 231	Advanced Hair Styling	1
COS 140	Intro to Chemical Texture	1
COS 141	Intermediate I: Chemical Texture	1
COS 240	Intermediate II: Chemical Texture	1
COS 241	Advanced Chemical Texture	1
COS 150	Laws, Rules and Regulations	1
COS 250	Mgmt, Ethics, Interpersonal Skills & Sales	1
COS 160	Intro to Disinfection, Sanitation & Safety	2
COS 161	Intermediate I: Disinfection, Sanitation & Safety	1
COS 260	Intermediate II: Disinfection, Sanitation & Safety	2
COS 261	Advanced Disinfection, Sanitation & Safety	1
COS 262	Advanced II: Disinfection, Sanitation & Safety	3
<b>Total Credits</b>		<b>39</b>

## Manicurist Certificate

The Manicurist Certificate (nail technology) is designed to develop the skills necessary for entry-level employment as a manicurist.

Required Courses		Credits
COS 160	Intro to Disinfection, Sanitation & Safety	2
NAT 110	Intro to Manicures & Pedicures	3
NAT 111	Intermediate Manicures & Pedicures	2
COS 261	Advanced Disinfection, Sanitation & Safety	1
NAT 210	Advanced Manicures & Pedicures	2
NAT 211	Application of Artificial Nails	5
NAT 230	Nail Tech Prep - State Board	4
<b>Total Credits</b>		<b>19</b>

## Esthetician (skin) Certificate

The Esthetician Certificate (esthetics-skin care) is designed to develop the skills necessary for entry-level employment as an esthetician.

Required Courses		Credits
EST 110	Intro to Facials & Skin Care	3
EST 111	Intermediate Facials & Skin Care	2
EST 210	Advanced Massage & Skin Care	2
EST 211	Facial Makeup	1
EST 212	Hair Removal	3
EST 160	Intro to Disinfection, Sanitation and Safety	2
EST 161	Intermediate Disinfection, Sanitation and Safety	3
EST 230	Preparation for State Board	2
EST 260	Advanced Disinfection, Sanitation and Safety	2
<b>Total Credits</b>		<b>20</b>

## 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. The associate of art 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.

**For information on the Criminal Justice Degree Program, go to: [www.rccc.edu/criminal](http://www.rccc.edu/criminal) or call 303.914.6434.**

## Degrees: Associate of Arts

### Areas of Study:

**Criminal Justice**

**Victim Assistance**

### Criminal Justice AA Degree

The completion of the Criminal Justice AA Degree is appropriate for those planning to transfer to a four-year college or university to complete a major in criminal justice or criminology. 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 303.914.6434 for advising.

**See AA - Criminal Justice Designated Degree Requirements on page 50**

### Victim Assistance

The completion of the following courses is appropriate 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. Contact criminal justice degree faculty for information on the AA in Victim Assistance at 303.914.6434 for advising.

Suggested Courses for Transfer		Credits
CRJ 110	Introduction to Criminal Justice	3
CRJ 257	Victimology	3
CRJ 151	Domestic Violence	3
CRJ 152	Sexual Assault	3
CRJ 205	Principles of Criminal Law	3
CRJ 225	Crisis Intervention	3
CRJ 239	Managing Emergency Worker Stress	3
CRJ 289	Capstone	1
<b>General Education Courses</b>		
<b>(See AA Degree Requirements on page 34)</b>		<b>38</b>
<b>Total Credits</b>		<b>61</b>

## Culinary Arts

(In cooperation with the Rocky Mountain Chefs of Colorado)

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 Head Start for five hours per week, 90 hours per semester. This VERY demanding six-semester (three-year) program will prepare and teach students 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 at: [www.rrcc.edu/culinary](http://www.rrcc.edu/culinary) 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 website to receive a sponsoring house list.

## Degree: Associate of Applied Science

### Culinary Arts

### Certificate:

### Culinary Arts

## Culinary Arts AAS Degree

Required Courses	Credits
CUA 122 Introduction to Stocks, Soups and Sauces	1
CUA 124 Vegetable Preparation and Breakfast Cookery	1
CUA 127 Soups, Sauces and Consommés	3
CUA 131 Starches, Pastas, Casseroles and Grain Products	1
CUA 132 Center of the Plate: Meat	1
CUA 133 Center of the Plate: Poultry, Fish and Seafood	1
CUA 141 Baking: Principles and Ingredients	1
CUA 142 Basic Yeast-Raised Products and Quick Breads	1
CUA 143 Baking: Cakes, Pies, Pastries and Cookies	1
CUA 144 Baking Applications	1
CUA 150 Baking: Decorating and Presentation	3
CUA 151 Baking: Intermediate Bread Preparation	3
CUA 152 Individual Fancy Dessert Production	3
CUA 156 Nutrition for the Hospitality Professional	3
CUA 180 Culinary Arts Internship 1	5
CUA 182 Culinary Arts Internship 2	5
CUA 210 Advanced Cuisine and Garde Manger	4
CUA 242 Intermediate Garde Manger	1
CUA 255 Supervision in the Hospitality Industry	3
CUA 281 Culinary Arts Internship 3	5

**General Education Courses** 15  
(See AAS Degree Requirements on page 44)  
**Total Credits** 60

## Culinary Arts Certificate

Required Courses	Credits
CUA 101 Food Safety and Sanitation	2
CUA 105 Food Service Concepts and Management Skills	3
CUA 121 Introduction to Food Production Principles and Practices	1
CUA 122 Introduction to Stocks, Soups and Sauces	1
CUA 123 Intro to Garde Manger	1
CUA 124 Vegetable Preparation and Breakfast Cookery	1
CUA 127 Soups, Sauces and Consommés	3
CUA 131 Starches, Pastas, Casseroles and Grain Products	1
CUA 132 Center of the Plate: Meat	1
CUA 133 Center of the Plate: Poultry, Fish and Seafood	1
CUA 141 Baking: Principles and Ingredients	1
CUA 142 Basic Yeast-Raised Products and Quick Breads	1
CUA 143 Baking: Cakes, Pies, Pastries and Cookies	1
CUA 144 Baking Applications	1
CUA 150 Baking: Decorating and Presentation	3
CUA 151 Baking: Intermediate Bread Preparation	3
CUA 152 Individual Fancy Dessert Production	3
CUA 156 Nutrition for the Hospitality Professional	3
CUA 157 Menu Planning	3
CUA 180 Culinary Arts Internship I	5
CUA 182 Culinary Arts Internship II	5
CUA 210 Advanced Cuisine and Garde Manger	4
CUA 242 Intermediate Garde Manger	1
CUA 255 Supervision in the Hospitality Industry	3
CUA 261 Cost Controls	3
CUA 281 Culinary Arts Internship III	5
<b>Total Credits</b>	<b>60</b>

## Dance

### Degree: Associate of Arts

The completion of the following suggested courses is for those planning to transfer to a four-year college or university to complete a major in Dance. This program provides basic preparation leading to dance related careers, as well as to the teaching of dance. Consult with a faculty advisor before beginning this area of study.

### Dance

Suggested Courses for Transfer	Credits
DAN 111 Modern Dance I	1
DAN 112 Modern Dance II	2
DAN 113 Modern Dance III	2
DAN 121 Jazz I	1
DAN 122 Jazz II	2
DAN 123 Jazz III	2
DAN 125 History of Dance	3
DAN 131 Ballet I	1
DAN 132 Ballet II	2
DAN 133 Ballet III	2
DAN 211 Dance Composition	3

**Choose one of the following for a total of one credit:**

DAN 105	Hip Hop I	1
DAN 106	Hip Hop II	1
DAN 141	Ballroom Dance I	1
DAN 142	Ballroom Dance II	1
DAN 143	Tap I	1
DAN 151	Belly Dance I	1
DAN 152	Belly Dance II	1
DAN 251	Belly Dance III	1

**General Education Courses**  
**(See AA Degree Requirements on page 34)** **38**

**Diagnostic Medical Sonography**

**See Sonography on page 130**

**Early Childhood Education**

All Early Childhood Education degrees and certificates require students to take the Accuplacer test before their first semester. You must earn a C or higher in all ECE courses to graduate with a degree or certificate in Early Childhood. Student must complete a criminal background check using American Data Bank's online background check. Please go to [www.rrcc.edu/ece](http://www.rrcc.edu/ece) for information.

**Degree: Associate of Arts**  
**Degree: Associate of Applied Science**

**Certificates:**

- Early Childhood Entry
- Preschool Early Childhood Teacher
- Infant/Toddler Early Childhood Teacher
- Director, Early Childhood Education

**Early Childhood Education Degrees**

**Early Childhood Education AA Degree**

If you plan to transfer to a four-year public college or university to complete a degree with an emphasis in early childhood 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. You must earn a B or higher in COM 115 to receive the AA in Early Childhood Education.

**Consult with the ECE advisor before beginning this program of study.**

<b>Required Courses</b>		<b>Credits</b>
ECE 101	Intro to Early Childhood Education	3
ECE 102	Early Childhood Lab Techniques	3
ECE 111	Infant/Toddler Theory/Practice	3
ECE 188	ECE Practicum I	3
ECE 205	Nutrition, Health and Safety	3

ECE 238	Child Growth and Development	3
ECE 241	Human Relations for ECE	3
ECE 260	The Exceptional Child	3

**General Education Course Requirements: 38**  
**Communication (3 courses): 9**

**COM 125 not acceptable.**

ENG 121	English Composition I	3
ENG 122	English Composition II	3
COM 115	Public Speaking	3

**Mathematics (2 courses)**

MAT 155	Integrated Math I	3
MAT 156	Integrated Math II	3

**Arts and Humanities (2 courses)**

MUS 120	Music Appreciation or ART 110 Art Appreciation	3
LIT 255	Children's Literature or LIT 115 Introduction to Literature	3

**Science (2 courses)**

SCI 155	Integrated Science I	4
SCI 156	Integrated Science II	4

**Social Sciences (3 courses)**

GEO 105	World Regional Geography	3
HIS 201	U.S. History I	3
POS 111	American Government	3

**Total Credits 62**

**Early Childhood Education AAS Degree**

This program prepares you to work as a professional in a variety of capacities in early childhood education. If you complete the degree requirements, you will have met the academic requirements for both preschool early childhood teacher and director certificates.

<b>Required Courses</b>		<b>Credits</b>
ECE 101	Intro to Early Childhood Education	3
ECE 102	Early Childhood Lab Techniques	3
ECE 103	Guidance Strategies for Children	3
ECE 111	Infant and Toddler Theory and Practice	3
ECE 188	ECE Practicum I	3
ECE 205	Nutrition, Health and Safety	3
ECE 220	Curriculum Development: Methods and Techniques	3
ECE 238	Child Growth and Development	3
ECE 240	Administration of Early Childhood Care and Education Programs (Capstone)	3
ECE 241	Human Relations for ECE	3
ECE 256	Working with Parents, Families and Community Systems	3
ECE 260	The Exceptional Child	3
ECE 288	ECE Practicum II	3
CIS 118	Introduction to PC Applications or EDU 261 Teaching, Learning and Technology	3

**Specific Program Requirements:**

**General Education Course Requirements:**

ENG 121	English Composition I (or above)	3
COM 125	Interpersonal Communication	3
MAT 107	Career Math (or above)	3

**Credit from two of the following areas: 6**

Arts and Humanities, Natural & Physical Sciences, Social and Behavioral Science  
**Faculty advisor-approved electives from above 3**  
**Total Credits 60**

## Early Childhood Education Certificates

### Early Childhood Entry Certificate

Completing this program provides you with the entry level requirements for working in early care and education settings.

Required Courses		Credits
ECE 101	Intro to Early Childhood Education	3
ECE 103	Guidance Strategies for Children	3
<b>Total Credits</b>		<b>6</b>

### Preschool Early Childhood Teacher Certificate

Completing this program prepares you for teacher positions in early care and education settings. Upon completion of these classes, you will have met academic requirements for a Colorado Early Childhood Teacher Certificate. In addition to the academic requirements, the Colorado Department of Human Services requires nine months (1,395 hours) of verifiable work experience.

Required Courses		Credits
ECE 101	Intro to Early Childhood Education	3
ECE 102	Early Childhood Lab Techniques	3
ECE 103	Guidance Strategies for Children	3
ECE 188	ECE Practicum I	3
ECE 220	Curriculum Development: Methods and Techniques	3
ECE 238	Child Growth and Development	3
<b>Total Credits</b>		<b>18</b>

### Infant/Toddler Early Childhood Teacher Certificate

Completing this program prepares you for infant nursery supervisor positions in early childhood care and education settings. Upon completion of these classes, you will have met academic requirements as a Colorado Infant Nursery Supervisor. In addition to the academic requirements, the Colorado Department of Human Services requires 12 months (1,820 hours) of verifiable work experience.

Required Courses		Credits
ECE 101	Intro to Early Childhood Education	3
ECE 103	Guidance Strategies for Children	3
ECE 111	Infant and Toddler Theory and Practice	3
ECE 112	Infant and Toddler Lab Techniques	3
ECE 188	ECE Practicum I	1
ECE 238	Child Growth and Development	3
<b>Total Credits</b>		<b>16</b>

### Director, Early Childhood Education Certificate

Completing this program prepares you for director-qualified positions in early childhood care and education programs. Upon completion of these classes, you will have met the academic requirements for an Early Childhood Director Certificate. In addition to the academic requirements, the Colorado Department of Human Services requires 24 months (3,640 hours) of verifiable work experience.

Required Courses		Credits
ECE 101	Intro to Early Childhood Education	3
ECE 102	Early Childhood Lab Techniques	3
ECE 103	Guidance Strategies for Children	3
ECE 111	Infant and Toddler Theory and Practice	3

ECE 188	ECE Practicum I	3
ECE 205	Nutrition, Health and Safety	3
ECE 220	Curriculum Development: Methods and Techniques	3
ECE 238	Child Growth and Development	3
ECE 240	Administration of Early Childhood Care and Education Programs (capstone)	3
ECE 241	Human Relations for ECE	3
ECE 260	The Exceptional Child	3
<b>Total Credits</b>		<b>33</b>

## Economics

### Degree: Associate of Arts

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.

If you plan to transfer to a four-year college or university to complete a major in economics, 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.

### Economics AA Degree

See AA - Economics Designated Degree Requirements on page 52

## Electricity Commercial-Industrial-Residential

This program prepares you for the many career opportunities in the electrical industry. A thorough treatment of DC, AC, and polyphase electric circuits and solid-state power devices minimizes the possibility of technological obsolescence. 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 and fire alarm classes are especially useful as preparation for NICET (National Institute for Certification in Engineering Technologies) state license, renewal and certification examinations. This program is excellent for electricians, engineers, firefighters, building department inspectors, and maintenance personnel because it uses an extensive lab environment for important, hands-on experience in electrical classes. Industrial Control & Instrumentation technicians maintain, repair and troubleshoot mechanisms in a wide variety of industries. As a Technician, you will repair, maintain and install sophisticated systems to control processes in a process or manufacturing plant. This program is designed to provide the student with a wide variety of electrical courses to prepare them for a job as an electrical technician. The need for trained electrical technicians continues to climb in a wide variety of industries including; manufacturing, power plants, oil and gas production

facilities, mining operations, and chemical processing plants. For advising, please call 303.914.6509.

**Related course work may be found under:**

Air Conditioning, Heating and Refrigeration and Renewable Energy Technology.

## Degrees: Associate of Applied Science

- Construction Electrician
- Maintenance Electrician
- Fire Protection Technology
- Construction Electrician/IBEW/NECA
- Power Technology
- Industrial Control & Instrumentation Technology

### Certificates:

- Electrical Installation
- National Electrical Code
- Electrical Codes and Standards
- Residential Construction Electrician
- Construction Electrician
- Advanced Construction Electrician
- Maintenance Electrician
- Introduction to Instrumentation and Controls Technician
- Advanced Instrumentation and Controls Technician
- Advanced Maintenance Electrician
- Fire Alarm Code
- Introduction to Fire Alarm Technician
- Fire Alarm and Detection Technician
- Post-Degree Specialization for Advanced Fire Code
- Post-Degree Specialization for Advanced Construction Electrician
- Post-Degree Specialization for Advanced Maintenance Electrician

## 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.

Required Courses		Credits
EIC 100	Electrical Construction and Planning	4
EIC 110	Electrical Installations I	4

EIC 120	Electrical Installations II	4
EIC 130	National Electrical Code I	4
EIC 135	National Electrical Code II	4
EIC 150	DC Circuit Fundamentals	4
EIC 155	AC Circuit Fundamentals	4
<b>Required Credits</b>		<b>28</b>
<b>Elective Courses (Choose from list below)</b>		<b>18</b>
EIC 102, 124, 125, 160, 167, 169, 211, 217, 220, 240, CIS 118. Other courses as approved by Electrical Department Advisor.		
<b>General Education Courses</b>		
<b>(See AAS Degree Requirements on page 44)</b>		<b>15</b>
<b>Total Credits</b>		<b>61</b>

### 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.

Required Courses		Credits
EIC 110	Electrical Installations I	4
EIC 120	Electrical Installations II	4
EIC 150	DC Fundamentals	4
EIC 155	AC Circuit Fundamentals	4
EIC 167	Electrical Maintenance	4
EIC 130	National Electrical Code I	4
EIC 220	Industrial Controls	4
EIC 225	Programmable Controllers I	4
<b>Required Credits</b>		<b>32</b>
<b>Elective Courses (Choose from list below)</b>		<b>14</b>
EIC 100, 102, 124, 125, 135, 150, 155, 160, 169, 211, 217, 226, 230, 233, 240, CIS 118. Other courses as approved by Electrical Department Advisor.		
<b>General Education Courses</b>		
<b>(See AAS Degree Requirements on page 44)</b>		<b>15</b>
<b>Total Credits</b>		<b>61</b>

### Fire Protection Technology AAS Degree

This degree prepares you for entry into a career in fire alarm systems design, fire alarm systems technician, or fire sprinkler systems design. This degree is also useful for anyone working for building or fire departments and conducting plan review or inspections. Emphasis is placed on the latest technologies in accordance with national and local fire codes. Preparation for NICET (National Institute for Certification in Engineering Technologies) certification in fire alarm systems levels I, II, III and IV is included in the program.

Required Courses		Credits
EIC 110	Electrical Installations I	4
EIC 120	Electrical Installations II	4
EIC 130	National Electrical Code I	4
EIC 135	National Electrical Code II	4
EIC 150	DC Circuit Fundamentals	4
EIC 240	Fire Alarm Fundamentals	4
EIC 241	Fire Alarm Systems	4
EIC 242	National Fire Alarm Code	4
<b>Required Credits</b>		<b>32</b>
<b>Elective Courses (Choose from list below)</b>		<b>14</b>
EIC 100, 102, 124, 125, 155, 160, 169, 211, 217, 220, 226, 230, 233, 240, CIS 118, FST 204. Other courses as approved by Electrical Department Advisor.		
<b>General Education Courses</b>		<b>15</b>
<b>(See AAS Degree Requirements on page 44)</b>		
<b>Total Credits</b>		<b>61</b>

## Construction Electrician/IBEW/NECA

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 & Instrumentation Technology AAS Degree

Required Courses	Credits
EIC 124 Electrical Safety	1
EIC 130 National Electrical Code I	4
EIC 150 DC Fundamentals	4
EIC 155 AC Circuit Fundamentals	4
EIC 160 Electrical Instruments and Measurements	4
EIC 167 Electrical Maintenance	4
EIC 220 Industrial Electrical Controls	4
EIC 222 Instrument. & Process Controls I	4
(pending) Advanced Industrial Controls	4
EIC 225 Programmable Controllers I	4
EIC 226 Programmable Controls II	4
EIC 230 Instrumentation & Controls II	4

<b>Required Credits</b>	<b>45</b>
<b>General Education Courses</b> (See AAS Degree Requirements on page 44)	<b>15</b>
<b>Total Credits</b>	<b>60</b>

## Electricity Commercial/Industrial/Residential Certificates

### Electrical Installation Certificate

Relating to AAS/Construction Electrician

Required Courses	Credits
EIC 100 Electrical Construction and Planning	4
EIC 110 Electrical Installations I	4
EIC 120 Electrical Installations II	4
EIC 130 National Electric Code I	4
<b>Total Credits</b>	<b>16</b>

### National Electrical Code Certificate

Relating to AAS/Construction Electrician

Required Courses	Credits
EIC 130 National Electrical Code I	4
EIC 135 National Electrical Code II	4
EIC 169 Electrical Code Calculations	4
<b>Total Credits</b>	<b>12</b>

### Electrical Codes and Standards Certificate

Relating to AAS/Construction Electrician

Required Courses	Credits
EIC 130 National Electrical Code I	4
EIC 135 National Electrical Code II	4
EIC 169 Electrical Code Calculations	4
EIC 211 IECC International Energy Conservation Code	4
<b>Total Credits</b>	<b>16</b>

### Residential Construction Electrician Certificate

Relating to AAS/Construction Electrician

Required Courses	Credits
EIC 102 Electrical Print Reading	4
EIC 100 Electrical Construction and Planning	4
EIC 110 Electrical Installations I	4
EIC 130 National Electric Code I	4
EIC 150 DC Circuit Fundamentals	4
EIC 155 AC Circuit Fundamentals	4
<b>Total Credits</b>	<b>24</b>

### Construction Electrician Certificate

Relating to AAS/Construction Electrician

Required Courses	Credits
EIC 102 Electrical Print Reading	4
EIC 100 Electrical Construction and Planning	4
EIC 110 Electrical Installations I	4
EIC 120 Electrical Installations II	4
EIC 130 National Electric Code I	4
EIC 135 National Electric Code II	4
EIC 150 DC Circuit Fundamentals	4
EIC 155 AC Circuit Fundamentals	4
EIC 169 Electrical Code Calculations	4
<b>Total Credits</b>	<b>36</b>

## Advanced Construction Electrician Certificate

Relating to AAS/Construction Electrician

Requires Construction Electrician Certificate or instructor's approval

Required Courses	Credits
AEC 221 Building Electrical/Mechanical Systems	3
EIC 124 Electrical Safety Requirements	1
EIC 215 Advanced Code Calculations	4
EIC 205 Advanced Electrical Planning	4
EIC 217 Electrical Estimating	4
EIC 240 Fire Alarm Fundamentals	4
<b>Total Credits</b>	<b>20</b>

## Maintenance Electrician Certificate

Relating to AAS/Maintenance Electrician:

Required Courses	Credits
EIC 110 Electrical Installations I	4
EIC 120 Electrical Installations II	4
EIC 130 National Electric Code I	4
EIC 135 National Electric Code II	4
EIC 150 DC Circuit Fundamentals	4
EIC 155 AC Circuit Fundamentals	4
EIC 167 Electrical Maintenance	4
EIC 220 Industrial Electrical Controls I	4
EIC 225 Programmable Controls I	4
<b>Total Credits</b>	<b>36</b>

## Introduction to Instrumentation and Controls Technician Certificate

Relating to AAS/Maintenance Electrician

Required Courses	Credits
EIC 220 Industrial Electrical Controls Prerequisite: EIC 150 and EIC 155 or permission	4
EIC 225 Programmable Controls I	4
EIC 222 Instrumentation and Controls I	4
<b>Total Credits</b>	<b>12</b>

## Advanced Instrumentation and Controls Technician Certificate

Relating to AAS/Maintenance Electrician

Required Courses	Credits
EIC 220 Industrial Electrical Controls Prerequisite: EIC 150 and EIC 155 or permission	4
(pending) Advanced Industrial Electrical Controls	4
EIC 225 Programmable Controls I	4
EIC 226 Programmable Controls II	4
EIC 222 Instrumentation & Controls I	4
<b>Total Credits</b>	<b>20</b>

## Advanced Maintenance Electrician Certificate

Relating to AAS/Maintenance Electrician:

Requires Maintenance Electrician Certificate or advisor approval

Required Courses	Credits
EIC 160 Electrical Instruments and Measurements	4
EIC 169 Electrical Code Calculations	4
EIC 205 Advanced Electrical Planning	4
EIC 210 Advanced National Electrical Code	4
(pending) Advanced Industrial Electrical Controls	4
EIC 226 Advanced Programmable Controllers	4
EIC 230 Instrumentation and Controls II	4
EIC 240 Fire Alarm Fundamentals	4
<b>Total Credits</b>	<b>32</b>

## Introduction to Fire Alarm Technician Certificate

Relating to AAS/Fire Protection Technology

Required Courses	Credits
EIC 240 Fire Alarm Fundamentals	4
EIC 241 Fire Alarm Systems Design	4
EIC 242 National Fire Alarm Code	4
<b>Total Credits</b>	<b>12</b>

## Fire Alarm Code Certificate

Relating to AAS/Fire Protection Technology

Required Courses	Credits
EIC 130 National Electrical Code I	4
EIC 135 National Electrical Code II	4
EIC 241 Fire Alarm Systems Design	4
EIC 242 National Fire Alarm Code	4
<b>Total Credits</b>	<b>16</b>

## Fire Alarm and Detection Technician Certificate

Relating to AAS/Fire Protection Technology

Required Courses	Credits
EIC 110 Electrical Installations I	4
EIC 120 Electrical Installations II	4
EIC 124 Electrical Safety Requirements	1
EIC 150 DC Circuit Fundamentals	4
EIC 155 AC Circuit Fundamentals	4
EIC 240 Fire Alarm Fundamentals	4
EIC 241 Fire Alarm Systems Design	4
EIC 242 National Fire Alarm Code	4
<b>Total Credits</b>	<b>29</b>

## Post-Degree Specialization for Advanced Fire Code Certificate

Relating to AAS/Fire Protection Technology

Required Courses	Credits
EIC 130 National Electrical Code I	4
EIC 135 National Electrical Code II	4
EIC 242 National Fire Alarm Code	4
FST 204 Fire Codes and Ordinances Prerequisite: Permission of instructor	3
<b>Total Credits</b>	<b>15</b>

## Post-Degree Specialization for Advanced Construction Electrician Certificate

Relating to AAS/Construction Electrician

Requires AAS/Construction Electrician or instructor's approval.

Required Courses		Credits
EIC 160	Electrical Instruments and Measurements	4
EIC 205	Advanced Electrical Planning	4
EIC 210	Advanced National Electrical Code	4
EIC 215	Advanced Code Calculations	4
<b>Total Credits</b>		<b>16</b>

## Post-Degree Specialization for Advanced Maintenance Electrician Certificate

Relating to AAS/Maintenance Electrician:

Prerequisite: AAS degree maintenance electrician emphasis or advisor approval

Required Courses		Credits
EIC 165	Solid State Devices and Circuits	4
EIC 210	Advanced National Electric Code	4
EIC 211	IECC International Energy Conservation Code	4
EIC 241	Advanced Fire Alarm Systems	4
<b>Total Credits</b>		<b>16</b>

## Elementary Education

See Teacher Education on page 131

## Emergency Management and Planning

### Degree: Associate of Applied Science

Emergency Management and Planning

#### Certificates:

Emergency Management and Planning

Fundamentals of Emergency Management

### 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 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 101 and EMP 105.

**Information:** [www.rrcc.edu/emplan](http://www.rrcc.edu/emplan).

Required Courses (Choose 10 of 11 courses)		Credits
EMP 101	Principles of Emergency Management	3
EMP 105	Emergency Planning	3
EMP 106	Exercise Design and Evaluation	3
EMP 107	Emergency Operations Center and Communications	3
EMP 109	Incident Command System	3
EMP 240	Leadership and Influence	3
EMP 242	Effective Communication	3
EMP 247	Decision Making in a Crisis	3
EMP 244	Developing Volunteer Resources	3
EMP 280	Business Emergency Management	3
EMP 291	Public Information Officer	3
<b>Total Required Credits</b>		<b>30</b>
<b>General Education Courses (See AAS Degree Requirements on page 44)</b>		<b>15</b>
<b>Elective Course Recommendations: EMP, EMS, FST, LEA, CRJ, GIS, CIS, BUS, MAN, PRA</b>		<b>15</b>
<b>Total Credits</b>		<b>60</b>

### Emergency Management and Planning Certificates

#### Emergency Management and Planning Certificate

The certificate program is geared toward current emergency management practitioners who want to upgrade their skills.

Required Courses (Choose 10 of 11 courses)		Credits
EMP 101	Principles of Emergency Management	3
EMP 105	Emergency Planning	3
EMP 106	Exercise Design and Evaluation	3
EMP 107	Emergency Operations Center and Communications	3
EMP 109	Incident Command System	3
EMP 240	Leadership and Influence	3
EMP 242	Effective Communication	3
EMP 247	Decision Making in a Crisis	3
EMP 244	Developing Volunteer Resources	3
EMP 280	Business Emergency Management	3
EMP 291	Public Information Officer	3
<b>Total Credits</b>		<b>30</b>

## Fundamentals of Emergency Management Certificate

Required Courses	Credits
EMP 101 Principles of Emergency Management	3
EMP 105 Emergency Planning	3
EMP 106 Exercise Design and Evaluation	3
<b>Total Credits</b>	<b>9</b>

## 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 Paramedicine. Consult the website: <http://www.rrcc.edu/ems/index.html> early in your college career to explore all your educational options. A grade of C or higher must be achieved in all EMS courses to graduate. Student's must complete a criminal background check prior to enrolling in this program by using American Data Bank's online background check procedures: [www.healthcareex.com](http://www.healthcareex.com).

## Degree: Associate of Applied Science

### Paramedicine

### Certificates:

Emergency Medical Technician

Advanced Emergency Medical Technician

Paramedic

## Emergency Medical Services Degrees

### Paramedicine AAS Degree

This program assists in advancing a graduate's career in the EMS system. For admission into the Paramedicine program, please go to the St. Anthony's Hospital EMS Training website at: [www.sahems.org](http://www.sahems.org)

Required Courses	Credits
EMS 225 Fundamentals of Paramedic Practice	3
EMS 226 Fundamentals of Paramedic Practice Lab	2
EMS 227 Paramedic Special Considerations	3
EMS 228 Paramedic Special Considerations Lab	2
EMS 229 Paramedic Pharmacology	3
EMS 230 Paramedic Pharmacology Lab	2
EMS 231 Paramedic Cardiology	5
EMS 232 Paramedic Cardiology Lab	1
EMS 233 Paramedic Medical Emergencies	4
EMS 234 Paramedic Medical Emergencies Lab	1
EMS 235 Paramedic Trauma Emergencies	4
EMS 236 Paramedic Trauma Emergencies Lab	1
EMS 237 Paramedic Internship Preparatory	2
EMS 280 Paramedic Internship I	6
EMS 281 Paramedic Internship II	6

### General Education Course Requirements:

#### Communication:

Any ENG or COM (100 or higher) 3

#### Mathematics:

MAT 107 or above 3

#### Natural & Physical Sciences:

BIO 201 Anatomy and Physiology I 4

BIO 202 Anatomy and Physiology II 4

**Arts and Humanities or Social and Behavioral Sciences** 3

**Total Credits** 62

## Emergency Medical Services Certificates

Information: [www.rrcc.edu/ems](http://www.rrcc.edu/ems)

### Emergency Medical Technician Certificate

This program prepares the student 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 entry-level employment in the emergency medical services system.

Required Courses	Credits
EMS 121 EMT Fundamentals	3
EMS 122 EMT Medical Emergencies	4
EMS 123 EMT Trauma Emergencies	2
EMS 124 EMT Special Considerations	2
EMS 170 Emergency Medical Technician-Basic Clinical	1
<b>Total Credits</b>	<b>12</b>

### Advanced Emergency Medical Technician Certificate

This program prepares the student 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.

Required Courses	Credits
EMS 127 AEMT Special Considerations	2
EMS 129 AEMT Pharmacology	1
EMS 130 EMT I V Therapy	2
EMS 131 AEMT Fundamentals	2
EMS 133 AEMT Medical Emergencies	2
EMS 135 AEMT Trauma Emergencies	2
EMS 171 AEMT Clinical Internship	2
<b>Total Credits</b>	<b>13</b>

### Paramedic Certificate

This program prepares the student 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.

Required Courses	Credits
EMS 225 Fundamentals of Paramedic Practice	3
EMS 226 Fundamentals of Paramedic Practice Lab	2
EMS 227 Paramedic Special Considerations	3
EMS 228 Paramedic Special Considerations Lab	2
EMS 229 Paramedic Pharmacology	3
EMS 230 Paramedic Pharmacology Lab	2

EMS 231	Paramedic Cardiology	5
EMS 232	Paramedic Cardiology Lab	1
EMS 233	Paramedic Medical Emergencies	4
EMS 234	Paramedic Medical Emergencies Lab	1
EMS 235	Paramedic Trauma Emergencies	4
EMS 236	Paramedic Trauma Emergencies Lab	1
EMS 237	Paramedic Internship Preparatory	2
EMS 280	Paramedic Internship I	6
EMS 281	Paramedic Internship II	6
BIO 106	Anatomy and Physiology	4
<b>Total Credits</b>		<b>49</b>

## Energy Technology Programs

Energy and Energy Efficiency courses, certificates, and Associate of Applied Science degrees are available in the program areas listed. These programs offer core skills required to install and maintain new energy technologies using practices that promote energy efficiency and sustain our natural resources.

**Air Conditioning, Heating and Refrigeration – HVAC Energy Efficiency on page 80**

**Carpentry – Home Energy Efficiency on page 88**

**Electricity: Commercial/Industrial/Residential – Energy Maintenance & Operations on page 98**

**Process Technology**

**Renewable Energy Technology – Solar Energy, Energy Efficiency Weatherization and Energy Auditing on page 127**

**Water Quality Management Technology on page 134**

**Wind Energy Technology**

**Advising:** Please contact the Energy Technology programs offices directly:

**Troy Wanek** - Renewable Energy Technology 303.914.6668, troy.wanek@rrcc.edu

**Larry Snyder** – Mechanical Trades, 303.914.6306, larry.snyder@rrcc.edu;

**Chuck Beck** – Process Technology and Industrial Maintenance, 303.914.6063, chuck.beck@rrcc.edu;

**Mike Smith** – Water Quality Management Technology, 303.914.6325, mike.smith@rrcc.edu.

**Bachelor of Science transfer program:** All Associate of Applied Science graduates are eligible to participate in the Colorado Community College Pathways program, a strategic partnership between DeVry University – Colorado and Red Rocks Community College. Students may transfer 80+ credit hours from Red Rocks Community College to DeVry University and complete a Bachelor of Science in Technical Management in as few as two semesters. Transfer options also available for Denver University, University of Phoenix, and may be available in other individual program areas. Contact your advisor for details.

## 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. Students will use CAD (Computer-Aided Design) 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. Students must earn a C or higher in all courses to graduate.

## Degrees: Associate of Applied Science

**Architectural**

**Civil**

**Mechanical**

## Certificates:

**Architectural**

**Civil**

**Mechanical**

**Intro to AutoCAD**

**Revit**

**SolidWorks**

**Sustainable Design Applications**

## Engineering Graphics Technology Degrees

### 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 20 hours of class time.

Required Courses		Credits
CAD 101	Computer Aided Drafting I	3
CAD 102	Computer Aided Drafting II	3
AEC 101	Basic Architectural Drafting	4
AEC 102	Residential Construction Drawing	4
AEC 121	Construction Materials And Systems	3
AEC 202	Architectural Design & Analysis	4
AEC 218	Sustainable Building Systems	3
AEC 225	Architectural Design & Development	4
AEC 275	SpTp: Architectural Graphics	3

CAD 224	Revit	3
CAD 227	Revit Advanced	3
CAD 289	Capstone (Fourth Semester Class)	9
<b>Required Architectural Credits</b>		<b>46</b>
<b>General Education Courses</b>		<b>15</b>
<b>(See AAS Degree Requirements on page 44)</b>		
<b>Total Credits</b>		<b>61</b>

### Civil AAS Degree

Required Courses	Credits	
CAD 101	Computer Aided Drafting I	3
CAD 102	Computer Aided Drafting II	3
EGT 230	Drafting and Design I: Civil	6
EGT 231	Drafting and Design II: Civil	6
CAD 233	Civil 3D	3
CAD 285	Independent Study	6
CAD 289	Capstone (Fourth Semester Class)	6
COM 105	Career Communications	3
GIS 101	Intro to Geographic Information Systems	3
PHY 105	Conceptual Physics	4
AEC or CAD Elective		3
<b>Required Civil Credits</b>		<b>46</b>
<b>General Education Courses</b>		
<b>(See AAS Degree Requirements on page 44)</b>		<b>15</b>
<b>Total Credits</b>		<b>61</b>

### 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.

Required Courses	Credits	
CAD 101	Computer Aided Drafting I	3
CAD 102	Computer Aided Drafting II	3
EGT 231	Drafting and Design II: Mech	6
CAD 256	SolidWorks Basic	6
CAD 257	SolidWorks Intermediate	6
CAD 258	SolidWorks Advanced	6
CAD 289	Capstone (Fourth Semester Class) Mech	12
PHY 105	Conceptual Physics	4
<b>Required Mechanical Credits</b>		<b>46</b>
<b>General Education Courses</b>		
<b>(See AAS Degree Requirements on page 44)</b>		<b>15</b>
<b>Total Credits</b>		<b>61</b>

### Engineering Graphics Technology Certificates

#### Architectural Certificate

Required Courses	Credits	
AEC 101	Basic Architectural Drafting	4
AEC 102	Residential Construction Drawing	4
AEC 121	Construction Materials and Systems	3
AEC 202	Architectural Design & Analysis	4
AEC 225	Architectural Design & Development	4
CAD 101	Computer Aided Drafting I	3
CAD 102	Computer Aided Drafting II	3
CAD 224	Revit	3
<b>And, one of the following electives:</b>		
CAD 227	Revit Advanced	3
AEC 218	Sustainable Building Systems	3
AEC 275	SpTp: Architectural Graphics	3
<b>Total Credits</b>		<b>29</b>

### Civil Certificate

Required Courses	Credits	
CAD 101	Computer Aided Drafting I	3
CAD 233	Civil 3D	3
GIS 101	Intro to Geographic Information	3
EGT 231	Drafting and Design II: Civil	6
<b>Total Credits</b>		<b>15</b>

### Mechanical Certificate

Required Courses	Credits	
CAD 101	Computer Aided Drafting I	3
CAD 102	Computer Aided Drafting II	3
EGT 231	Drafting and Design II: Mech	6
<b>Total Credits</b>		<b>12</b>

### Intro to AutoCAD Certificate

Required Courses	Credits	
CAD 101	Computer Aided Drafting I	3
CAD 102	Computer Aided Drafting II	3
<b>Total Credits</b>		<b>6</b>

### Revit Certificate

Required Courses	Credits	
CAD 224	Revit	3
CAD 227	Revit Advanced	3
<b>Total Credits</b>		<b>6</b>

### Drafting Certificate (pending approval)

Required Courses	Credits	
CAD 101	Computer Aided Drafting I	3
CAD 102	Computer Aided Drafting II	3
AEC 275	SpTp: Architectural Graphics	3
IND 111	Drafting for Interiors	4
IND 112	Graphic Communication	4
<b>Total Credits</b>		<b>17</b>

### SolidWorks Certificate

Required Courses	Credits	
CAD 256	SolidWorks Basics	6
CAD 257	SolidWorks Intermediate	6
CAD 258	SolidWorks Advanced	6
<b>Total Credits</b>		<b>18</b>

### Sustainable Design Applications Certificate

Required Courses	Credits	
AEC 218	Sustainable Building Systems	3
IND 231	Sustainable Design	3
<b>Total Credits</b>		<b>6</b>

## Engineering - Pre-Engineering

### Degree: Associate of Science

The completion of the following suggested courses is 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.

### Engineering - Pre-Engineering

Suggested Courses for Transfer	Credits
CHE 111 General College Chemistry I*	5
PHY 211 Physics: Calculus-Based I *	5
PHY 212 Physics: Calculus-Based II	5
MAT 201 Calculus I *	5
MAT 202 Calculus II	5
MAT 204 Calculus III	5
MAT 261 Differential Equations	4
* Fulfills General Education requirements	
<b>General Education Courses</b> (see AS Degree Requirements on page 37)	<b>26</b>

## 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.

### Degrees: Associate of Arts

#### Areas of Study:

Literature

Creative Writing

#### Literature

Suggested Courses for Transfer	Credits
LIT 115 Introduction to Literature *	3
ENG 221 Creative Writing I	3
LIT 201 World Literature to 1600 *	3
LIT 202 World Literature after 1600*	3
LIT 211 American Literature to Civil War*	3
LIT 212 American Literature after Civil War*	3
LIT 221 British Literature to 1770*	3
LIT 222 British Literature since 1770*	3
*State-guaranteed general education courses	
<b>General Education Courses</b> (See AA Degree Requirements on page 34)	<b>33</b>
<b>Elective with ENG or LIT prefix</b>	<b>3</b>

(Discuss elective options with English faculty advisor).

## Creative Writing

Suggested Courses for Transfer	Credits
ENG 221 Creative Writing I	3
ENG 226 Fiction Writing	3
ENG 227 Poetry Writing	3
ENG 230 Creative Nonfiction	3
ENG 231 Literary Magazine	3
LIT 115 Introduction to Literature*	3
*State-guaranteed general education course	
<b>General Education Courses</b> (See AA Degree Requirements on page 34)	<b>36</b>
<b>Elective with ENG or LIT prefix</b>	<b>6</b>
(Discuss elective options with English faculty advisor).	
<b>Total Credits</b>	<b>60</b>

## Fine Woodworking

This program provides theory and hands-on training for entry-level skills through craftsman/master-level competencies. Day, evening, and weekend classes for part-time or full-time students include the areas of lutherie (musical instrument building), furniture building, cabinet making, chair making, carving, woodturning, and wood finishing. Courses may be repeated up to three times to increase proficiency. All courses are sequenced as shown in the certificate.

### Degree: Associate of Applied Science

#### Fine Woodworking

#### Certificates:

Woodworking Fundamentals

Craftsman

Cabinetmaker

Joiner

Contemporary Furniture Fundamentals

Fine Furniture Craftsman

Contemporary Furniture Craftsman

Artisan

Post-Degree Advanced Craftsman

Woodturner

Advanced Woodturner

Luthier Technician

Luthier Fundamentals

## 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. Students are expected to develop individual portfolios that demonstrate the ability to design and build original and reproduction pieces, and demonstrate specific skills through presentations from each course. An AAS degree designation requires submittal of three pieces to be judged by a board of professional woodworkers and instructors.

The AAS degree includes 15 credits from General Education Courses.

Required Courses	Credits
FIW 101 Introduction to Woodworking	6
FIW 104 Elements of Design	2
FIW 118 Introduction to Turning	3
FIW 125 Wood Finishing	3
(3 credits of special topics finishing classes may be substituted for FIW 125 with the advisor's permission)	
FIW 201 Furniture I: Frame Joinery	4
FIW 202 Furniture II: Carcass & Chair Construction	4
FIW 203 Furniture III: Period Furniture Reproduction	4
(FIW 213 Contemporary Furniture II may be substituted for Furniture III)	
BUS 102 Entrepreneurial Operations	3
FIW 212 Contemporary Furniture Making	4
<b>FIW Electives</b>	<b>12</b>
<b>General Education Courses</b>	
<b>(See AAS Degree Requirements on page 44)</b>	<b>15</b>
<b>Total Credits</b>	<b>60</b>

## Fine Woodworking Certificates

### Woodworking Fundamentals Certificate

This certificate is designed to give students the basics of most woodworking applications. It is well suited for those students seeking an occupation within an existing woodworking industry and/or continuing their pursuit of a degree or a more advanced certificate.

Required Courses	Credits
FIW 100 Fundamentals of Woodworking	3
FIW 201 Furniture I: Frame Joinery	4
<b>Total Credits</b>	<b>7</b>

### Craftsman Certificate

This certificate is designed for students who desire to show evidence of their knowledge of the basic skills required for a woodworking craftsman in order to pursue an entrepreneurial career within the field.

Required Courses	Credits
FIW 101 Introduction to Woodworking	6
FIW 201 Furniture I: Frame Joinery	4
FIW 202 Furniture II: Carcass & Chair Construction	4
<b>Total Credits</b>	<b>14</b>

## Cabinetmaker Certificate

Students seeking employment within the cabinetmaking business 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.

Required Courses	Credits
FIW 100 Woodworking Fundamentals (FIW 101 may be substituted for FIW 100)	3
FIW 128 Doormaking	4
FIW 109 Intro to Cabinetmaking	4
FIW 125 Wood Finishing	3
<b>Total Credits</b>	<b>14</b>

### Joiner Certificate

This certificate is designed for students 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.

Required Courses	Credits
FIW 101 Introduction to Woodworking	6
FIW 125 Wood Finishing	3
FIW 201 Furniture I: Frame Joinery	4
FIW 202 Furniture II: Carcass & Chair Construction	4
FIW 203 Furniture III: Period Furniture Reproduction	4
(FIW 213 Contemporary Furniture II may be substituted for Furniture III)	
<b>Total Credits</b>	<b>21</b>

### Contemporary Furniture Fundamentals Certificate

This certificate is designed for students who want to explore the design and creative elements of contemporary furniture construction. It is well suited for students that have an understanding of furniture construction and want to expand the possibilities within the contemporary furniture field of fine woodworking.

Required Courses	Credits
FIW 101 Introduction to Woodworking	6
FIW 104 Elements of Design	2
FIW 125 Wood Finishing	3
FIW 201 Furniture I: Frame Joinery	4
FIW 212 Contemporary Furniture Making	4
<b>Total Credits</b>	<b>19</b>

## Fine Furniture Craftsman Certificate

This certificate is designed for students who want to design and build period or contemporary pieces of fine furniture. It is well suited for seeking employment within an existing furniture-making business or to pursue an entrepreneurial career within the field.

Required Courses		Credits
FIW 101	Introduction to Woodworking	6
FIW 104	Elements of Design	2
FIW 118	Introduction to Turning	3
FIW 125	Wood Finishing	3

(3 credits of special topics finishing classes may be substituted for FIW 125 with the advisor's permission)

FIW 201	Furniture I: Frame Joinery	4
FIW 202	Furniture II: Carcass & Chair Construction	4
FIW 203	Furniture III: Period Furniture Reproduction	4

(Substitutions to Furniture III are possible, but must be approved)

<b>Total Credits</b>		<b>26</b>
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## Contemporary Furniture Craftsman Certificate

This certificate combines the skills of building and the skills of designing in the field of custom furniture building. Students are expected to develop individual portfolios that demonstrate their ability to design and build original pieces, and demonstrate specific skills through presentations from each course. Design skills and drawing proficiency are required.

Additional courses may be required. A Contemporary Furniture Craftsman designation requires submittal of three pieces to be judged by a board of professional woodworkers and instructors.

Required Courses		Credits
FIW 101	Introduction to Woodworking	6
FIW 104	Elements of Design	2
ART 121	Drawing I	3
FIW 118	Introduction to Turning	3
FIW 122	Woodcarving	3
FIW 125	Wood Finishing	3
FIW 200	Veneering and Marquetry	3
FIW 201	Furniture I: Frame Joinery	4
FIW 212	Contemporary Furniture Making	4
FIW 213	Advanced Contemporary Furniture Making	4
<b>Total Credits</b>		<b>35</b>

## Artisan Certificate

The artisan of old was the builder of the product. As students progress through this certificate, they come to realize that the builder needs to have an intimate relationship with design. This certificate requires the completion of two particular projects chosen to illustrate the need to combine building and designing in the field of custom furniture production. Projects will be judged by a panel of instructors and/or professionals in the field.

Required Courses		Credits
FIW 101	Introduction to Woodworking	6
FIW 102	Classical Guitar Construction or FIW 103 Steel String Guitar Construction	6
FIW 104	Elements of Design	2
FIW 118	Introduction to Turning	3
FIW 122	Woodcarving	3
FIW 125	Wood Finishing	3

FIW 200	Veneering and Marquetry	3
FIW 201	Furniture I: Frame Joinery	4
FIW 202	Furniture II: Carcass & Chair	4
<b>Total Credits</b>		<b>34</b>

## Post-Degree Advanced Craftsman Certificate

This certificate expands skills to the level of Advanced Craftsman. Students are expected to develop individual portfolios that demonstrate their ability to set up and maintain equipment, design and build original pieces, and demonstrate specific skills through presentations from each course. Design skills and drawing proficiency are required. Additional courses may be required. An Advanced Craftsman designation requires submittal of three pieces to be judged by a board of professional woodworkers and instructors. Preliminary rehearsal submittals are encouraged to establish standards of craftsmanship.

Required Courses		Credits
FIW 101	Introduction to Woodworking	6
FIW 102	Classical Guitar Construction	6
FIW 103	Steel String Guitar Construction (Other instrument-building classes may be substituted)	6
FIW 109	Intro to Cabinetmaking	4
FIW 122	Woodcarving	3
FIW 128	Doormaking	4
FIW 200	Veneering and Marquetry or FIW 177 Inlay	3
FIW 201	Furniture I: Frame Joinery	4
FIW 202	Furniture II: Carcass & Chair Construction	4
FIW 203	Furniture III: Period Furniture Reproduction (FIW 213 may be substituted for Furniture III)	4
FIW 212	Contemporary Furniture	4
<b>FIW Electives approved by advisor</b>		<b>12</b>
<b>Total Credits</b>		<b>60</b>

## Woodturner Certificate

This certificate is designed for students desiring to validate their experience in the world of wood turning. Students who successfully complete this certificate are seeking to begin their own woodturning or craft-based businesses.

Required Courses		Credits
FIW 100	Fundamentals of Woodworking	3
FIW 118	Introduction to Turning	3
FIW 119	Intermediate Turning I	3
FIW 120	Intermediate Turning II	3
<b>Total Credits</b>		<b>12</b>

## Advanced Woodturner Certificate

This certificate is designed for students desiring to achieve proficiency in wood turning. Students who successfully complete this certificate are seeking to begin or have already begun their own woodturning or craft-based businesses.

Required Courses		Credits
FIW 101	Introduction to Woodworking	3
FIW 118	Introduction to Turning	3
FIW 119	Intermediate Turning I	3
FIW 120	Intermediate Turning II	3
FIW 121	Advanced Turning	3
<b>Total Credits</b>		<b>18</b>

## Luthier Technician Certificate

This certificate is design for the student currently employed or seeking employment as a repair and setup technician. It is well suited for luthiers, entrepreneurs and even music store owners.

Required Courses		Credits
FIW 105	Guitar Setup and Repair	3
FIW 175	SpTp: Advanced Instrument Finishing and Setup	3
<b>Total Credits</b>		<b>6</b>

## Luthier Fundamentals Certificate

As students progress through our rapidly growing Lutherie program, they often seek employment within the musical instrument repair and construction business or become entrepreneurs within this field of woodworking. Students should plan to take their electives under the luthier program with special topic classes focused on their field of study. This certificate is designed to validate their experience in this field.

Required Courses		Credits
FIW 101	Introduction to Woodworking	6
FIW 102	Classical Guitar Making	6
FIW 103	Steel String Guitar Making (Other Instrument building classes may be substituted for FIW 102 or FIW 103)	6
FIW 131	Electric Guitar	6
FIW 105	Guitar Setup & Repair	3
FIW 175	SpTp: Advanced Instrument Finishing	3
FIW 126	French Polish	1
<b>FIW Elective approved by advisor</b>		<b>6</b>
<b>Total Credits</b>		<b>37</b>

## Fire Science Technology

### Degrees: Associate of Applied Science

- Fire Science Technology
- Fire Service Management
- Fire and Emergency Services

### Certificates:

- Fire Fighter I
- Fire Instructor
- Fire Officer I
- Fire Officer II
- Fire Officer III
- Fire Inspector

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 of science degree.

Information: [www.rccc.edu/fire](http://www.rccc.edu/fire)

## Fire Science Technology Degrees

### Fire Science Technology AAS Degree

This program of study is designed for students new to or preparing for the fire service. Students must earn a C or higher in all fire science and general education courses to graduate.

Required Courses		Credits
FST 100	Firefighter I Academy	9
FST 102	Principles/Emergency Services	3
FST 103	Occupational Health and Safety for Fire	3
FST 104	Fire Protection Systems	3
FST 105	Building Construction for Fire Prof	3
FST 106	Fire Prevention	3
FST 107	HazMat Operations (Level I)	3
FST 202	Strategy and Tactics I	3
FST 204	Principles of Code Enforcement	3
FST 205	Fire Investigation I	3
FST 250	Chemistry for Fire Protection	3
<b>Elective Courses</b>		<b>6</b>
FST, EMS, or EMP (only)		
<b>Required Course Credits</b>		<b>45</b>
<b>General Education Courses</b>		<b>15</b>
<b>(See AAS Degree Requirements on page 44)</b>		
<b>Total Credits</b>		<b>60</b>

### Fire Service Management AAS Degree

This degree is for students experienced as firefighters preparing for career advancement. Students 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, towards a bachelor of science degree in public administration or applied science.

Required Courses		Credits
FST 102	Principles/Emergency Services	3
FST 103	Occupational Health and Safety for Fire	3
FST 104	Fire Protection Systems	3
FST 105	Building Construction for Fire Prof	3
FST 106	Fire Prevention	3
FST 206	Fire Officer Supervision and Leadership	3
FST 250	Chemistry for Fire Protection	3
FST 206	Fire Officer Supervision and Leadership	3
FST 289	Capstone	3
<b>Electives</b>		<b>21</b>
FST 201, FST 202, FST 204, FST 205, FST 206, FST 207, FST 251, FST 253, FST 255, or FST 257		
<b>Required Course Credits</b>		<b>45</b>
<b>General Education Courses</b>		<b>15</b>
<b>(See AAS Degree Requirements on page 44)</b>		
<b>Total Credits</b>		<b>60</b>

## Fire and Emergency Services AAS Degree

This program of study is designed for students new to or preparing for the fire service. Students must earn a C or higher in all fire science and general education courses to graduate.

<b>Required Courses</b>		<b>Credits</b>
FST 102	Principles/Emergency Services	3
FST 103	Occupational Health and Safety for Fire	3
FST 104	Fire Protection Systems	3
FST 105	Building Construction for Fire Prof	3
FST 106	Fire Prevention	3
FST 250	Chemistry for Fire Protection	3
<b>Elective Courses</b>		<b>27</b>
FST, EMS, or EMP (only)		
<b>Required Course Credits</b>		<b>45</b>
<b>General Education Courses</b>		<b>15</b>
<b>(See AAS Degree Requirements on page 44)</b>		
<b>Total Credits</b>		<b>60</b>

## Fire Science Technology Certificates

### Fire Fighter I Certificate

FST 170 highly recommended to enhance Fire Academy Certificate experience

<b>Required Courses</b>		<b>Credits</b>
FST 100	Firefighter I Academy	9
FST 107	HazMat Operations (Level I)	3
<b>Total Credits</b>		<b>12</b>

### Fire Instructor Certificate

<b>Required Courses</b>		<b>Credits</b>
FST 201	Instructional Methodology	3
COM 115	Public Speaking	3
<b>Total Credits</b>		<b>6</b>

### Fire Officer I Certificate

Prerequisites: ENG 121 English Composition I  
Firefighter I (Colorado CDFS certification)

<b>Required Courses</b>		<b>Credits</b>
FST 202	Strategy and Tactics I	3
FST 204	Principles of Code Enforcement	3
FST 206	Company Officer Supervision & Leadership	3
FST 250	Chemistry for Fire Protection	3
<b>Total Credits</b>		<b>12</b>

### Fire Officer II Certificate

Prerequisite: Fire Officer I Certificate

<b>Required Courses</b>		<b>Credits</b>
FST 205	Fire Investigation I	3
FST 207	Strategy and Tactics II	3
FST 253	NIMS Fire Ground Organization and Command (ICS)	3
FST 255	Fire Service Management	3
<b>Total Credits</b>		<b>12</b>

### Fire Officer III Certificate

Prerequisites: Fire Officer I and II Certificates

<b>Required Courses</b>		<b>Credits</b>
FST 251	Legal Aspects of Fire Service	3
FST 255	Fire Service Management	3
FST 257	Fire Department Administration	3
FST 289	Capstone	3
<b>Total Credits</b>		<b>12</b>

### Fire Inspector Certificate

Prerequisite: Fire Officer I

<b>Required Courses</b>		<b>Credits</b>
FST 105	Building Construction for Fire Prof	3
FST 106	Fire Prevention	3
FST 204	Principles of Code Enforcement	3
<b>Total Credits</b>		<b>9</b>

## Foreign Languages

### Degree: Associate of Arts

The completion of the following suggested courses is 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.

### Foreign Languages

<b>Suggested Courses for Transfer</b>		<b>Credits</b>
<b>Choose one (FRE, GER, SPA)</b>		
FRE/GER/SPA 111	French/German/Spanish Language I	5
FRE/GER/SPA 112	French/German/Spanish Language II	5
FRE/GER/SPA 211*	French/German/Spanish Language III	3
FRE/GER/SPA 212*	French/German/Spanish Language IV	3
* Fulfills General Education requirement		
<b>General Education Courses</b>		<b>32</b>
<b>(See AA Degree Requirements on page 34)</b>		

**See AA - French Designated Degree Requirements** on page 54

**See AA - Spanish Designated Degree Requirements** on page 68

## French

The completion of the following suggested courses is for those planning to transfer to a four-year college or university to complete a major in French. Consult with a faculty advisor before beginning this area of study.

See **AA - French Designated Degree Requirements** on page 54

## Geology

### Degree: Associate of Science

The completion of the following suggested courses is 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. Some courses might not be offered each semester. These courses provide the basic preparation leading to geology-related careers.

### Geology

#### Suggested Courses for Transfer

	Credits
CHE 111 General College Chemistry I	5
GEY 111 Physical Geology*	4
CHE 112 General College Chemistry II	5
GEY 112 Historical Geology*	4
MAT 201 Calculus I*	5
MAT 202 Calculus II	5
GEY Elective approved by advisor	4

\*Fulfills General Education requirement

**General Education Courses** **27**  
(See **AS Degree Requirements on page 37**)

## History

### Degree: Associate of Arts

The completion of the following courses is appropriate for students 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.

### History AA Degree

See **AA - History Designated Degree Requirements** on page 57

## Holistic Health

This program provides the opportunity to learn a variety of complementary healing modalities. Upon completion of the program students may apply their knowledge in wellness centers, clinics, spas and fitness centers.

Information: [www.rrcc.edu/health/holcert.html](http://www.rrcc.edu/health/holcert.html)

### Degree: Associate of Applied Science

#### Holistic Health

### Certificates:

#### Holistic Health Practitioner

#### Reflexology

### Holistic Health AAS Degree

This program provides the opportunity to learn a variety of complementary healing modalities. Upon completion of the program students may apply their knowledge in wellness centers, clinics, spas and fitness centers. The AAS degree can be transferred to Metropolitan State College in Denver into their Bachelors of Science Degree in Integrative Therapeutic Practice Program.

#### Required Courses

	Credits
HHP 244 Holistic Health Level 1	1
HHP 254 Holistic Health Level 2	2
HHP 256 Holistic Health Level 3	2
HHP 229 Wellness Counseling	1
HWE 100 Human Nutrition	3

#### Recommended General Education Courses:

##### Arts & Humanities

Choose any 6 credits from this area of Statewide GT (Guaranteed Transfer) courses **6**

##### English/Communication

ENG 121, 122, COM 115 or 125 **9**

##### Mathematics:

MAT 135 **3**

##### Natural & Physical Sciences

BIO 111, 201, 202, CHE 101 **18**

##### Social & Behavioral Science

HIS: Choose any Statewide GT courses **3**

ANT 101 Cultural Anthropology **3**

**HHP (elective courses, any) 10**

**Total Credits 61**

## Holistic Health Certificates

### Holistic Health Practitioner Certificate

This program was originally created for nurses and is now open to all interested persons who are ready to expand their knowledge and skills in 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. To ensure enrollment, register no later than 10 days before class.

Required Courses		Credits
HHP 229	Wellness Counseling	1
HHP 244	Holistic Health I	1
HHP 254	Holistic Health II	2
HHP 256	Holistic Health III*	2
*13 credits must be completed before participating in HHP 256 Holistic Health III		
<b>Electives: any of the HHP courses</b>		<b>10</b>
<b>Total Credits</b>		<b>16</b>

### Reflexology 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.

Required Courses		Credits
HHP 166	Introduction to Reflexology	1
HHP 260	Advanced Reflexology	1
HHP 169	Healing Hands and Feet	1
HHP 164	Hand Reflexology	1
HHP 188	Practicum Reflexology Lab	2
HHP 270	Clinical	2
HHP 263	Creating a Holistic Practice	0.5
HHP 190	Crystals and Mineral Usage	0.5
<b>Total Credits</b>		<b>9</b>

## Industrial Maintenance Technology – Energy Maintenance

### Under Revision: See Mechanical Trades, Electricity Commercial/Industrial/Residential, Wind Energy Technology

Information: 303.914.6063, Chuck.Beck@rrcc.edu

[www.rrcc.edu/isod](http://www.rrcc.edu/isod)

## Law Enforcement

### Degree: Associate of Applied Science

#### Law Enforcement

### Certificate:

#### Basic Law Enforcement Training Academy (P.O.S.T. Certification)

### 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. The following courses are required for all law enforcement students:

Required Courses		Credits
LEA 101	Basic Law Enforcement Academy I	6
LEA 102	Basic Law Enforcement Academy II	12
LEA 104	Basic Law Enforcement Academy IV	1
LEA 105	Basic Law	8
LEA 106	Arrest Control Techniques	3
LEA 107	Law Enforcement Driving	3
LEA 108	Firearms	3
LEA 175	Standard Field Sobriety Testing	1
PED 112	Conditioning Lab	1
<b>Required Course Credits</b>		<b>38</b>

#### Elective Recommendations:

LEA 109	Culture and Conflict Resolution	2
LEA 116	Civil Liability	3
LEA 118	Report Writing	3
LEA 218	Drug Investigative Strategies	3
LEA 221	Community Problem Solving	3
LEA 240	Criminal Investigations	3
LEA 247	Street Survival Techniques	2
CRJ 110	Introduction to Criminal Justice	3
CRJ 125	Law Enforcement Operations	3
CRJ 135	Judicial Function	3
CRJ 205	Principles of Criminal Law	3
<b>Required Advisor Approved Electives</b>		<b>8</b>

#### General Education Courses (See AAS Degree Requirements on page 44)

Recommended General Education Courses:		Credits
ENG 121		3
COM 115 or COM 125		3
MAT 120 (or higher)		4
Natural & Physical Sciences (any)		3
PSY or SOC (any)		3
<b>Total General Education Course Requirements</b>		<b>16</b>
<b>Total Credits</b>		<b>62</b>

## Law Enforcement Certificates

### Basic Law Enforcement Training 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. Students earn 38 credits during this intense course of study. This is not an open enrollment offering. You must make separate application to the Academy.

See [www.rrcc.edu/lawenforcement](http://www.rrcc.edu/lawenforcement) for details.

Required Courses		Credits
LEA 101	Basic Police Academy I	6
LEA 102	Basic Police Academy II	12
LEA 104	Basic Law Enforcement Academy IV	1
LEA 105	Basic Law	8
LEA 106	Arrest Control Techniques	3
LEA 107	Law Enforcement Driving	3
LEA 108	Firearms	3
LEA 175	Standard Field Sobriety Testing	1
PED 112	Conditioning Lab	1
<b>Total Credits</b>		<b>38</b>

## Management and Marketing

See Business on page 86

## Mathematics

### Degree: Associate of Science

If you plan to transfer to a four-year college or university to complete a major in mathematics, you should complete the following courses. 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.

### Mathematics AS Degree

See AS - Mathematics Designated Degree Requirements on page 71

## Mechanical Trades

New students should contact Sarah Burger at 303.914.6273. Current students should contact Larry Snyder at 303.914.6306 or [larry.snyder@rrcc.edu](mailto:larry.snyder@rrcc.edu).

These certificates are part of the State of Colorado program approval for Building and Apartment Maintenance. Please see Air Conditioning, Heating and Refrigeration on page 80, Carpentry on page 88, or Plumbing on page 123 for additional degrees and certificates under this category.

This program provides basic entry-level and job upgrade skills. This subset of degrees and certificates 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 207 International Plumbing Code, PLU 247 Hot Water Heating Systems) will continue to be taught as stand-alone courses.

## Degree: Associate of Applied Science

### Mechanical Trades

### Certificates:

#### Basic Mechanical Skills

#### Advanced Mechanical Skills

#### Heating Specialties

## Mechanical Trades AAS Degree

Required Courses		Credits
Level I Refrigeration Certificate		10.5
HVA 132	Air Conditioning and Refrigeration Controls	4
HVA 162	Heating Controls	4
HVA 206	Mechanical Codes	4
PLU 101	Piping Skills	4
CAR 103	Carpentry Basics	4
EIC 110	Electrical Installations I	4
PLU 108	Soldering and Brazing Skills	0.5
PLU 104	Plumbing Service	4
CAR 136	Remodeling, Renovation/Additions	4
HVA Electives		4
<b>General Education Courses</b>		<b>15</b>
<b>(See AAS Degree Requirements on page 44)</b>		
<b>Total Credits</b>		<b>62</b>

## Mechanical Trades Certificates

### Basic Mechanical Skills Certificate

Required Courses		Credits
Level 1 Refrigeration Certificate		10.5
PLU 101	Piping Skills	4
CAR 103	Carpentry Basics	4
EIC 110	Electrical Installations I	4
PLU 108	Soldering and Brazing Skills	0.5
<b>Total Credits</b>		<b>23</b>

### Advanced Mechanical Skills Certificate

Required Courses		Credits
Level 1 Refrigeration Certificate		10.5
HVA 132	Air Conditioning and Refrigeration Controls	4
HVA 162	Heating Controls	4
PLU 101	Piping Skills	4

CAR 103	Carpentry Basics	4
EIC 110	Electrical Installations I	4
PLU 108	Soldering and Brazing Skills	0.5
PLU 104	Plumbing Service	4
CAR 136	Remodeling, Renovation/Additions	4
<b>Total Credits</b>		<b>39</b>

### Heating Specialties Certificate

Required Courses		Credits
OSH 127	10-HR Construction Industry Standards	1
HWE 113	First Aid and Adult CPR	0.5
HVA 105	Electricity for HVAC/R or PLU 105 Basic Electricity	4
HVA 110	Fundamentals of Gas Heating	4
HVA 162	Heating Controls	4
HVA 206	Mechanical Codes	4
PLU 101	Piping Skills	4
PLU 108	Soldering and Brazing Skills	0.5
PLU 208	International Fuel Gas Code	4
PLU 247	Hot Water Heating Systems	4
PLU 267	Radiant Heating Systems	4
ENY 102	Energy Audit Techniques	3
<b>Total Credits</b>		<b>37</b>

### Medical Imaging

See Radiologic Technology on page 126 or Sonography on page 130

### Medical Office Technology

The medical office programs are designed to prepare the student for a career as an allied health professional, assisting physicians/providers in various medical and business settings. Accuplacer results should place all students into ENG 121 or higher or documented previous ENG 121 or college degree. All program students must complete and pass a criminal background check 90 days prior to enrolling in internships by using American DataBank's online background check procedures at [www.healthcareex.com](http://www.healthcareex.com). Immunizations and CPR are required of all Medical Assisting students prior to internship. A minimum grade of C must be achieved for all program required courses to graduate with a certificate or degree. Students should consult with the Medical Assisting Coordinator or refer to the website to ensure proper sequencing of courses and other educational options. Most MOT courses are not offered in the summer semester.

Information: [www.rccc.edu/health/medasst.html](http://www.rccc.edu/health/medasst.html)

## Degrees: Associate of Applied Science

Medical Assisting  
Medical Office

## Certificates:

Medical Assisting  
Medical Office

### Medical Billing/Coding

### Fundamentals of Medical Office Technology

## Medical Office Technology Degrees

### Medical Assisting AAS Degree

The Medical Assisting program prepares you for a career as a multi-skilled professional in the allied health field performing administrative and clinical procedures. This program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). All students who successfully complete the program are required to take the national certification exam (AAMA) to become a Certified Medical Assistant. A math prerequisite of MAT 060 or higher is required for MOT 140 and MOT 150 for all certificate and degree students. Internship must be started within four months of completing all program courses. Please note that not all courses are offered in the summer session.

Required Courses		Credits
BIO 106	Basic Anatomy and Physiology	4
CIS 118	Introduction to PC Applications	3
COM 126	Communication in Healthcare	3
HPR 106	Law and Ethics for Health Prof	2
HPR 178	Medical Terminology	2
MOT 110	Medical Office Administration	4
MOT 120	Medical Office Financial Management	3
MOT 150	Pharmacology for Medical Assistants	3
MOT 130	Insurance Billing and Coding	3
MOT 136	Introduction to Clinical Skills	2
MOT 140	Medical Assisting Clinical Skills	4
MOT 138	Medical Assisting Laboratory Skills	4
PSY 101	General Psychology	3
MOT 181	Administrative Internship and	2
MOT 182	Clinical Internship or	3
MOT 183	Medical Assisting Internship	5
<b>General Education Courses</b>		
<b>(See AAS Degree Requirements on page 44)</b>		<b>15</b>
<b>Total Credits</b>		<b>60</b>

### Medical Office AAS Degree

The Medical Office Program is designed to prepare the student for a career as an allied health professional, assisting physicians in front-office operations. This program provides a wide range of medical office administration services. Internship must be started within four months of completing all required courses. Please note that not all courses are offered in the summer session

Required Courses		Credits
ACC 101	Fundamentals of Accounting	3
BIO 106	Basic Anatomy and Physiology	4
CIS 118	Introduction to PC Applications	3
COM 126	Communication in Healthcare	3
HPR 106	Law and Ethics for Health Prof	2
HPR 178	Medical Terminology	2
MAN 116	Principles of Supervision or BUS 115 Introduction to Business	3
MOT 110	Medical Office Administration	4
MOT 120	Medical Office Financial Management	3
MOT 130	Insurance Billing and Coding	3
MOT 136	Introduction to Clinical Skills	2

MOT 181	Administrative Internship	2
<b>Faculty advisor approved electives</b>		<b>11</b>
<b>General Education Courses</b>		
<b>(See AAS Degree Requirements on page 44)</b>		<b>15</b>
<b>Total Credits</b>		<b>60</b>

MOT 136	Introduction to Clinical Skills	2
MOT 181	Administrative Internship	2
<b>Total Credits</b>		<b>34</b>

## Medical Office Technology Certificates

### Medical Assisting Certificate

The Medical Assisting program prepares you for a career as a multi-skilled professional in the allied health field performing administrative and clinical procedures. This program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). All students who successfully complete the program are required to take the national certification exam (AAMA) to become a Certified Medical Assistant. A math prerequisite of MAT 060 or higher is required for MOT 140 and 150 for all certificate and degree students. Internship must be started within four months of completing all program courses. Please note that not all courses are offered in the summer session.

Required Courses		Credits
BIO 106	Basic Anatomy and Physiology	4
CIS 118	Introduction to PC Applications	3
COM 126	Communication in Healthcare	3
HPR 106	Law and Ethics for Health Prof	2
HPR 178	Medical Terminology	2
MOT 110	Medical Office Administration	4
MOT 120	Medical Office Financial Management	3
MOT 130	Insurance Billing and Coding	3
MOT 136	Introduction to Clinical Skills	2
MOT 138	Medical Assisting Laboratory Skills	4
MOT 140	Medical Assisting Clinical Skills	4
MOT 150	Pharmacology for Medical Assistants	3
PSY 101	General Psychology	3
MOT 181	Administrative Internship	2
MOT 182	Clinical Internship or	3
MOT 183	Medical Assisting Internship	5
<b>Total Credits</b>		<b>45</b>

### Medical Office Certificate

The Medical Office Program is designed to prepare the student for a career as an allied health professional, assisting health care providers in front-office operations. This program provides a wide range of medical office administration services. Internship must be started within four months of completing all required courses. Please note that not all courses are offered in the summer session.

Required Courses		Credits
ACC 101	Fundamentals of Accounting	3
HPR 106	Law and Ethics for Health Prof	2
HPR 178	Medical Terminology	2
BIO 106	Basic Anatomy and Physiology	4
CIS 118	Introduction to PC Applications	3
COM 126	Communication in Healthcare	3
MAN 116	Principles of Supervision or BUS 115 Introduction to Business	3
MOT 110	Medical Office Administration	4
MOT 120	Medical Office Financial Management	3
MOT 130	Insurance Billing and Coding	3

### Medical Billing/Coding Certificate

The Medical Billing/Coding Certificate will prepare the student to use and apply medical coding for insurance reimbursement and billing in a physician office, billing, and insurance companies. The program provides a sound knowledge of medical coding rules and regulations including compliance and reimbursement as well as billing procedures and regulations. At the completion of the program, including an internship, you are eligible to take the National Certified Professional Coding (CPC) exam. . Internship must be started within four months of completing all required courses. Students seeking the AAS degree will follow the requirements for the Medical Office degree. Please note that not all courses are offered in the summer session.

Required Courses		Credits
HPR 106	Law and Ethics for Health Prof	2
HPR 178	Medical Terminology	2
BIO 106	Basic Anatomy and Physiology	4
CIS 118	Introduction to PC Applications	3
MOT 120	Medical Office Financial Management	3
MOT 130	Insurance Billing and Coding	3
MOT 131	Advanced Billing and Coding	3
MOT 184	Billing Specialist Internship	3
<b>Total Credits</b>		<b>23</b>

### Fundamentals of Medical Office Technology Certificate

This certificate will introduce the Medical Office Technology student to the profession by completing the basic fundamental required courses. The courses in this certificate will apply towards all the other certificates and degrees in MOT and do not need to be retaken if a grade of C or better is achieved. Students can decide upon completion, which plan of study (certificate or degree) they will pursue. The MOT 110 class is not required for the Billing and Coding certificate but is highly recommended.

Required Courses		Credits
CIS 118	Introduction to PC Applications	3
HPR 106	Law and Ethics for Health Prof	2
HPR 178	Medical Terminology	2
MOT 110	Medical Office Administration	4
MOT 120	Medical Office Financial Management	3
<b>Total Credits</b>		<b>14</b>

## Multimedia Graphic Design

The Multimedia Graphic Design, Photography and Journalism Departments provide four instructional classrooms with up to 24 computer workstations per classroom. The classrooms house state-of-the-art multimedia equipment and software for student instruction and use. The MGD/PHO/JOU Student Computer Lab allows students to work outside the classroom with the same software, applications, and hardware that are used in the classrooms. Currently, the labs are equipped with Intel Power Macs, which allow students to choose between operating systems; the computers are loaded with both Windows 7 and Macintosh OSX, providing students with the fastest technology currently available. Peripheral devices are also available, including color and black and white output printers, flatbed scanners, 3D digital scanner, Wacom tablets, and video capture stations.

For the student interested in traditional film processing the department also includes a wet-darkroom for the use of MGD/PHO/JOU students. The department also provides several film, digital, and digital video cameras which students may use on a 48-hour check-out basis.

Red Rocks Community College offers both associate degrees and certificates in the MGD/PHO/JOU programs that will prepare students to enter the work force upon graduation

### Recommended General Education Courses for AAS in MGD/PHO/JOU

#### Mathematics

MAT 107 Career Math 3

#### Humanities

ART 149 Animation Drawing/Design 3  
or \*ART 121 Drawing I  
or ART 139 Digital Photography I

#### English

ENG 131 Technical Writing 3

#### General Education Elective

ART 131 Visual Concepts 2-D Design\* 3  
or ART 132 Visual Concepts 3-D Design\*

\*ART 121 and ART 131 or ART 132 may be used to fulfill one humanities and the General Education course electives. You may substitute MGD/PHO advisor approved-classes if ART 121, and ART 131 or ART 132 are used to fulfill the General Education Course Requirements.

## Degrees: Associate of Applied Science

**Graphic Design & Print Production**

**Video Production**

**Professional Photography: Traditional Film and Digital Photography**

**Digital Media Journalism**

## Certificates:

**Graphic Design & Print Production**

**Web Design**

**Advanced Web Design**

**Photography Studio Management**

**Professional Photography: Traditional Film and Digital Photography**

**Digital Media Journalism**

**Photographer's Assistant**

**Fundamentals of Video Production**

**Video Production**

## Multimedia Graphic Design AAS Degrees

### Graphic Design & Print Production AAS Degree

The Graphic Design/Print Production emphasis within the Multimedia Graphic Design 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.

<b>Required Courses</b>	<b>Credits</b>
MGD 101 Introduction to Computer Graphics	3
MGD 103 Introduction to Production Design	3
MGD 111 Adobe Photoshop I	3
MGD 112 Adobe Illustrator I	3
MGD 114 Adobe InDesign	3
MGD 118 Digital Color Theory or MGD 116 Typography I	3
MGD 121 Painter for Digital Media	3
MGD 202 Point of Purchase Packaging Design or MGD 212 Adobe Illustrator II	3
MGD 211 Adobe Photoshop II	3
MGD 213 Electronic Prepress	3
MGD 268 Business for Creatives or MGD 280 Internship or MGD 289 Capstone	3
<b>MGD/PHO Advisor Approved Electives</b>	<b>6</b>
<b>Recommended MGD Electives:</b>	
MGD 141 Web Design I: Dreamweaver	3
JOU 225 Internet Media	3
ART 139 Digital Photography I*	3
<b>General Education Courses (See AAS Degree Requirements on page 44)</b>	<b>15</b>
*ART 121 and ART 132 or ART 139 may be used to fulfill one Humanities and the General Education Elective. Students may substitute additional MGD/PHO classes if ART 121 and ART 132 or ART 139 are used for the Humanities and General Education Course Requirements.	
<b>Total Credits</b>	<b>60</b>

## Video Production AAS Degree

The video production emphasis within the Multimedia Graphic Design Department prepares you for work in video and DVD production. You are exposed to many exciting aspects of video production, such as sound and digital editing, as well as motion graphics.

**MGD Advisor:** Michael Fulks, Michael.Fulks@rrcc.edu or Alexis Clements, Alexis.Clements@rrcc.edu

<b>Required Courses</b>		<b>Credits</b>
MGD 111	Adobe Photoshop I	3
MGD 112	Adobe Illustrator I	3
MGD 104	Videography I	3
MGD 163	Sound Design I: Apple Logic Pro	3
MGD 164	Digital Video Editing I	3
MGD 165	Adobe After Effects I	3
MGD 204	Videography II	3
MGD 263	Sound Design II: Apple Logic Pro	3
MGD 264	Digital Video Editing II	3
MGD 268	Business for Creatives	3

### MGD/PHO Advisor Approved Electives

<b>Recommended MGD Electives:</b>		<b>Credits</b>
MGD 265	Adobe AfterEffects II	3
MGD 121	Painter for Digital Media	3
ART 139	Digital Photography*	3
MUS 105	Intro to Computer Music Applications*	3

### General Education Courses

(See AAS Degree Requirements on page 44) **15**

\*ART 139 and/or MUS 105 may be used to fulfill one Humanities and the General Education Elective Course Requirements.

**Total Credits 60**

## Professional Photography - Traditional Film & Digital Photography AAS Degree

The Professional Photography: Traditional Film & Digital Photography AAS degree prepares students for a career as a professional photographer. By blending both film and digital skills students will learn techniques that include camera operation, print production, lighting, equipment, and business management. History and photographic theory are covered as well. Students will need both a traditional film SLR camera and a digital SLR camera or a digital camera with manual settings.

PHO Advisor: Michael Fulks, michael.fulks@rrcc.edu or Alexis Clements, Alexis.Clements@rrcc.edu

<b>Required Courses</b>		<b>Credits</b>
ART 113*	History of Photography	3
PHO 120*	Fundamentals of Photography I	3
PHO 122	Photo Image Capture II	3
PHO 143	Perception and Photography	3
MGD 111	Adobe Photoshop I	3
PHO 161	Digital Capture Processing I	2
PHO 162	Digital Darkroom II	2
ART 144	Portrait Photography	3
	or PHO 232 Comm. Portrait Photo	
ART 143	Figure Photography I	3
	or PHO 260 Event and Wedding Photography	
PHO 204	Commercial Studio Lighting	3
MGD 268	Business for Creatives	3
MGD 121	Corel Painter for Digital Media	3
	or PHO 266 Professional Digital Workflow	
	Adobe Lightroom	

## MGD/PHO Advisor Approved Electives **6**

### Recommended MGD Electives:

MUS 105*	Intro to Computer Music Applications	3
ART 121*	Drawing I	3
ART 131*	Visual Concepts: 2D Design	3

### General Education Courses

(See AAS Degree Requirements on page 44) **15**

\* ART 113 and ART 138 or ART 121 and/or ART 131 or ART 139 and/or MUS 105 may be used to fulfill one Humanities and the General Education Elective. Students may substitute ART/PHO/MGD classes if the ART 113 and ART 138 are counted toward the Humanities and General Education Course Requirements.

**Total Credits 60**

## Digital Media Journalism AAS Degree

The AAS in Digital Media Journalism prepares students 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.

Students 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 publications.

### Required Courses **Credits**

JOU 102	Intro to Editing	3
JOU 105	Introduction to Mass Media	3
JOU 106	Fundamentals of Reporting	3
MGD 102	Intro to Multimedia	3
MGD 104	Videography I	3
MGD 111	Adobe Photoshop I	3
MGD 114	Adobe InDesign	3
MGD 141	Web Design I: Adobe Dreamweaver	3
JOU 114	TV Production	3

or JOU 121 Photojournalism

JOU 206	Intermediate Newswriting and Editing	3
JOU 241	Magazine Article Writing	3
MGD 216	Adobe Acrobat Professional	3
JOU 225	Internet Media	3
JOU 215	Publications Production and Design	3

### Faculty Advisor Approved Electives from MGD **6**

#### MGD Recommended Electives

JOU 121	Photojournalism	3
MGD 164	Digital Video Editing I: Apple Final Cut Pro	3
ART 139	Digital Photography I*	3
MUS 105	Intro to Computer Music Applications*	3

### General Education Courses

(See AAS Degree Requirements on page 44) **15**

\*ART 139 and MUS 105 may be used to fulfill one Humanities and the General Education Elective Course Requirements.

**Total Credits 60**

## Multimedia Graphic Design Certificates

### Graphic Design/Print Production Certificate

The graphic design/print production emphasis prepares students for careers 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 or the Web Design and Development AAS degree to add additional marketable skills to the traditional AAS degree.

Required Courses		Credits
MGD 101	Introduction to Computer Graphics or MGD 102 Introduction to Multimedia	3
MGD 103	Introduction to Production Design	3
MGD 111	Adobe Photoshop I	3
MGD 112	Adobe Illustrator I	3
MGD 114	Adobe InDesign	3
MGD 118	Digital Color Theory	3
MGD 121	Corel Painter for Digital Media or MGD 216 Adobe Acrobat Professional	3
MGD 202	Point of Purchase Packaging Design	3
MGD 211	Adobe Photoshop II or MGD 212 Adobe Illustrator II	3
MGD 213	Electronic Prepress	3
<b>Total Credits</b>		<b>30</b>

### Web Design Certificate

The Web Design Express certificate within the Multimedia Graphic Design Department prepares students for entry-level work in Web page production. You will learn the importance of page layout, user interface, and design, as well as site design. The Web Design certificate and/or the Advanced Web Design certificate, when combined with the Graphic Design and Print Production AAS degree, or Video Production AAS degree adds additional marketable skills to the traditional AAS degree.

It is highly recommended that students also take CWB 110 Complete Web Authoring or have basic HTML coding skills before taking MGD 141.

Required Courses		Credits
CWB 110	Complete Web Authoring: HTML	3
MGD 111	Adobe Photoshop I	3
MGD 112	Adobe Illustrator I	3
MGD 116	Typography	3
MGD 118	Digital Color Theory	3
<b>Total Credits</b>		<b>15</b>

### Advanced Web Design Certificate

You will evaluate the look and feel of websites, learn HTML and HTML editors, and learn advanced Web production techniques, such as adding sound, video, or animation to a website. You are exposed to pre-production, production, and post-production concepts. Motion graphic techniques, video-editing, and sound design used in Web development will be addressed. You must complete or be concurrently enrolled in the Web Design Certificate program.

Required Courses		Credits
MGD 104	Videography I	3
MGD 163	Sound Design I: Apple Logic Pro	3
MGD 164	Digital Video Editing I: Final Cut Pro	3
CWB 205	Complete Web Scripting: JavaScript	3
JOU 225	Internet Media	3
<b>Total Credits</b>		<b>15</b>

### Photography Studio Management Certificate

You will learn essential skills for creating and managing a photographic studio.

Required Courses		Credits
MGD 268	Business for Creatives	3
SBM 101	Starting a Small Business	1
<b>Total Credits</b>		<b>4</b>

### Professional Photography – Traditional Film and Digital Photography Certificate

You will learn techniques in both film and digital photography such as camera techniques, print production, lighting, equipment, and business management. You will need both a traditional film SLR camera and a digital SLR camera or a digital camera with manual settings.

Required Courses		Credits
PHO 120	Fundamentals of Photography	3
MGD 111	Adobe Photoshop I	3
PHO 143	Perception and Photography	3
PHO 204	Commercial Studio Lighting	3
MGD 268	Business for Creatives	3
<b>Total Credits</b>		<b>12</b>

### Digital Media Journalism Certificate

The Digital Media Journalism certificate prepares students for work with blogs, microblogs, and social networking applications for delivering mass media using the Internet as the primary means of media distribution. Students 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 publications.

Required Courses		Credits
JOU 102	Intro to Editing	3
JOU 105	Introduction to Mass Media	3
JOU 106	Fundamentals of Reporting	3
MGD 104	Videography I	3
MGD 111	Adobe Photoshop I	3
MGD 114	Adobe InDesign	3
JOU 241	Magazine Article Writing	3
JOU 225	Internet Media	3
JOU 215	Publications Production and Design	3
<b>Total Credits</b>		<b>27</b>

## Photographer's Assistant Certificate

You will learn the basics of photography to give you the skills to act as a commercial photographer's assistant. Assisting is the apprenticeship route to becoming a professional photographer.

Required Courses		Credits
PHO 204	Commercial Studio Lighting	3
PHO 120	Fundamentals of Photography	3
<b>Total Credits</b>		<b>6</b>

## Fundamentals of Video Production Certificate

Learn the basics of video production to help you be successful in your own business or become an important asset to someone else's.

Required Courses		Credits
MGD 101	Intro to Computer Graphics	3
MGD 104	Videography I	3
MGD 164	Digital Video Editing I	3
MGD 165	After Effects	3
MGD 204	Videography II	3
<b>Total Credits</b>		<b>15</b>

## Video Production Certificate

The Video Production emphasis within the Multimedia Graphic Design Department prepares students for work in video and DVD production. Students will be exposed to many exciting aspects of video production, such as sound and digital editing, as well as motion graphics. The Video Production certificate, when combined with the Graphic Design and Print Production AAS degree, adds additional marketable skills to the traditional AAS degree.

Required Courses		Credits
MGD 101	Introduction to Computer Graphics or MGD 102 Introduction to Multimedia	3
MGD 111	Adobe Photoshop I	3
MGD 112	Adobe Illustrator I	3
MGD 104	Videography	3
MGD 163	Sound Design I: Apple Logic Pro	3
MGD 164	Digital Video Editing I: Final Cut Pro	3
MGD 165	Adobe AfterEffects I	3
MGD 264	Digital Video Editing II: Final Cut Pro	3
MGD 204	Videography II	3
<b>Total Credits</b>		<b>27</b>

## Nursing

### Certificates:

Nurse Aide

RN Refresher Program

### Nursing Certificates

#### Nurse Aide Certificate

Applicants must be 18 years of older. Lifting requirement. Open enrollment with one of the following acceptance requirements documented with Red Rocks Community College: Accuplacer score in sentence skills of 95 or higher or SAT verbal score of 440 or higher or ACT English score of 18 or higher or ENG 090 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.rrcc.edu/health](http://www.rrcc.edu/health). Register for the NUA 170 clinical section that corresponds to the NUA 101 class. You must pass NUA 101 with a grade of C or higher in order to participate in the NUA 170 clinical rotation. You must pass both NUA 101 and NUA 170 with a grade of C or higher in order to receive a certificate of completion. Drug screening will be done during the first week of school.

**For a Step by Step Nursing Assistant Enrollment process, please visit our website at:**

**[www.rrcc.edu/health/nuraidcour.html](http://www.rrcc.edu/health/nuraidcour.html).**

Required Courses		Credits
NUA 101	Nurse Aide Theory/Lab	4
NUA 170	Nurse Aide Clinical	1
<b>Total Credits</b>		<b>5</b>

#### RN Refresher Program Certificate

Requirements for this program: A current Colorado RN license, or a license to be reinstated proof of immunizations, liability insurance, Health Care Provider – BLS certification, and a letter from a physician stating you are physically and mentally able to participate in this course, including a lifting requirement. You must pass HPR 210 and NUR 290 with a grade of C or higher in order to participate in NUR 291 clinical rotation. You also must pass HPR 210, NUR 290, and NUR 291 with a grade of C or higher in order to receive a Certificate of Completion. This is not an open enrollment offering. You must make a separate application to the program.

**For more information: [www.rrcc.edu/health/rnrefresh](http://www.rrcc.edu/health/rnrefresh).**

Required Courses		Credits
NUR 290	RN Refresher	10
NUR 291	RN Refresher Clinical	2
HPR 210	Physical Assessment	2
<b>Total Credits</b>		<b>14</b>

## Outdoor Education

### Degree: Associate of General Studies

#### Outdoor Education

### Certificates:

**Introduction to Outdoor Education Leadership (This certificate is only offered at WarrenTech)**

**Outdoor Education with an Emphases in one or more of the following:**

**Winter Skills Specialist**

**Water-Based Skills Specialist**

**Land-Based Skills Specialist**

**Outdoor Education Generalist**

**Information: [www.rrcc.edu/outdoor](http://www.rrcc.edu/outdoor). 303.914.6238 or email [nate.bondi@rrcc.edu](mailto:nate.bondi@rrcc.edu).**

### Outdoor Education Certificates

#### Introduction to Outdoor Education Certificate

This certificate is only offered at WarrenTech.

Required Courses	Credits
REC 211 Outdoor Leadership	2
OUT 143 Backpacking	2
OUT 144 Backcountry Cooking	1
OUT 107 Orienteering and Route Finding	2
OUT 108 Wilderness Survival Skills	3
OUT 131 Rock Climbing I	2
HWE 120 Wilderness First Aid	1
OUT 216 Challenge Course Facilitation	2
<b>Total Credits</b>	<b>15</b>

#### Outdoor Education Certificate

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 ski areas, flyfishing guide services, summer adventure camps, community nature centers and outdoor programs, whitewater river outfitters, outdoor equipment purveyors, and companies employing wilderness guides. 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.

**In order to complete the Outdoor Education Certificate, you must complete the following 18 credits plus at least one (1) area of emphasis in either: Winter Skills Specialist, Water-Based Skills Specialist, Land-Based Skills Specialist, or Outdoor Education Generalist.**

Required Courses	Credits
REC 100 Introduction to Recreation	2

PRA 218 Outdoor Leadership	3
OUT 107 Orienteering and Route Finding	2
OUT 134 Wilderness Ethics	3
OUT 135 Risk Mgmt for Outdoor Professional	1
OUT 136 Leave No Trace Trainer Cert.	2
OUT 216 Challenge Course Facilitation	2
HWE 129 Wilderness First Responder	4
<b>Total Required Credits</b>	<b>18</b>

#### Emphasis in:

##### Winter Skills Specialist (Total Credits 28)

**Select 10 credits from the following courses:**

OUT 101 Mountaineering	3
OUT 109 Winter Wilderness Survival Skills	2
OUT 115 Snow Orientation	2
OUT 129 Ice Climbing I	2
OUT 130 Ice Climbing II	2
OUT 145 Introduction to Winter Sports	1
OUT 146 Nordic Skiing	2
OUT 147 Telemark Skiing I	2
OUT 148 Telemark Skiing II	2
OUT 149 Alpine Skiing I	2
OUT 150 Alpine Skiing II	2
OUT 151 Snowshoeing	2
OUT 152 Snowboarding I	2
OUT 153 Snowboarding II	2
OUT 168 Avalanche Awareness Level I	1
OUT 169 Avalanche Awareness Level II	1
OUT 289 Capstone	3

#### Emphasis in:

##### Water-Based Skills Specialist (Total Credits 28)

**Select 10 credits from the following courses:**

PER 151 Lifeguard Training	2
OUT 116 River Orientation	2
OUT 117 Ocean Orientation	2
OUT 119 Flyfishing I	2
OUT 120 Flyfishing II	2
OUT 137 Kayaking	1
OUT 139 Whitewater Rafting Guide	2
OUT 140 Swift Water Rescue Tech I	1
OUT 141 Canoeing	1
OUT 200 Sailing	1
OUT 201 Scuba Diving	1
OUT 237 Paddle Sports	2
OUT 289 Capstone	3

#### Emphasis in:

##### Land-Based Skills Specialist (Total Credits 28)

**Select 10 credits from the following courses:**

OUT 101 Mountaineering	3
OUT 103 Colorado Fourteeners	2
OUT 112 Mountain Orientation	2
OUT 108 Wilderness Survival Skills	3
OUT 113 Desert Orientation	2
OUT 114 Canyon Orientation	2
OUT 126 Mountain Biking	1
OUT 131 Rock Climbing I	2
OUT 132 Rock Climbing II	2
OUT 143 Backpacking	2
OUT 144 Backcountry Cooking	1
OUT 166 High Angle Rescue	2
OUT 167 Basic Search and Rescue	3
OUT 289 Capstone	3

**Emphasis in:****Outdoor Education Generalist (Total Credits 30)**

You can design your own course of study by choosing at least four credits from each of the three programs of emphasis above, 12 credits in addition to the required **Outdoor Education Leadership Certificate** courses. Students completing this program emphasis can expect a well-rounded outdoor education experience and training in various aspects of outdoor education and leadership competencies.

## Park Ranger Technology

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 allow students 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 2-year associates 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.

**Information:** [www.rrcc.edu/park](http://www.rrcc.edu/park). 303.914.6238 or email [nate.bondi@rrcc.edu](mailto:nate.bondi@rrcc.edu).

**Certificates:****Introduction to Park Ranger Technology****Law Enforcement****Outdoor Recreation Management****Resource Interpretation****Park Ranger Technology Certificates****Introduction to Park Ranger Technology Certificate**

The Introduction to Park Ranger Technology Certificate is for students 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.

<b>Required Courses</b>		<b>Credits</b>
PRA 102	Introduction to Park Ranger Technology	3
PRA 203	Natural Resource Management	3
<b>Total Credits</b>		<b>6</b>

**Law Enforcement Certificate**

The Law Enforcement Certificate is for those students wishing to increase their job opportunities by becoming qualified for full law enforcement responsibilities in the field.

<b>Required Courses</b>		<b>Credits</b>
LEA 101, LEA 102, LEA 103, LEA 104, LEA 105, LEA 106, LEA 107, and LEA 108	Post Law Enforcement Academy	37
PRA 102	Introduction to Park Ranger Technology	3
PRA 203	Natural Resource Management	3
PRA 280	Park Ranger Internship	3
<b>Total Credits</b>		<b>46</b>

**Outdoor Recreation Management Certificate**

The Outdoor Recreation Certificate provides a wide choice for those wishing to become employed as guides, outdoor instructors, safety personnel, or rangers with both governmental and private agencies.

<b>Required Courses</b>		<b>Credits</b>
PRA 102	Introduction to Park Ranger Technology	3
PRA 203	Natural Resource Management	3
PRA 205	Resource Interpretation	3
PRA 218	Outdoor Leadership	3
REC 211	Introduction to Recreation	2
OUT 134	Wilderness Ethics	3
OUT 135	Risk Mgmt for Outdoor Professional	1
OUT 136	Leave No Trace Trainer Cert.	2
PRA 280	Park Ranger Internship	3
<b>Required Course credits</b>		<b>22</b>
<b>Elective Courses</b>		<b>10</b>

**Choose 10 credits from the following:**

HPR 125	Outdoor Emergency Care or HWE 129 Wilderness First Responder	4
GIS 101	Geographic Information Systems	3
OUT 101	Mountaineering	3
OUT 103	Colorado Fourteeners	2
OUT 105	Land and Water Navigation	1
OUT 106	Map & Compass- Outdoors Person	3
OUT 107	Orienteering and Route Finding	2
OUT 108	Wilderness Survival Skills	3
OUT 109	Winter Wilderness Survival Skills	2
OUT 112	Mountain Orientation	2
OUT 113	Desert Orientation	2
OUT 114	Canyon Orientation	2
OUT 115	Snow Orientation	2
OUT 116	River Orientation	2
OUT 117	Ocean Orientation	2

OUT 119	Fly Fishing I	2
OUT 120	Fly Fishing II	2
OUT 124	Bicycle Touring	1
OUT 126	Mountain Biking	1
OUT 129	Ice Climbing I	2
OUT 130	Ice Climbing II	2
OUT 131	Rock Climbing I	2
OUT 132	Rock Climbing II	2
OUT 137	Kayaking	1
OUT 139	Whitewater Rafting Guide	2
OUT 140	Swift Water Rescue Tech I	1
OUT 141	Canoeing	1
OUT 143	Backpacking	2
OUT 144	Backcountry Cooking	1
OUT 145	Introduction to Winter Sports	1
OUT 146	Nordic Skiing	1
OUT 147	Telemark Skiing I	1
OUT 148	Telemark Skiing II	1
OUT 149	Alpine Skiing I	1
OUT 150	Alpine Skiing II	1
OUT 151	Snowshoeing	1
OUT 152	Snowboarding I	1
OUT 153	Snowboarding II	1
OUT 156	Survival Plants in Summer I	2
OUT 157	Survival Plants in Fall I	2
OUT 158	Survival Plants in Spring I	2
OUT 161	Survival Plants in Summer II	3
OUT 162	Survival Plants in Fall II	3
OUT 163	Survival Plants In Spring II	3
OUT 166	High Angle Rescue	2
OUT 167	Basic Search and Rescue	3
OUT 168	Avalanche Awareness Level I	1
OUT 169	Avalanche Awareness Level II	1
OUT 200	Sailing	1
OUT 201	Scuba Diving	1
OUT 216	Challenge Course Facilitation	2
OUT 237	Paddle Sports	2
<b>Total Credits</b>		<b>32</b>

### Resource Interpretation Certificate

The Resource Interpretation Certificate is for those working with resource interpretation, naturalists, and/or other nature center work with the public.

Required Courses	Credits	
PRA 102	Introduction to Park Ranger Technology	3
PRA 203	Natural Resource Management	3
PRA 205	Resource Interpretation	3
PRA 218	Outdoor Leadership	3
OUT 134	Wilderness Ethics	3
OUT 135	Risk Mgmt for Outdoor Professional	1
OUT 136	Leave No Trace Trainer Cert.	2
PRA 280	Park Ranger Internship	3
<b>Total Credits</b>		<b>21</b>

## Philosophy

### Degree: Associate of Arts

The completion of the following suggested courses is for those planning to transfer to a four-year college or university to complete a major in Art. Consult with a faculty advisor before beginning this area of study.

#### Philosophy

Suggested Courses for Transfer	Credits	
PHI 111	Introduction to Philosophy	3
PHI 112	Ethics	3
PHI 113	Logic	3
PHI 114	Comparative Religions	3
<b>General Education Courses</b>		
<b>(See AA Degree Requirements on page 34)</b>		<b>32</b>

## Phlebotomy

### Certificate

This CCE approved certificate is designed to prepare individuals to gain employment as a Phlebotomist in the health care industry. Students will receive an extensive and varied program of study that includes theory and practice, specimen setup and process, medical terminology specific to the laboratory, customer service skills, regulatory issues, venipuncture and fingerstick technique and numerous other collection procedures. After successful completion of this course and the phlebotomy internship, the student is eligible to apply and sit for the national AMT (American Medical Technologist) certification exam. Immunizations and background check are required before the start of the internship. Students must complete a criminal background check 90 days prior to enrolling in the internship by using American DataBank's online background check procedures at [www.healthcareex.com](http://www.healthcareex.com). The internship, HPR 180, must be started within four months of completing HPR 112.

### Phlebotomy Certificate

**Please fill out an application form to be considered for this course at: [www.rcc.edu/health/phlebotomy.html](http://www.rcc.edu/health/phlebotomy.html).**

Permission of the instructor is required to register for both courses. Students must be at least 18 years old to register for this program.

Required Courses	Credits	
HPR 112	Phlebotomy Certification	4
HPR 180	Phlebotomy Internship	3
<b>Total Credits</b>		<b>7</b>

## Photography

See Multimedia Graphic Design on page 116

## Physician Assistant

### Certificate

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 train clinically competent and compassionate physician assistants to provide primary care to the medically underserved.

The rigorous, year-round, full-time, 25-month curriculum leads to a certificate that qualifies graduates to sit for the Physician Assistant National Certifying Examination (PANCE). The first two semesters of the program are devoted to classroom, laboratory, and small-group work, most of which is on campus. Students will then be scheduled for three off-campus clinical rotations. Students will return to campus for another ten weeks of didactic curriculum. The remainder of the program is devoted to off-campus clinical rotations. Many of the clinical rotations are scheduled outside of the Denver metropolitan area. Qualified students may apply to an affiliated institution to obtain a master's degree designed to be completed at the same time as the certificate.

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. [www.rrcc.edu/pa](http://www.rrcc.edu/pa)

#### Program Application and Admission Criteria:

Candidates must submit an application to the program through the Central Application Service for Physician Assistants (CASPA). Application information with a link to CASPA is found on the RRCC PA program website. At the time of application, candidates must have completed a Bachelors degree from a regionally accredited institution of higher education.

### Physician Assistant Certificate

Required Didactic Courses	Credits
PAP 201, PAP 202, and PAP 203	2
PAP 204, PAP 205, and PAP 206	3
PAP 207, PAP 208, and PAP 209	11
PAP 210, PAP 211, and PAP 212	6
PAP 214	1
PAP 220	3
PAP 221	3
PAP 222	3
PAP 223	2
PAP 224, PAP 225, and PAP 226	5
HPR 120	1
HPR 130	1

PAP 231, PAP 232, and PAP 233	Professional Seminar IV, V, VI	1.5
PAP 234, PAP 245, and PAP 236	Problem Based Learning IV, V, VI	1.5
<b>Required Clinical Courses</b>		<b>Credits</b>
PAP 240, PAP 241	Family Medicine I, II	6
PAP 242, PAP 243	Internal Medicine I, II	6
PAP 244	Women's Health	3
PAP 245	Emergency Medicine	3
PAP 246	Surgery	3
PAP 247	Pediatrics	3
PAP 248	Psychiatry	3
PAP 249	Geriatrics/LTC	3
PAP 250, PAP 251	Elective I, II	6
<b>Total Credits</b>		<b>80</b>

## Physics

### Degree: Associate of Science

The completion of the following suggested courses is for those planning to transfer to a four-year college or university to complete a major in Art. 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

Suggested Courses for Transfer	Credits	
CSC 160	Computer Science I	5
MAT 201	Calculus I *	5
MAT 202	Calculus II	5
MAT 204	Calculus III with special topics	5
PHY 211	Physics: Calculus-Based I *	5
PHY 212	Physics: Calculus-Based II *	5
*Fulfills General Education requirements		
<b>General Education Courses</b>		<b>27</b>
<b>(See AS Degree Requirements on page 37)</b>		

## Plumbing

### Certificate

This program is under revision.

New students should contact Sarah Burger at 303.914.6273. Current students should contact Larry Snyder at 303.914.6306 or [larry.snyder@rrcc.edu](mailto:larry.snyder@rrcc.edu).

These certificates are part of the State of Colorado program approval for Building and Apartment Maintenance. Please see Air Conditioning, Heating and Refrigeration on page 80, Carpentry on page 88, or Mechanical Trades on page 113 for additional degrees and certificates under this category.

This program provides basic entry-level and job upgrade skills. This subset of degrees and certificates 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 207 International Plumbing Code, PLU 247 Hot Water Heating Systems) will continue to be taught as stand-alone courses.

## Plumbing Service Certificate

Required Courses		Credits
OSH 127	10-HR Construction Industry Standards	1
HWE 113	First Aid and Adult CPR	0.5
PLU 101	Piping Skills	4
PLU 207	International Plumbing Code	4
PLU 108	Soldering and Brazing Skills	0.5
PLU 104	Plumbing Service	4
HVA 105	Electricity for HVAC/R or PLU 105 Basic Electricity	4
<b>Total Credits</b>		<b>18</b>

## Political Science

### Degree: Associate of Arts

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.

### Political Science AA Degree

See AA - Political Science Designated Degree Requirements on page 60

## Power Equipment and Sport Vehicle Technology

(In cooperation with and taught at Warren Tech)

This two-year program is designed to provide students with the basic and advanced skill training as needed for successful entry to the power and sport vehicle industry.

### Degree: Associate of Applied Science

Power Equipment and Sports Vehicle Technology

#### Certificates:

Power Equipment Maintenance Technician  
Sports Vehicle Maintenance Technician

## Power Equipment and Sports Vehicle Technology AAS Degree

Required Courses		Credits
HEM 110	Gasoline, Power Plants & Elec Sys	5
HEM 113	Diesel Fuel Systems	3
HEM 161	Heavy Equipment Laboratory	4
HEM 210	Hydraulics and Transmissions	3
HEM 211	Final Drives and Brakes	2
HEM 268	Heavy Equipment Laboratory I	4
HEM 269	Heavy Equipment Laboratory II	4
SVT 101	SVT Orientation and Safety	1
SVT 102	SVT Rolling Chassis	3
SVT 103	SVT Electrical Theory	2
SVT 104	2 Stroke Engines	2
SVT 105	4 Stroke Engines	2
SVT 106	SVT Electrical Repair	2
SVT 107	SVT Drive Systems	2
SVT 108	SVT Trade Practices	1
SVT 109	SVT Snow/ATV/PWC	2
SVT 143	Physics for Transportation	3
SVT 160	Basic Motorcycle Repair I	1
SVT 165	Basic Motorcycle Repair II	1
SVT 170	Basic Motorcycle Repair III	1
SVT 175	Basic Motorcycle Repair IV	1
SVT 180	Basic Motorcycle Repair V	1
SVT 202	Adv SVT Electrical Syst.	4
<b>General Education Courses</b>		<b>15</b>
<b>(See AAS Degree Requirements on page 44)</b>		<b>15</b>
<b>Total Credits</b>		<b>69</b>

## Power Equipment and Sports Vehicle Technology Certificates

### Power Equipment Maintenance Technician Certificate

Required Courses		Credits
HEM 110	Gasoline, Power Plants & Elec Sys	5
HEM 113	Diesel Fuel Systems	3
HEM 161	Heavy Equipment Laboratory	4
HEM 210	Hydraulics and Transmissions	3
HEM 211	Final Drives and Brakes	2
HEM 268	Heavy Equipment Laboratory I	4
HEM 269	Heavy Equipment Laboratory II	4
<b>Total Credits</b>		<b>25</b>

### Sports Vehicle Maintenance Technician Certificate

Required Courses		Credits
SVT 101	SVT Orientation and Safety	1
SVT 102	SVT Rolling Chassis	3
SVT 103	SVT Electrical Theory	2
SVT 104	2 Stroke Engines	2
SVT 105	4 Stroke Engines	2
SVT 106	SVT Electrical Repair	2
SVT 107	SVT Drive Systems	2
SVT 108	SVT Trade Practices	1
SVT 109	SVT Snow/ATV/PWC	2
SVT 143	Physics for Transportation	3
SVT 160	Basic Motorcycle Repair I	1
SVT 165	Basic Motorcycle Repair II	1
SVT 170	Basic Motorcycle Repair III	1
SVT 175	Basic Motorcycle Repair IV	1
SVT 180	Basic Motorcycle Repair V	1
SVT 202	Adv SVT Electrical Syst.	4
<b>Total Credits</b>		<b>29</b>

## Precision Machining Technology

(In cooperation with and taught at WarrenTech)

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.

## Degree: Associate of Applied Science

### Precision Machining

### Certificates:

**Machine Shop Fundamentals**

**Lathe Operator**

**Mill Operator**

**CNC Lathe Operator**

**CNC Mill Operator**

### Precision Machining AAS Degree

Required Courses	Credits
MAC 101 Introduction to Machine Shop	3
MAC 102 Blueprint Reading	3
MAC 110 Introduction to Engine Lathe	3
MAC 111 Intermediate Engine Lathe	3
MAC 120 Introduction to Milling Machine	3
MAC 121 Intermediate Milling Machine	3
MAC 201 Introduction to CNC Turning Operations	3
MAC 202 CNC Turning Operations II	3
MAC 205 Introduction to CNC Milling Operations	3
MAC 206 CNC Milling Operations II	3
MAC 245 CAD/CAM 3D	3
MAC 250 Advanced Inspection Techniques	3
TEC 205 Geometric Dimensioning/Tolerancing	3
<b>Choose 15 credits from any of the following courses:</b>	
MAC 112 Adv. Engine Lathe	3
MAC 122 Adv. Milling Machine Operations	3
MAC 123 Horizontal Mill Set Up and Operations Description	3
MAC 130 Conventional Lathe Operations	4
MAC 141 Advanced Machining Operations	4
MAC 221 Surface Grinder Setups and Operations	3
MAC 223 Tool and Cutter Grinder	3
MAC 252 Practical Metalurgy	3
MAC 258 Interpreting Engineering Drawings	3
<b>Required General Education Courses:</b>	
ENG 131 Technical Writing	3
COM 115 Public Speaking	3
MAT 107 Career Math (or higher)	3
<b>Six credits from the following three areas:</b>	<b>6</b>
Arts and Humanities: (ART, FRE, GER, HUM, LIT, MUS, PHI, COM, SPA, THE)	
Natural & Physical Sciences: (AST, BIO, CHE, GEY, PHY)	
Social and Behavioral Science: (ANT, ECO, HIS, POS, PSY, SOC)	
<b>Total Credits</b>	<b>60</b>

## Precision Machining Certificates

### Machine Shop Fundamentals Certificate

Required Courses	Credits
MAC 101 Introduction to Machine Shop	3
MAC 102 Blueprint Reading	3
<b>Total Credits</b>	<b>6</b>

### Lathe Operator Certificate

Required Courses	Credits
MAC 101 Introduction to Machine Shop	3
MAC 102 Blueprint Reading	3
MAC 110 Introduction to Engine Lathe	3
MAC 111 Intermediate Engine Lathe	3
TEC 205 Geometric Dimensioning/Tolerancing	3
<b>Total Credits</b>	<b>15</b>

### Mill Operator Certificate

Required Courses	Credits
MAC 101 Introduction to Machine Shop	3
MAC 102 Blueprint Reading	3
MAC 120 Introduction to Milling Machine	3
MAC 121 Intermediate Milling Machine	3
TEC 205 Geometric Dimensioning/Tolerancing	3
<b>Total Credits</b>	<b>15</b>

### CNC Lathe Operator Certificate

Required Courses	Credits
MAC 102 Blueprint Reading	3
MAC 201 Introduction to CNC Turning Operations	3
MAC 202 CNC Turning Operations II	3
MAC 245 CAD/CAM 3D	3
TEC 205 Geometric Dimensioning/Tolerancing	3
<b>Total Credits</b>	<b>15</b>

### CNC Mill Operator Certificate

Required Courses	Credits
MAC 102 Blueprint Reading	3
MAC 205 Introduction to CNC Milling Operations	3
MAC 206 CNC Milling Operations II	3
MAC 245 CAD/CAM 2D	3
TEC 205 Geometric Dimensioning/Tolerancing	3
<b>Total Credits</b>	<b>15</b>

## Psychology

### Degree: Associate of Arts

### Degree: Associate of Science

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. Completion of the following courses is appropriate for students 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 Degree

See AA - Psychology Designated Degree Requirements on page 62

### Psychology AS Degree

See AS - Psychology Designated Degree Requirements on page 73

## Radiologic Technology

### Degree: Associate of Applied Science

#### Certificates:

- Computed Tomography (CT)
- Magnetic Resonance Imaging (MRI)
- Mammography
- Bone Densitometry

### Radiologic Technology AAS Degree

The Radiologic Technology Program is designed to provide training in radiologic technology for students who wish to establish eligibility to participate in the national certification examination of the American Registry of Radiologic Technologists (ARRT). Graduates who pass this national certifying examination are qualified to assume diagnostic radiographer positions in thousands of medical facilities across the nation, both in hospitals and private clinics or offices. After gaining on-the-job experience, you may be allowed to participate in advanced level examinations, such as computed tomography, magnetic resonance imaging, or mammography. The radiography program is also an entry-level program for advanced imaging modalities, such as ultrasound, nuclear medicine, and radiation therapy.

You must complete the recommended general education course work, as well as HPR 178 and RTE 101 prior to applying. When enrolled in the clinical internship courses, students spend 30 to 34 hours per week at a healthcare facility. Students can expect to rotate through a variety of shifts on weekdays and weekend, during the day, at night, or overnight.

Admission to the radiologic technology program is through a competitive selection process. Applications are accepted once a year in May. Please visit the Medical Imaging website [www.rrcc.edu/radiology](http://www.rrcc.edu/radiology) or contact an academic advisor for more information on the application process. Information sessions for the Radiologic Technology Program are held regularly throughout the year. \*\*Additional fees apply for most RTE courses.

<b>Prerequisite Courses</b>		<b>Credits</b>
HPR 178	Medical Terminology	2
<b>Required Courses</b>		<b>Credits</b>
RTE 101	Introduction to Radiology	2
RTE 111	Patient Care	2
RTE 121	Radiologic Procedures I	3
RTE 131	Radiographic Pathology and Image Evaluation I	1.5
RTE 141	Radiographic Equipment and Imaging I	3
RTE 181	Clinical Internship I (Additional fees)	6
RTE 122	Radiologic Procedures II	3
RTE 132	Radiographic Pathology & Image Evaluation II	1.5
RTE 142	Radiographic Equipment and Imaging II	3
RTE 182	Clinical Internship II	6
RTE 183	Clinical Internship III	6
RTE 221	Advanced Medical Imaging	3
RTE 231	Radiation Biology/Protection	2
RTE 281	Clinical Internship IV	6
RTE 282	Clinical Internship V	6
RTE 289	Registry Review (Capstone)	3
<b>General Education Courses</b>		<b>15</b>
<b>(See AAS Degree Requirements on page 44)</b>		<b>15</b>
<b>Total Credits</b>		<b>75</b>
<b>Recommended General Education Courses:</b>		
<b>English</b>		
ENG 121		3
<b>Mathematics</b>		
MAT 107 or higher		3
<b>Social and Behavior Science</b>		
PSY 235 or any PSY or SOC equivalent		3
<b>Natural &amp; Physical Sciences</b>		
BIO 201 and BIO 202 or equivalent		8

### Radiologic Technology Certificates

**For more information regarding these courses, please contact the program office at 303.914.6034. These specialty courses are not available every semester.**

Advanced education and training courses are available for individuals currently certified by the American Registry of Radiologic Technologists (ARRT) in the following specialties:

## Computed Tomography (CT) Certificate

Required Courses		Credits
RTE 240	Principles of CT Imaging	3
RTE 255	Multiplanar Sectional Imaging	2
RTE 284	Advanced Clinical	10
<b>Total credits</b>		<b>15</b>

## Magnetic Resonance Imaging (MRI) Certificate

Required Courses		Credits
RTE 260	Magnetic Resonance Imaging	3
RTE 255	Multiplanar Sectional Imaging	2
RTE 284	Advanced Clinical	10
<b>Total credits</b>		<b>15</b>

## Mammography Certificate

Required Courses		Credits
RTE 250	Mammography	3
RTE 284	Advanced Clinical	10
<b>Total credits</b>		<b>13</b>

## Bone Densitometry Certificate

Required Courses		Credits
RTE 256	Bone Densitometry	2
RTE 284	Advanced Clinical	10
<b>Total credits</b>		<b>12</b>

## Real Estate

See Business on page 86

## Renewable Energy Technology

Renewable energy sources are increasingly becoming a substantial part of America's quest for a diversified and secure energy future. Environmentally friendly and regenerating, renewable energy sources have always been the right choice, and with rising fuel costs along with limited resources, renewable energy is no longer a choice but a requirement. Careers in renewable energy will be increasing dramatically locally, nationally as well as globally.

There is an increasing demand for skilled solar equipment installers, system designers, project managers, business managers, sales and marketing people as well as home energy auditors and weatherization technicians. Be a part of the change toward energy independence.

**New students should contact Sarah Burger at 303.914.6273.**

**Current students should contact: Larry Snyder, 303.914.6306, larry.snyder@rrcc.edu or Troy Wanek 303.914.6668, troy.wanek@rrcc.edu**

## Degrees: Associate of Applied Science

**Renewable Energy Technology  
Solar Thermal Specialty**

## Solar Photovoltaic Specialty

**Solar Photovoltaic Business Owner Specialty**

**Solar Thermal Business Owner Specialty**

## Certificates:

**PV Entry Level**

**Advanced Photovoltaic Installation**

**Solar Photovoltaic Designer**

**Solar Thermal Entry Level**

**Solar Thermal Installer**

**Solar Thermal Designer**

**Post EIC Degree Solar Photovoltaic**

**Post HVA Degree Solar Thermal**

**Energy Auditing**

**Fundamentals of Renewable Energy**

## Renewable Energy Technology Degrees

### Renewable Energy Technology AAS Degree

Students seeking an AAS degree in Renewable Energy Technology will should select either a Solar Thermal or Solar Photovoltaic Specialty.

The AAS degree in Renewable Energy may also be customized to meet the needs of the entrepreneur operating a solar business. A renewable energy advisor will work with you to identify courses within the area, which complement your career goals.

**Information: Larry Snyder 303.914.6306, larry.snyder@rrcc.edu or Troy Wanek 303.914.6668, troy.wanek@rrcc.edu**

### Solar Thermal Specialty AAS Degree

Required Courses		Credits
ENY 101	Introduction to Energy Technologies	3
ENY 102	Building Energy Audit Techniques	3
OSH 127	10-HR Construction Industry Standards	1
HVA 105	Electricity for HVAC/R	4
CAR 123	Roof Framing	1
CAR 125	Roofing Materials and Methods	1
ENY 120	Solar Thermal System Install	4
ENY 275	SpTp: Thermal Install II & Controls	4
CON 105	Construction Technology	4
PLU 101	Piping Skills	4
ENY 231	Solar Contracting	4
ENY 240	Estimating for Energy	4
<b>Internship or Elective:</b>		<b>7</b>

**Seek advisor approval for elective courses in CON, BUS, ACT, CIS, ENY, MAR, MAN, COM, HVA, EIC, or PLU**

#### General Education Courses:

MAT 107	Career Math	3
PHY 107	Energy Science & Technology: GT-SC1	4
<b>Choose six credits from the following areas:</b>		<b>6</b>
ART, FRE, GER, HUM, LIT, MUS, PHI, SPA, AST, BIO, CHE, GEY, PHY, ANT, ECO, GEO, HIS, POS, PSY, SOC, or CIS 118		
<b>Total Credits</b>		<b>60</b>

## Solar Photovoltaic Specialty AAS Degree

Required Courses	Credits
ENY 101 Introduction to Energy Technologies	3
ENY 102 Building Energy Audit Techniques	3
OSH 127 10-HR Construction Industry Standards	1
HVA 105 Electricity for HVAC/R	4
CAR 123 Roof Framing	1
CAR 125 Roofing Materials and Methods	1
ENY 130 Solar Photovoltaic Grid Tie	2
EIC 120 Electrical Installations II	4
EIC 130 National Electrical Code I	4
CON 105 Construction Technology	4
ENY 131 Advanced PV Install	2
ENY 132 NABCEP Entry Level Prep Class	1
ENY 231 Solar Contracting	4
ENY 240 Estimating for Energy	4
ENY 277 SpTp: Advanced PV Concepts & Commercial Applications	4

### Internship or Elective:

Seek advisor approval for elective courses in BUS, ACT, CIS, ENY, MAR, MAN, COM, HVA, EIC, PLU

### General Education Courses:

MAT 107 Career Math	3
PHY 107 Energy, Science and Technology: GT-SC1	4
<b>Choose six credits from the following areas:</b>	<b>6</b>
ART, FRE, GER, HUM, LIT, MUS, PHI, SPA, AST, BIO, CHE, GEY, PHY, ANT, ECO, GEO, HIS, POS, PSY, SOC, or CIS 118	
<b>Total Credits</b>	<b>61</b>

## Solar Photovoltaic Business Owner Specialty AAS Degree

Required Courses	Credits
ENY 101 Introduction to Energy Technologies	3
ENY 102 Building Energy Audit Techniques	3
OSH 127 10-HR Construction Industry Standards	1
HVA 105 Electricity for HVAC/R	4
ENY 130 Solar PV Grid-Tie	2
CON 105 Construction Technology	4
ENY 231 Solar Contracting	4
ENY 240 Estimating for Energy	4
BUS 102 Entrepreneurial Operations	3

### Advisor-Approved Electives

### Internship or Elective

### General Education Courses:

ENG 131 Technical Writing	3
MAT 107 Career Math	3
PHY 107 Energy Science and Technology: GT-SC1	4
<b>Choose six credits from the following areas:</b>	<b>6</b>
ART, FRE, GER, HUM, LIT, MUS, PHI, SPA, AST, BIO, CHE, GEY, PHY, ANT, ECO, GEO, HIS, POS, PSY, SOC, or CIS 118	
<b>Total Credits</b>	<b>60</b>

\*The elective list for Business Owner is a mix of advisor-approved classes within BUS, MAR, ACT, MAN, COM, CIS, or PSY

## Solar Thermal Business Owner Specialty AAS Degree

Required Courses	Credits
ENY 101 Introduction to Energy Technologies	3
ENY 102 Building Energy Audit Techniques	3
OSH 127 10-HR Construction Industry Standards	1
HVA 105 Electricity for HVAC/R	4
CON 105 Construction Technology	4
ENY 120 Solar Thermal System Install	4
ENY 231 Solar Contracting	4
ENY 240 Estimating for Energy	4
BUS 102 Entrepreneurial Operations	3

### Advisor-Approved Electives

### Internship or Elective:

The elective list for Business Owner is a mix of advisor-approved classes within CON, BUS, ACT, MAR, MAN, COM, CIS, or PSY

### General Education Courses:

MAT 107 Career Math	3
PHY 107 Energy Science and Technology: GT-SC1	4
<b>Choose six credits from the following areas:</b>	<b>6</b>
ART, FRE, GER, HUM, LIT, MUS, PHI, SPA, AST, BIO, CHE, GEY, PHY, ANT, ECO, GEO, HIS, POS, PSY, SOC, or CIS 118	
<b>Total Credits</b>	<b>60</b>

## Renewable Energy Technology Certificates

### Fundamentals of Renewable Energy Certificate

Required Courses	Credits
ENY 101 Introduction to Energy Technologies	3
PHY 107 Energy Science and Technology	4
<b>Total credits</b>	<b>7</b>

### PV Entry Level Certificate

Required Courses	Credits
OSH 127 10-HR Construction Industry Standards	1
HWE 113 First Aid and Adult CPR	0.5
ENY 130 Solar Photovoltaics Grid-Tie	2
ENY 131 Advanced Solar PV	2
ENY 132 NABCEP Prep	1
<b>Total Credits</b>	<b>6.5</b>

### Advanced Photovoltaic Installation Certificate

Required Courses	Credits
ENY 101 Introduction to Energy Technologies	3
OSH 127 10-HR Construction Industry Standards	1
HWE 113 First Aid and Adult CPR	0.5
HVA 105 Electricity for HVAC/R	4
EIC 120 Electrical Installations II	4
CAR 123 Roof Framing	1
CAR 125 Roofing Materials and Methods	1
ENY 130 Solar Photovoltaics Grid Tie	2
EIC 130 National Electrical Code I	4
ENY 131 Advanced Solar PV	2
ENY 132 NABCEP Entry Level Prep Class	1
ENY 231 Solar Contracting	4
ENY 277 SpTp: Advanced PV Concepts & Commercial Applications	4
<b>Total credits</b>	<b>31.5</b>

## Solar Photovoltaic Designer Certificate

Required Courses		Credits
ENY 101	Introduction to Energy Technologies	3
HVA 105	Electricity for HVAC/R	4
EIC 130	National Electric Code I	4
ENY 130	Solar Photovoltaics Grid Tie	2
CON 105	Construction Technology	4
ENY 131	Advanced PV Install	2
ENY 231	Solar Contracting	4
ENY 240	Estimating for Energy	4
ENG 131	Technical Writing	3
<b>Total Credits</b>		<b>30</b>

## Solar Thermal Entry Level Certificate

Required Courses		Credits
OSH 127	10-HR Construction Industry Standards	1
HWE 113	First Aid and Adult CPR	0.5
ENY 120	Solar Thermal System Install I	4
<b>Total credits</b>		<b>5.5</b>

## Solar Thermal Installer Certificate

Required Courses		Credits
ENY 101	Introduction to Energy Technologies	3
OSH 127	10-HR Construction Industry Standards	1
HWE 113	First Aid and Adult CPR	0.5
HVA 105	Electricity for HVAC/R	4
CAR 123	Roof Framing	1
CAR 125	Roofing Materials and Methods	1
ENY 120	Solar Thermal System Install I	4
ENY 275	SpTp: Thermal Install II & Controls	4
PLU 101	Piping Skills	4
ENY 231	Solar Contracting	4
<b>Total Credits</b>		<b>26.5</b>

## Solar Thermal Designer Certificate

Required Courses		Credits
ENY 101	Introduction to Energy Technologies	3
HVA 105	Electricity for HVAC/R	4
ENY 120	Solar Thermal System Install I	4
CON 105	Construction Technology	4
ENY 231	Solar Contracting	4
ENY 240	Estimating for Energy	4
ENY 275	SpTp:Thermal Install II and Controls	4
ENG 131	Technical Writing	3
<b>Total Credits</b>		<b>30</b>

## Post EIC Degree Solar Photovoltaic Certificate

Required Courses		Credits
ENY 101	Introduction to Energy Technologies	3
OSH 127	10-HR Construction Industry Standards	1
HWE 113	First Aid and Adult CPR	0.5
CAR 123	Roof Framing	1
CAR 125	Roofing Materials and Methods	1
ENY 130	Solar Photovoltaics Grid-Tie	2
ENY 131	Advanced PV Install	2
ENY 277	SpTp: Advanced PV Concepts & Commercial Applications	4
<b>Total Credits</b>		<b>14.5</b>

## Post HVA Degree Solar Thermal Certificate

Required Courses		Credits
ENY 101	Introduction to Energy Technologies	3
OSH 127	10-HR Construction Industry Standards	1
HWE 113	First Aid and Adult CPR	0.5
CAR 123	Roof Framing	1
CAR 125	Roofing Materials and Methods	1
ENY 120	Solar Thermal System Install I	4
ENY 275	SpTp: Thermal Install II & Controls	4
<b>Total Credits</b>		<b>14.5</b>

## Energy Auditing Certificate

Required Courses		Credits
ENY 101	Introduction to Energy Technologies	3
OSH 127	10-HR Construction Industry Standards	1
HWE 113	First Aid and Adult CPR	0.5
ENY 102	Building Energy Audit Tech	3
ENY 276	SpTp: Energy Auditing Field Course	3
ENY 177	SpTp: Commercial Building Energy Audit	4
ENY 280	Internship	3

### Advisor-Approved Electives:

**6**

Seek advisor approval for elective courses in SOC, PSY, PHI, or AEC  
Students completing this certificate along with some field experience will have the option to sit for the BPI Building Analyst exam. Please note exam costs are in addition to course tuition and fees.

### Total Credits

**23.5**

## RN Refresher

See Nursing on page 119

## Secondary Education

See Teacher Education on page 131

## Sociology

### Degree: Associate of Arts

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 students 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.**

### Sociology AA Degree

See AA - Sociology Designated Degree Requirements on page 65

## Sonography

### Degrees: Associate of Applied Science

Diagnostic Medical Sonography  
Vascular Technology  
Diagnostic Cardiac Sonography

### Certificates:

Diagnostic Medical Sonography  
Vascular Technology  
Diagnostic Cardiac Sonography

The Sonography program prepares the student for entry-level positions in the field with specialization in general sonography, vascular technology, or cardiac sonography. Upon completion of the program, you will be eligible to take the American Registry for Diagnostic Medical Sonography (ARDMS) certifying examination. You may choose between the associate of applied science degree option or the certificate of completion option.

You must complete a qualifying degree (two-year healthcare degree, or a four-year degree in any field), as well as RTE 255 and DMS 101 prior to applying. When enrolled in the clinical internship courses, students spend 30 to 34 hours per week at a healthcare facility. Students can expect to rotate through a variety of shifts on weekdays and weekend, during the day, at night, or overnight.

Admission to the Sonography Program is through a competitive selection process. Applications are accepted once a year in May. Please visit the Medical Imaging website [www.rrcc.edu/dms](http://www.rrcc.edu/dms) or contact an academic advisor 303.914.6034 for more information on the application process. Information sessions for the Sonography Program are held regularly throughout the year.

\*\*Additional fees apply for DMS 244, DMS 280, and DMS 289.

### Sonography Degrees

#### Diagnostic Medical Sonography AAS Degree

<b>Prerequisite courses:</b>		<b>Credits</b>
DMS 101	Introduction to Sonography	2
RTE 255	Multiplanar Sectional Imaging or equivalent	2
<b>Required Courses</b>		<b>Credits</b>
DMS 205	Small Parts Ultrasound	2
DMS 206	Vascular Ultrasound	2
DMS 221	OB/GYN Ultrasound I	2
DMS 222	OB/GYN Ultrasound II	2
DMS 231	Abdominal Ultrasound I	2
DMS 232	Abdominal Ultrasound II	2
DMS 241	Ultrasound Physics I	2
DMS 242	Ultrasound Physics II	2
DMS 244	Ultrasound Scan Lab	6
DMS 270	Clinical Observation	2.5
DMS 271	Clinical I	6
DMS 272	Clinical II	6
DMS 273	Clinical III	6
DMS 274	Clinical IV	6

DMS 288	Practicum	6
DMS 289	Ultrasound Capstone	3
<b>DMS Elective Courses</b>		<b>4</b>
<b>General Education Courses</b>		
<b>(See AAS Degree Requirements on page 43)</b>		<b>15</b>
<b>Total Credits</b>		<b>76.5</b>

#### Vascular Technology AAS Degree

<b>Prerequisite Courses:</b>		<b>Credits</b>
DMS 101	Introduction to Sonography	2
RTE 255	Multiplanar Sectional Imaging or equivalent	2
<b>Required Courses</b>		<b>Credits</b>
DMS 203	Cerebrovascular Sonography	2
DMS 204	Venous Sonography	2
DMS 241	Ultrasound Physics I	2
DMS 242	Ultrasound Physics II	2
DMS 244	Ultrasound Scan Lab	6
DMS 251	Cardiovascular Anatomy and Physiology	2
DMS 252	Abdominal Vascular Sonography	2
DMS 261	Introduction to Vascular Testing	2
DMS 262	Arterial Sonography	2
DMS 270	Clinical Observation	2.5
DMS 271	Clinical I	6
DMS 272	Clinical II	6
DMS 273	Clinical III	6
DMS 274	Clinical IV	6
DMS 288	Practicum	6
DMS 289	Ultrasound Capstone	3
<b>DMS Elective Courses</b>		<b>4</b>
<b>General Education Courses</b>		
<b>(See AAS Degree Requirements on page 44)</b>		<b>15</b>
<b>Total Credits</b>		<b>76.5</b>

#### Diagnostic Cardiac Sonography AAS Degree

<b>Prerequisite Courses</b>		<b>Credits</b>
DMS 101	Introduction to Sonography	2
RTE 255	Multiplanar Sectional Imaging or equivalent	2
<b>Required Courses</b>		<b>Credits</b>
DMS 251	Cardiovascular Anatomy and Physiology	2
DMS 257	Adult Echocardiography	3
DMS 267	Adult Echocardiographic Pathology	3
DMS 235	Pediatric Echocardiography	2
DMS 206	Vascular Sonography	2
DMS 241	Ultrasound Physics I	2
DMS 242	Ultrasound Physics II	2
DMS 244	Ultrasound Scan Lab	6
DMS 270	Clinical Observation	2.5
DMS 271	Clinical I	6
DMS 272	Clinical II	6
DMS 273	Clinical III	6
DMS 274	Clinical IV	6
DMS 289	Ultrasound Capstone	3
<b>DMS Elective Courses</b>		<b>4</b>
<b>General Education Courses</b>		
<b>(See AAS Degree Requirements on page 44)</b>		<b>15</b>
<b>Total Credits</b>		<b>76.5</b>

### Sonography Certificates

#### Diagnostic Medical Sonography Certificate

<b>Prerequisite Courses</b>		<b>Credits</b>
DMS 101	Introduction to Sonography	2

RTE 255	Multiplanar Sectional Imaging or equivalent	2	DMS 274	Clinical IV	6
<b>Required Courses</b>		<b>Credits</b>	DMS 288	Practicum	6
DMS 205	Small Parts Ultrasound	2	DMS 289	Ultrasound Capstone	3
DMS 206	Vascular Ultrasound	2	<b>DMS Elective Courses</b>		<b>4</b>
DMS 221	OB/GYN Ultrasound I	2	<b>Total Credits</b>		<b>61.5</b>
DMS 222	OB/GYN Ultrasound II	2			
DMS 231	Abdominal Ultrasound I	2			
DMS 232	Abdominal Ultrasound II	2			
DMS 241	Ultrasound Physics I	2			
DMS 242	Ultrasound Physics II	2			
DMS 244	Ultrasound Scan Lab	6			
DMS 270	Clinical Observation	2.5			
DMS 271	Clinical I	6			
DMS 272	Clinical II	6			
DMS 273	Clinical III	6			
DMS 274	Clinical IV	6			
DMS 288	Practicum	6			
DMS 289	Ultrasound Capstone	3			
<b>DMS Elective Courses</b>		<b>4</b>			
<b>Total Credits</b>		<b>61.5</b>			

### Vascular Technology Certificate

<b>Prerequisite Courses:</b>		<b>Credits</b>
DMS 101	Introduction to Sonography	2
RTE 255	Multiplanar Sectional Imaging or equivalent	2

<b>Required Courses</b>		<b>Credits</b>
DMS 203	Cerebrovascular Sonography	2
DMS 204	Venous Sonography	2
DMS 241	Ultrasound Physics I	2
DMS 242	Ultrasound Physics II	2
DMS 244	Ultrasound Scan Lab	6
DMS 251	Cardiovascular Anatomy and Physiology	2
DMS 252	Abdominal Vascular Sonography	2
DMS 261	Introduction to Vascular Testing	2
DMS 262	Arterial Sonography	2
DMS 270	Clinical Observation	2.5
DMS 271	Clinical I	6
DMS 272	Clinical II	6
DMS 273	Clinical III	6
DMS 274	Clinical IV	6
DMS 288	Practicum	6
DMS 289	Ultrasound Capstone	3
<b>DMS Elective Courses</b>		<b>4</b>
<b>Total Credits</b>		<b>61.5</b>

### Diagnostic Cardiac Sonography Certificate

<b>Prerequisite Courses:</b>		<b>Credits</b>
DMS 101	Introduction to Sonography	2
RTE 255	Multiplanar Sectional Imaging or equivalent	2

<b>Required Courses</b>		<b>Credits</b>
DMS 251	Cardiovascular Anatomy and Physiology	2
DMS 257	Adult Echocardiography	2
DMS 267	Adult Echocardiographic Pathology	3
DMS 235	Pediatric Echocardiography	2
DMS 206	Vascular Sonography	2
DMS 241	Ultrasound Physics I	2
DMS 242	Ultrasound Physics II	2
DMS 244	Ultrasound Scan Lab	6
DMS 270	Clinical Observation	2.5
DMS 271	Clinical I	6
DMS 272	Clinical II	6
DMS 273	Clinical III	6

DMS 274	Clinical IV	6
DMS 288	Practicum	6
DMS 289	Ultrasound Capstone	3
<b>DMS Elective Courses</b>		<b>4</b>
<b>Total Credits</b>		<b>61.5</b>

### Spanish

The completion of the following suggested courses is for those planning to transfer to a four-year college or university to complete a major in Art. Consult with a faculty advisor before beginning this area of study.

**See AA - Spanish Designated Degree Requirements** on page 68

### Speech and Communication

**See Communication on page 89**

### Teacher Education

Contact the teacher education faculty advisor before beginning any of these programs of study.

### Degrees: Associate of Arts

**Elementary Education (K-6 grade)**

**Secondary Education (7-12 grade)**

### Certificates:

**Paraeducator**

### Teacher Education Additional Program of Study:

**Adult Basic Education Authorization (ABEA)**

### Teacher Education Degrees

#### Elementary Education AA Degree

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. 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.

<b>General Education Courses</b>		<b>Credits</b>
<b>Communication</b>		
ENG 121	English Composition I (B or higher)	3
ENG 122	English Composition II (B or higher)	3

### Arts and Humanities

LIT 115 or LIT 201, or LIT 202, or LIT 211 or LIT 221 3

### Mathematics

MAT 155 Integrated Math I 3

MAT 156 Integrated Math II 3

### Social and Behavioral Science

GEO 105 World Regional Geography 3

HIS 201 United States History I 3

POS 111 American Government 3

### Natural & Physical Sciences

SCI 155 Integrated Science 4

SCI 156 Integrated Science 4

### Statewide Education Requirements

COM 115 Public Speaking 3

PSY 238 Child Development 3

EDU 221 Introduction to Teacher Education 3

EDU 288 Practicum 1

### Transfer Institution Approved Credits 19

(Meet with the teacher education faculty advisor for a list of approved credits for each institution.)

### Total Credits 61

## Secondary Education AA Degree

If you plan to transfer to a four-year college or university to complete a secondary education certification program, meet with the RRCC Teacher Education faculty advisor to design a course of study. Electives will include RRCC education courses and courses in your area of emphasis.

## Teacher Education Certificates

### Paraeducator Certificate

The federal No Child Left Behind Act mandates paraeducator requirements.

In order to be considered as a highly qualified paraeducator, you must meet one of the following requirements:

- successfully complete two years of post-secondary education (48 credits)  
OR
- demonstrate your knowledge through a formal academic assessment (the Work Keys test) of writing, reading, and mathematics skills.

RRCC has developed a Paraeducator Certificate to assist paraeducators in meeting these new requirements. If you plan to transfer to a four-year college or university to complete teacher certification, you should consider the Associate of Arts degree, Elementary Education. This certificate helps prepare you to work as a paraeducator in the K-12 classroom.

**In order to be considered highly qualified, you must complete one of the above requirements.**

Required Courses	Credits
EDU 221 Introduction to Education	3
EDU 261 Teaching, Learning and Technology	3
EDU 240 Teaching the Exceptional Learner	3
EDU 288 Practicum	1
MAT 107 Career Math (or higher)	3

Students can select 3 credit hours from the following:  
EDU 234; PSY 238; LIT 255 or one advisor-approved elective. 3

### Total Required Credits 16

## Teacher Education Additional Program of Study

### Adult Basic Education Authorization (ABEA)

Proficiency in these course competencies represents a foundational knowledge in the field of adult basic education. A transcript or Certificate of Equivalency for the four required courses is required to apply to the Colorado Department of Education (CDE) for the Adult Basic Education Authorization (ABEA). EDU 135 is optional. Paid instructors employed by Adult Education and Family Literacy Act (AEFLA)-funded programs in Colorado must have the ABEA or earn it within three years of hire. Adult educators in the Colorado Department of Corrections must have the ABEA or a valid Colorado teaching license. For more information about the ABEA, go to the CDE Office of Adult Education and Family Literacy website at [www.cde.state.co.us/index\\_adult.htm](http://www.cde.state.co.us/index_adult.htm).

Required Courses	Credits
EDU 131 Introduction to Adult Education	3
EDU 132 Planning, Organizing, and Delivering Adult Education Instruction	3
EDU 133 Adult Basic Education (ABE) and Adult Secondary Education (ASE/GED)	3
EDU 134 Teaching English as a Second Language (ESL) to Adult Learners	3
EDU 135 Family Literacy in Adult Education (Required for Even Start Program Staff)	3
<b>Total Credits</b>	<b>15</b>

## Theatre Arts

Consult with the Program Chair of Theatre Arts and Dance before beginning any program of study.

## Degrees: Associate of Arts

### Area of Study:

Theatre Arts

## Degree: Associate of Applied Science

Theatre Technology

### Certificates:

Costume Basics

Costume and Fashion

Stagehand Basics

Stagecraft

### Theatre Arts

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 Arts. This program provides basic

preparation leading to theatre-related careers, as well as to the teaching of theatre.

<b>Suggested Courses for Transfer</b>		<b>Credits</b>
THE 108	Theatre Script Analysis	3
THE 111	Acting I	3
THE 116	Technical Theatre	3
THE 212	Development of Theatre II (spring only)	3
THE 215	Playwriting	3
<b>Choose one course from the following:</b>		<b>3</b>
THE 131	Theatre Production I	
THE 132	Theatre Production II	
THE 231	Theatre Production III	
THE 232	Theatre Production IV	
<b>General Education Courses</b>		<b>38</b>
<b>(See AA Degree Requirements on page 34)</b>		
<b>Additional General Education Courses:</b>		
THE 105	Theatre Appreciation`	3
THE 211	Development of Theatre I	3

## Theatre Technology AAS Degree

**(Choose either Emphasis in Stage Costuming or Emphasis in Stagecraft)**

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 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.

<b>Required Courses for Either Emphasis</b>		<b>Credits</b>
THE 104	Basic Costume and Apparel Construction	3
THE 105	Theatre Appreciation	3
THE 116	Technical Theatre	3
THE 131	Theatre Production I (fall only)	3
THE 132	Theatre Production II (spring only)	3
THE 135	Stage Makeup I (fall only)	3
THE 231	Theatre Production III (fall only)	3
THE 260	Employment Skills for Technical Theatre (spring only)	
THE 280	Internship	1

### **Emphasis in Stage Costuming:**

ART 121	Drawing I or ART 128 Figure Drawing I	3
THE 100	Technical Theatre Lab	1
THE 109	Basics of Pattern Drafting (spring only)	3
THE 136	Stage Makeup II (spring only)	3
THE 202	Intermediate Sewing Techniques (fall only)	3
THE 245	Basics of Costume Design & Construction (spring only)	3
THE 237	History of Costumes & Fashion (fall only)	3
THE 222	Costume Accessories & Millinery	3

### **Emphasis in Stagecraft:**

THE 100	Technical Theatre Lab	2
THE 104	Basics of Costume Construction	3
THE 151	Stagecraft I	3
THE 152	Production Stage Management	3
THE 216	Theatre Lighting and Design (fall only)	3
THE 221	Set Design (spring only)	3

THE 225	Sound Operation & Design Basics (spring only)	2
THE 241	Stage Properties	3
<b>General Education Requirements:</b>		<b>15</b>
THE 211	Development of Theatre I (fall only)	3
THE 212	Development of Theatre II (spring only)	3
<b>Communication (3 credits)</b>		
ENG or COM		
<b>Mathematics (3 credits)</b>		
MAT 107 and above		
<b>Natural &amp; Physical Sciences (3 credits)</b>		
AST,BIO,CHE,ENV,GEY,PHY,SCI		
<b>or</b>		
<b>Social and Behavioral Sciences (3 credits)</b>		
ANT,ECO,GEO,GIS,HIS,POS,PSY,SOC		
<b>Required Program Credits</b>		<b>45</b>
<b>Total Credits</b>		<b>60</b>

## Theatre Arts Certificates

### **Costume Basics Certificate**

The Certificate in Costume Basics is appropriate for those who want to prepare for a career in costume and fashion 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 Chair 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.**

<b>Required Courses</b>		<b>Credits</b>
THE 100	Technical Theatre Lab	1
THE 105	Theatre Appreciation	3
THE 104	Basic Costume and Apparel Construction	3
THE 202	Intermediate Costume Construction	3
THE 131	Theatre Production I	3
THE 135	Stage Makeup I	3
<b>Total Credits For One Semester</b>		<b>16</b>

### **Costume and Fashion Certificate**

The Certificate in Costume and Fashion is appropriate for those who want to prepare for a career in costume and fashion design. Upon completion of the courses, you will be prepared for entry-level employment in costume and fashion careers as stitchers, wardrobe assistants, costume shop assistants, working in alterations and tailoring, makeup artists, window dressers, and other fashion and entertainment-related employment opportunities. This certificate also prepares you for pursuing an advanced degree in costume design and the fashion industry. You should consult with the Program Chair 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.

**The Costume and Fashion certificate is intended for a one year course of study, divided into two semesters (fall and spring).**

<b>Required Courses</b>		<b>Credits</b>
THE 105	Theatre Appreciation	3
THE 104	Basic Costume and Apparel Construction	3
THE 109	Basics of Pattern Drafting	3
THE 116	Technical Theatre	3
THE 202	Intermediate Costume Construction	3
THE 135	Stage Makeup I	3
THE 136	Stage Makeup II	3
THE 222	Costume Accessories & Millinery	3
<b>Total Credits For Two Semesters</b>		<b>24</b>

### Stagehand Basics Certificate

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 Chair 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.**

<b>Required Courses</b>		<b>Credits</b>
THE 100	Technical Theatre Lab	1
THE 105	Theatre Appreciation	3
THE 104	Basic Costume and Apparel Construction	3
THE 116	Technical Theatre	3
THE 131	Theatre Production I	3
THE 135	Stage Makeup I	3
<b>Total Credits For One Semester</b>		<b>16</b>

### Stagecraft Certificate

This course of study is designed to train you for entry-level positions as back-stage technicians, running crews, shop assistants, crew leaders, properties assistants, and set-building. Related professions are carpentry, cabinet-making, and careers requiring construction skills. You should consult with the Program Chair 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 two semesters (fall and spring).**

<b>Required Courses</b>		<b>Credits</b>
THE 100	Technical Theatre Lab	1
THE 105	Theatre Appreciation	3
THE 104	Basic Costume and Apparel Construction	3
THE 116	Technical Theatre	3
THE 132	Theatre Production II	3
THE 135	Stage Makeup I	3
THE 151	Stagecraft I	3
THE 216	Theatre Lighting and Design	3
THE 225	Sound Operation and Design Basics	2
<b>Total Credits For Two Semesters</b>		<b>24</b>

## Water Quality Management Technology

The Water Quality Management Technology Program is a comprehensive study of all levels and areas of operations in the water and wastewater industry. You will be introduced to the many functions and career opportunities within the field. You can then establish an educational program that best fits your goals and interests.

If you are working in the industry, you can obtain higher education and skill levels for higher operator certification by attending specific courses offered. A degree in water quality management technology will give you all the instruction necessary to work in supervisory and management positions.

**Information: Mike Smith 303.914.6325**

[www.rrcc.edu/wqm/](http://www.rrcc.edu/wqm/)

## Degree: Associate of Applied Science

### Water Quality Management

### Certificates:

#### Education and Experience

#### Introduction to Water Treatment

#### Introduction to Wastewater Treatment

#### Mathematics in Water Quality

#### Laboratory Analysis

#### Distribution and Collection Systems

#### Advanced Water Treatment Certification

#### Advanced Wastewater Treatment Certification

#### Source Control and Water Audit

## Water Quality Management AAS Degree

<b>Required Courses</b>		<b>Credits</b>
WQM 100	Introduction to Water Quality Management	3
WQM 105	Specific Calculations for Water Quality Management	4
WQM 119	Basic Water Quality Analysis	4
WQM 120	Water Quality Equipment Maintenance	4
WQM 126	Safety in the Water Quality Industry	3
WQM 200	Hydraulics for Water Quality Management	4
WQM 206	Design Interpretation of Water Quality Systems	4
WQM 216	Biological and Bacteriological Water Quality Analysis	4
WQM 217	Disinfection Techniques in Water Quality Systems	4
<b>General Education Courses (See WQM Faculty Advisor)</b>		<b>12</b>
<b>Faculty advisor-approved WQM electives</b>		<b>12</b>
<b>Required Electives</b>		
CIS 118	Introduction to PC Applications	3
GIS 101	Introduction To Geographic Information Systems	3
<b>Total Credits</b>		<b>64</b>

## Water Quality Certificates

Students completing this program possess the skills and knowledge for entry level positions within the industry in your specific area of interest.

### Education and Experience Certificate

Required Courses	Credits
WQM 126 Safety in the Water Quality Industry	3
WQM 280 Internship	3-6
<b>Total Credits</b>	<b>6-9</b>

### Introduction to Water Treatment Certificate

Required Courses	Credits
WQM 100 Introduction to Water Quality Management	3
WQM 124 C and D Review for Water Certification	3
<b>Total Credits</b>	<b>6</b>

### Introduction to Wastewater Treatment Certificate

Required Courses	Credits
WQM 100 Introduction to Water Quality Management	3
WQM 125 C and D Review for Wastewater Certification	3
<b>Total Credits</b>	<b>6</b>

### Mathematics in Water Quality Certificate

Required Courses	Credits
WQM 105 Specific Calculations for Water Quality Management	4
WQM 200 Hydraulics	4
<b>Total Credits</b>	<b>8</b>

### Laboratory Analysis Certificate

Required Courses	Credits
WQM 119 Basic Water Analysis	4
WQM 216 Bacteriological/Biological Water Analysis	4
<b>Total Credits</b>	<b>8</b>

### Distribution and Collection Systems Certificate

Required Courses	Credits
WQM 109 Water Distribution	3
WQM 118 Wastewater Collection Systems	3
<b>Total Credits</b>	<b>6</b>

### Advanced Water Treatment Certification

Required Courses	Credits
WQM 124 Water Certification Review for C and D	3
WQM 224 Water Treatment Review for A and B	3
<b>Total Credits</b>	<b>6</b>

## Advanced Wastewater Treatment Certification

Required Courses	Credits
WQM 125 Wastewater Cert Review for C and D	3
WQM 225 Wastewater Treatment Review A and B	3
<b>Total Credits</b>	<b>6</b>

### Source Control and Water Audit Certificate

Required Courses	Credits
WQM 160 Source Water Management	3
WQM 165 Water Law	3
WQM 212 Drinking Water Regulations	4
<b>Total Credits</b>	<b>10</b>

## Welding

(In cooperation with and taught at WarrenTech)

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: Associate of Applied Science

### Welding

### Certificates:

OFW and OFC Certificate

SMAW Certificate

GMAW Certificate

FCAW Certificate

GTAW Certificate

### Welding AAS Degree

Required Courses	Credits
WEL 100 Safety for Welders	1
WEL 101 Allied Cutting Process	4
WEL 102 Oxyacetylene Joining Processes	4
WEL 103 Basic Shielded Metal Arc I	4
WEL 110 Advanced Shielded Metal Arc I	4
WEL 124 Introduction to Gas Tungsten Arc Welding	4
WEL 201 Gas Metal Arc Welding I	4
WEL 202 Gas Metal Arc Welding II	4
WEL 203 Flux Cored Arc Welding I	4
WEL 204 Flux Cored Arc Welding II	4
WEL 224 Advanced Gas Tungsten Arc Welding	4
WEL 250 Layout and Fabrication	4
CAD 101 Computer Aided Drafting I	3
<b>General Education Course Requirements:</b>	
ENG 131 Technical Writing	3
MAT 107 Career Math (or higher)	3
COM 115 Public Speaking	3
PHY 105 Conceptual Physics	4

<b>One elective from any of the following areas:</b>	<b>3</b>
<b>Arts and Humanities</b>	
ART, FRE, GER, HUM, LIT, MUS, PHI, COM, SPA, THE	
<b>Natural &amp; Physical Sciences</b>	
AST, BIO, CHE, GEY, PHY	
<b>Social and Behavioral Science</b>	
ANT, ECO, HIS, POS, PSY, SOC	
<b>Total Credits</b>	<b>64</b>

## Welding Certificates

For the following certificates, you must complete WEL 100 Safety for Welders as a prerequisite course.

### Ox-Fuel Welding and Cutting (OFW and OFC) Certificate

Required Courses	Credits
WEL 100 Safety for Welders	1
WEL 101 Allied Cutting Process	4
WEL 102 Oxyacetylene Joining Processes	4
<b>Total Credits</b>	<b>9</b>

### Shield Metal Arc Welding (SMAW) Certificate

Required Courses	Credits
WEL 103 Basic Shielded Metal Arc I	4
WEL 110 Advanced Shielded Metal Arc I	4
<b>Total Credits</b>	<b>8</b>

### Gas Metal Arc Welding (GMAW) Certificate

Required Courses	Credits
WEL 201 Gas Metal Arc Welding I	4
WEL 202 Gas Metal Arc Welding II	4
<b>Total Credits</b>	<b>8</b>

### Flux Core Arc Welding (FCAW) Certificate

Required Courses	Credits
WEL 203 Flux Cored Arc Welding I	4
WEL 204 Flux Cored Arc Welding II	4
<b>Total Credits</b>	<b>8</b>

### Gas Tungsten Arc Welding (GTAW) Certificate

Required Courses	Credits
WEL 124 Intro. to Gas Tungsten Arc Welding	4
WEL 224 Advanced Gas Tungsten Arc Welding	4
<b>Total Credits</b>	<b>8</b>

## Woodworking

See Fine Woodworking on page 106

## 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 – Academic Achievement Courses

#### AAA 050 Semester Survival 2 credits

Emphasizes basic study skills in order to bolster your chances of completing the current semester successfully.

#### AAA 101 The Student Experience 1 credit

Introduces you to college culture and prepares you for the challenges you will face in higher education. Through a series of interactive seminars, you will discover learning in a multicultural environment and use college and community resources to attain educational and career goals.

#### AAA 109 College Gateway 3 credits

Assists the student in making a successful transition to higher education by setting up a pattern of success that will last the rest of his/her life. During this course students will build academic and personal skills that are necessary for a successful college experience. We understand the unique position the former offender population is in so this class is designed to challenge the students to look closely at themselves and the way that they think. Through the use of the book "Man's Search for Meaning" the Gateway student learns not only about how to study but also what is necessary to be successful.

Some of the skill sets we will be covering in this course are: muscle reading, note taking, test taking and time management. Students will be introduced to personal learning styles and ways of using those styles to improve ways to study.

### ACC – Accounting Courses

[www.rrcc.edu/business](http://www.rrcc.edu/business)

#### ACC 101 Fundamentals of Accounting 3 credits

Presents the basic elements and concepts of accounting, with emphasis on the procedures used for maintaining journals, ledgers, and other related records, and for the completion of end-of-period reports for small service and merchandising businesses.

*To apply toward graduation, this course must be taken prior to successfully completing ACC 121.*

#### ACC 121 Accounting Principles I 4 credits

Introduces the study of accounting principles for understanding of the theory and logic that underlie procedures and practices. Major topics include the accounting cycle for service and merchandising companies, special journals and subsidiary ledgers, internal control principles and practices, notes and interest, inventory systems and costing, plant assets and intangible asset accounting, and depreciation methods and practices.

*Prerequisites: Accuplacer scores of 80 or higher for reading and 45 or higher for elementary algebra or equivalent SAT scores ACT scores or equivalent course work recommended.*

#### ACC 122 Accounting Principles II 4 credits

Continues the study of accounting principles as they apply to partnerships and corporations. Major topics include stocks and bonds, investments, cash flow statements, financial analysis, budgeting, and cost and managerial accounting.

*Prerequisite: ACC 121 or equivalent.*

#### ACC 123 Accounting Principles I Recitation 1 credit

Offers an accompanying recitation for ACC 121, Accounting Principles I. The course exposes you to a broader accounting experience in the foundational studies of accounting. You will be introduced to additional problems, case studies, and applications of accounting in real-world business situations, using individual and team problem solving.

*Corequisite: ACC 121.*

#### ACC 124 Accounting Principles II Recitation 1 credit

Offers an accompanying recitation for ACC 122, Accounting Principles II. The course exposes you to a broader accounting experience in financial and managerial accounting. You will be introduced to additional problems, case studies, and applications of accounting in real-world business situations, using individual and team problem solving.

*Corequisite: ACC 122.*

#### ACC 131 Income Tax 3 credits

Presents basic concepts of federal income taxation, including gross income, deductions, accounting periods and methods, and property transactions, with emphasis on taxation of individuals and sole proprietorships.

*Prerequisite: ACC 121 strongly recommended.*

#### ACC 132 Tax Help Colorado 2 credits

Prepares the student for preparation of federal and state income tax returns for individuals. Emphasis is placed on form preparation with the use of tax software.

#### ACC 133 Tax Help Colorado Practicum 1 credit

Allows the student to prepare actual federal and state income tax returns for individuals in the real time environment.

### **ACC 135 Spreadsheet Applications for Accounting**

#### **3 credits**

Introduces spreadsheets as an accounting tool. Using an accounting perspective, you will apply fundamental spreadsheet concepts. The spreadsheets are used as a problem solving and decision making tool.

*Prerequisite:* ACC 121.

### **ACC 138 Payroll and Sales Tax**

#### **3 credits**

Acquaints you with laws pertaining to payroll and sales taxes including record keeping rules. You will prepare various federal, state, and local forms for reporting payroll taxes and sales taxes. A computerized payroll simulation is included in the course.

*Corequisite or prerequisite:* ACC 101, ACC 121 or equivalent knowledge.

### **ACC 211 Intermediate Accounting I**

#### **4 credits**

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. It focuses on the preparation and analysis of business information relevant and useful to external users of financial reports; explores the theories, principles, and practices surveyed in Accounting Principles; and critically examines real-world financial analysis and reporting issues.

*Prerequisite:* ACC 122.

### **ACC 212 Intermediate Accounting II**

#### **4 credits**

Focuses on the theoretical and practical aspects of accounting for long-term liabilities, stockholders equity, investments, pensions, and leases. It includes income tax allocation, financial statement analysis, cash flow statements, and accounting methods changes.

*Prerequisite:* ACC 211.

### **ACC 216 Governmental and Not-for-Profit Accounting**

#### **3 credits**

Addresses concepts of budgetary control as a matter of law and public administration theory. Accounting principles and procedures necessary to implement budgetary controls for governmental units and other not-for-profit institutions and organizations are presented.

*Prerequisite:* ACC 122.

### **ACC 226 Cost Accounting**

#### **3 credits**

Presents cost accumulation methods and reports. It focuses on the concepts and procedures of job order, process, standard, and direct cost systems, budgeting, planning, and control of costs.

*Prerequisite:* ACC 122.

### **ACC 245 Computerized Accounting with a Professional Package**

#### **3 credits**

Integrates accounting principles and practices with a computerized accounting package such as Peachtree, DacEasy, or other professional package. This course emphasizes computerized functions of the general ledger and integrated accounts payable, accounts receivable, invoicing, and payroll systems.

*Prerequisite:* ACC 121 or ACC 101

### **ACC 275 Special Topics in Accounting**

#### **1-3 credits**

Provides you with a vehicle to pursue in depth exploration of special topics of interest.

### **ACC 280 Internship**

#### **1-3 credits**

Provides you with the opportunity to supplement coursework with practical work experience related to their educational program. You will work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

*Prerequisite:* Permission of instructor.

### **ACC 285 Independent Study**

#### **1-3 credits**

Meets the individual needs of students. You will engage in intensive study or research under the direction of a qualified instructor.

*Prerequisite:* Permission of instructor.

## **ACT – Automotive Collision Technology Courses**

[www.rrcc.edu/autotech](http://www.rrcc.edu/autotech)

### **ACT 101 Introduction to Automotive Collision Technology**

#### **4 credits**

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 110 Safety in Collision Repair**

#### **2 credits**

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 111 Metal Welding and Cutting I**

#### **3 credits**

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.

*Prerequisite:* ACT 101, ACT 110, or Faculty Consent

### **ACT 121 Non-Structural Repair Preparation**

#### **3 credits**

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.

*Prerequisite:* ACT 101, ACT 110, or Faculty Consent

### **ACT 122 Panel Repair and Replacements**

#### **3 credits**

Covers straightening options prior to replacement decisions, and emphasizes the identification, handling, and replacement of parts such as adjustment and alignment of bolt-on parts, fixed parts, and accessories.

*Prerequisite:* ACT 101, ACT 110, or Faculty Consent

### **ACT 123 Metal Finishing and Body Filling**

#### **3 credits**

Covers 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.

*Prerequisite:* ACT 101, ACT 110, or Faculty Consent.

**ACT 124 Exterior Panel Replacement (Weld-on)**

**3 credits**

Covers the replacement of welded on 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.

*Prerequisite: ACT 101, ACT 110, or Faculty Consent.*

**ACT 131 Structural Damage Diagnosis**

**3 credits**

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. This course includes the techniques for basic hook ups and safety procedures used in making corrective pulls.

*Prerequisite: ACT 101, ACT 110, or Faculty Consent.*

**ACT 132 Structural Damage Repair**

**3 credits**

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.

*Prerequisite: ACT 101, ACT 110, ACT 131, or Faculty Consent.*

**ACT 141 Refinishing Safety**

**1 credit**

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.

*Prerequisite: ACT 101, ACT 110, or Faculty Consent.*

**ACT 142 Surface Preparation I**

**2 credits**

Covers surface preparation for refinishing including cleaning, sanding, feather edging, chemical treatment of bare materials and priming. The application of primers, including rationale and use is covered. In addition you will learn skills for proper removal and storage of exterior trim and protection of adjacent panels.

*Prerequisite: ACT 101, ACT 110, or Faculty Consent.*

**ACT 143 Spray Equipment Operation**

**2 credits**

Covers the inspection, cleaning, and determination of the condition of spray guns and related equipment. You will learn skills for adjusting spray guns by setting-up and testing spray gun operations.

*Prerequisite: ACT 101, ACT 110, or Faculty Consent.*

**ACT 144 Refinishing I**

**2 credits**

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 will practice correct masking and detailing techniques.

*Prerequisite: ACT 101, ACT 110, or Faculty Consent.*

**ACT 160 Custom Painting**

**3 credits**

This course provides instruction in basic custom paint application such as pearl paints, candy colors, metal flakes, etc.

**ACT 161 Automotive Graphics and Designs**

**3 credits**

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 163 Automotive Special Effects and Refinishing**

**3 credits**

This course provides instruction in the different types of design effects that can be achieved through special techniques.

**ACT 165 Automotive Body Customizing I**

**3 credits**

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 166 Automotive Body Customizing II**

**3 credits**

Covers modification of vehicle and vehicle parts such as Chopping, measuring, realigning, fabricating, recessing, shaping etc.

**ACT 167 Automotive Body Customizing III**

**3 credits**

Covers the completion of modifications that were started in Automotive Body Customizing II along with the addition of body molding kits.

**ACT 170 Automotive Collision Technology Lab Experiences I**

**1-9 credits**

Designed to prepare you to perform basic tasks for a specialized area in a controlled instructional lab.

*Prerequisite: Completion of all courses in ACT specialization area.*

**ACT 171 Automotive Collision Technology Lab Experiences II**

**1-9 credits**

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.

*Prerequisite: Completion of all courses in ACT specialization area.*

**ACT 172 Automotive Collision Technology Lab Experiences III**

**1-9 credits**

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.

*Prerequisite: Completion of all courses in ACT specialization area.*

## **ACT 175 Special Topics**

### **0.5-9 credits**

Assists those who are interested in individual topics within the normal curriculum. You will identify and select objectives that you 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.

*Prerequisite: ACT 101, ACT 110, or Faculty Consent*

## **ACT 180 Automotive Collision Repair Internship**

### **1-9 credits**

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.

*Prerequisite: Completion of coursework in specialized area.*

## **ACT 181 Automotive Collision Repair Level II Internship**

### **1-9 credits**

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 205 Estimating and Shop Management**

### **3 credits**

Initiates written estimates on damaged vehicles. You will learn shop management including work orders, ordering supplies, operating costs, time cards, shop liabilities, employee's safety, and insurance management issues.

*Prerequisite: ACT 101, ACT 110, or Faculty Consent.*

## **ACT 211 Metal Welding and Cutting II**

### **2 credits**

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.

*Prerequisite: ACT 101, ACT 110, or Faculty Consent.*

*Corequisite: ACT 111, ACT 124.*

## **ACT 220 Structural Repair II**

### **4 credits**

Designed as a continuation of ACT 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.

*Prerequisite: ACT 101, ACT 110, and all other lower level Structural Repair courses or Faculty Consent.*

## **ACT 226 Production**

### **4 credits**

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 will also develop leadership abilities and time management skills.

*Prerequisite: ACT 101, ACT 110, ACT 205, or Faculty Consent.*

## **ACT 231 Advanced Structural Damage Diagnosis and Repair**

### **3 credits**

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.

*Prerequisite: ACT 101, ACT 110, and all other lower level Structural Repair courses or Faculty Consent*

## **ACT 232 Fixed Glass Repair**

### **2 credits**

Covers the removal and replacement of fixed glass using manufacturer's specifications, proper tools, and recommended materials. Application of skills is demonstrated and used for the removal and replacement of modular glass using manufacturer's specifications and procedures.

*Prerequisite: ACT 101, ACT 110, or Faculty Consent.*

## **ACT 241 Paint Defects**

### **3 credits**

Covers paint defects. Emphasizes the causes of paint defects with methods to cure problems during and after refinishing procedures. Students will 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.

*Prerequisites: ACT 101, ACT 110, and all other lower level Refinishing courses or Faculty Consent.*

## **ACT 242 Surface Preparation II**

### **2 credits**

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.

*Prerequisite: ACT 101, ACT 110, and all other lower level Refinishing courses or Faculty Consent*

## **ACT 243 Refinishing II**

### **2 credits**

In this advanced course, students will 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.

*Prerequisite: ACT 101, ACT 110, and all other lower level Refinishing courses or Faculty Consent.*

## **ACT 244 Final Detail**

### **2 credits**

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.

*Prerequisites: ACT 101, ACT 110, or Faculty Consent.*

## AEC – Architecture, Engineering and Construction Courses

### AEC 101 Basic Architectural Drafting 4 credits

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: CAD 102 or permission of instructor.*

### AEC 102 Residential Construction Drawing 4 credits

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: AEC 101 or permission of instructor.*

### AEC 121 Construction Materials and Systems 3 credits

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 202 Architectural Design & Analysis 4 credits

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: AEC 102 or permission of instructor.*

### AEC 218 Sustainable Building Systems 3 credits

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 221 Building Electrical/Mechanical Systems 3 credits

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.

### AEC 225 Architectural Design & Development 4 credits

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.

*Prerequisite: AEC 202 or permission of instructor.*

### AEC 275 Special Topics: Architectural Graphics 3 credits

Provides students with a vehicle to pursue in depth exploration of special topics of interest. This class uses a combination of AutoCAD, Photoshop and SketchUp for rendering presentation files.

*Prerequisite: EGT 230: Arch or equivalent*

## AGR – Agriculture Courses

### AGR 260 World Interdependence-Population and Food: GT-SS3 3 credits

Covers the study of world population and food production and distribution. Problems and opportunities concerning population and food are discussed in a global context.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

## ANT – Anthropology Courses

[www.rccc.edu/anthropology](http://www.rccc.edu/anthropology)

### ANT 101 Cultural Anthropology: GT-SS3 3 credits

Studies human cultural patterns and learned behavior. It includes linguistics, social and political organization, religion, culture and personality, culture change, and applied anthropology.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### ANT 102 Cultural Anthropology LAB: GT-SS3 1 credit

Studies the art and science of ethnographic research methods, analyze classic ethnographies, conduct field research projects, write model ethnographies and ethnologies, and address ethical debates and controversies.

### ANT 103 Archeology LAB: GT-SS3 1 credit

Studies analytical methods in archeological research including those employed both in the field and in the laboratory. Deals with practical exercises illustrating many of the theoretical principles of archeology, including methods of archeological survey, excavation, artifact analysis, collection strategies, mapping strategies, and field interpretation.

### ANT 104 Physical Anthropology LAB: GT-SS3 1 credit

Investigates the principles of physical/biological anthropology. Includes genetic and evolutionary processes, comparative skeletal anatomy, primate morphology and behavior, human evolution, modern human variation, and forensics through laboratory and/or online practicum exercises and analytical discussions.

**ANT 107 Introduction to Archaeology: GT-SS3**

**3 credits**

Introduces the science of recovering the human prehistoric and historic past through excavation, analysis and interpretation of material remains. The course includes a survey of the archaeology of different areas of the Old and New Worlds and also includes the works of selected archaeologists and discussions of major archaeological theories.

*ANT 107 is generally offered in the late spring.*

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**ANT 108 Archaeology of World Rock Art: GT-SS3**

**3 credits**

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. Classification, recordation, dating, analysis, management and conservation, research ethics and protocols, and symbolic and ethnographic interpretation will be covered. Also addresses other formal approaches and established as well as emerging theory.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**ANT 111 Physical Anthropology: GT-SS3**

**3 credits**

Studies human biology and its effects on behavior. It includes principles of genetics and evolution, vertebrates and primates, human origins, human variation, and ecology.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**ANT 201 Introduction to Forensic Anthropology:GT-SS3**

**3 credits**

Studies the basic principles of forensic anthropology, an applied field within the discipline of physical anthropology. Includes the study of the human skeleton, practical application of physical anthropology and archaeology, and judicial procedure, as they relate to the identification of human remains within a medico-legal context.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**ANT 215 Indians of North America: GT-SS3**

**3 credits**

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.

*ANT 215 is generally offered in the fall. Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**ANT 221 Exploring Other Cultures I 3 credits**

Provides an anthropological understanding of a selected culture. Areas of study include the culture's language, processes of enculturation, subsistence patterns and economics, kinship and descent, political organization, religion, art, history, and its reactions to the forces of globalization.

**ANT 225 Anthropology of Religion 3 credits**

Explores the culturally universal phenomenon of religion. Cross-cultural varieties of beliefs in the supernatural and the religious rituals people employ to interpret and control their worlds are examined.

**ANT 250 Medical Anthropology: GT-SS3**

**3 Credits**

Studies the basic principles of medical anthropology, an applied field within the discipline of cultural anthropology. It includes the cross-cultural study of practices and beliefs regarding illness, health, death, prevention and therapy; and the interaction of the medical systems between Western and other cultures.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**ANT 255 Anthropology of Energy 3 Credits**

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?

**ARA – Arabic Courses**

[www.rccc.edu/languages](http://www.rccc.edu/languages)

**ARA 101 Conversational Arabic I 3 credits**

Introduces beginning students to conversational Arabic and focuses on understanding and speaking Arabic. Covers basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

**ARA 102 Conversational Arabic II 3 credits**

Continues the sequence for students who wish to understand and speak Arabic. Covers basic conversational patterns, expressions, and grammar.

**ARM – Military Science Courses (U.S. Army ROTC)**

**ARM 111 Adventures in Leadership I**

**2 credits**

**Fall semester**

Introduces you to fundamentals of leadership and the United States Army. It 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. The course includes lecture and laboratory. (Lab Fee).

**ARM 112 Adventures in Leadership II**

**2 credits**

**Spring semester**

Investigates leadership in small organizations. The course 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. The course introduces you to effective military writing styles and includes lecture and laboratory. (Lab Fee).

### **ARM 211 Methods of Leadership and Management I**

**3 credits**

#### **Fall semester**

Reviews leadership and management concepts including motivation, attitudes, communication skills, problem solving, human needs and behavior, and leadership self-development. You will refine written and oral communications skills and explore the basic branches of the Army, and officer and NCO duties. You will conduct practical exercises in small unit light infantry tactics and perform as mid-level leaders in the cadet organization. The course includes lecture and laboratory. (Lab Fee).

### **ARM 212 Methods of Leadership and Management II**

**3 credits**

#### **Spring semester**

Focuses on leadership and management functions in military and corporate environments. You will study 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. The course continues to refine communication skills and includes lecture and laboratory. (Lab Fee).

## **ART – Art Courses**

[www.rccc.edu/arts](http://www.rccc.edu/arts)

### **ART 110 Art Appreciation: GT-AH1**

**3 credits**

Introduces the cultural significance of the visual arts, including media, processes, techniques, traditions, and terminology. *Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **ART 111 Art History Ancient to Medieval: GT-AH1**

**3 credits**

Provides the knowledge base to understand the visual arts, especially as related to Western culture. The course surveys the visual arts from the Ancient through the Medieval periods. *Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **ART 112 Art History Renaissance to Modern: GT-AH1**

**3 credits**

Provides the knowledge base to understand the visual arts, especially as related to Western culture. The course surveys the visual arts from the Renaissance through the Modern periods. *Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **ART 113 History of Photography**

**3 credits**

Surveys the history of photography from its beginning to the present. Course emphasis is on individual photographers who have made significant contributions in the field. You will attain an overview of technical, artistic, commercial, and social development of photography as a form of visual communication. You are required to have a basic knowledge of computers prior to taking this class. You should be able to upload and download files from the Internet, external devices, and flash drives; use the Internet for basic research; be able to send email and attachments; save information to CD/DVD, flash drive, and/or other external devices. Students without these skills are required to take MGD 101 Introduction to Computer Graphics either concurrently or prior to taking courses in digital photography.

### **ART 115 Stained Glass I**

**3 credits**

Develops a basic understanding of and approach to stained glass. You will gain an understanding of and appreciation for the properties of glass and the nature of finished stained glass construction.

### **ART 116 Stained Glass II**

**3 credits**

A continuation of Stained Glass I. You will advance to a clearer but still basic understanding and approach to stained glass. You will gain a greater understanding of and appreciation for the properties of glass and the nature of finished stained glass construction. *Prerequisite: ART 115 or permission of instructor.*

### **ART 121 Drawing I**

**3 credits**

Investigates the various approaches and media that you need in order to develop drawing skills and visual perception.

### **ART 124 Watercolor I**

**3 credits**

Introduces 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 128 Figure Drawing I**

**3 credits**

Introduces the basic techniques of drawing the human figure.

### **ART 129 Printmaking I**

**3 credits**

Introduces the basic techniques and skills of printmaking as a fine art medium. Instruction includes an understanding of visual concepts as they relate to prints. The course may include introduction to relief, intaglio, lithography and screen printing techniques.

### **ART 131 2-D Design**

**3 credits**

Examines the basic elements of design, visual perception, and artistic form and composition as they relate to two-dimensional media.

### **ART 132 3D Design**

**3 credits**

Focuses on learning to apply the elements and principles of design to three-dimensional problems.

### **ART 133 Jewelry and Metal Work I**

**3 credits**

Introduces the construction of jewelry designs in metals and small casting techniques.

### **ART 138 Film Photography I**

**3 credits**

Introduces black and white film photography as a fine art medium and develops skills necessary for basic camera and lab operations.

*Degree seeking Candidates, see PHO 120.*

### **ART 139 Digital Photography I**

**3 credits**

Analyzes acquisition and manipulation of digital images. You will study traditional photography methods of weaving contrast, sharpness, color, and composition together within the limitations of computer technology. The practical aspects of setting up a shoot, equipment needs, and camera controls are discussed. You will examine color correction, restoration, colorizing, and archiving digital images. A digital SLR camera with manual settings is required for this class. You are required to have a basic knowledge of computers prior to taking this class. You should be able to upload and download files from the Internet, external devices, and flash drives; use the Internet for basic research; be able to send email and attachments; save information to CD/DVD, flash drive, or other external devices. Students without these skills are required to take MGD 101 Introduction to Computer

Graphics either concurrently or prior to taking courses in digital photography. *Recommended MGD 101. Degree seeking Candidates, see PHO 120.*

**ART 143 Figure Photography I**  
**3 credits**

Introduces students to the social, artistic and photographic aspects of fine art figure studies in photography. 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 144 Portrait Photography**  
**3 credits**

Teaches the technical and aesthetic aspects of studio and location portrait photography. This course explores the personal style of portraiture, the history of the field, and portraiture as a visual language and creative expression and also includes lighting, composition, posing, and equipment selection. Both film and/or digital SLR cameras with manual settings may be used for this class.

**ART 151 Painting I**  
**3 credits**

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 154 Figure Painting I**  
**3 credits**

Focuses on painting the human figure and includes a brief survey of figure painting and instruction in the fundamental methods of composition and expressions.

**ART 161 Ceramics I**  
**3 credits**

Introduces the basics of wheel throwing and hand building. Students learn about clay, slips and glazes for high fire. Exposure to historical and contemporary ceramics.

**ART 165 Sculpture I**  
**3 credits**

Introduces the fundamentals of sculpture such as modeling, casting, carving, and the processes of assemblage.

**ART 167 Sculpting the Figure**  
**3 credits**

Focuses on sculpting the human figure using modeling techniques in clay.

**ART 175-177 Special Topics**  
**1-6 credits**

Covers specific topics in art. These courses are offered as needed for credit appropriate to the topic. Each offering includes a description of the topic(s). *Prerequisite: Permission of instructor.*

**ART 207 Art History – 1900 to Present: AH1**  
**3 credits**

Provides you with the knowledge base to understand the visual arts as related to Modern and Contemporary visual art. This course surveys world art of the twentieth century, including Modernism to Post-Modernism. *Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**ART 209 Studio Art**  
**3 credits**

Designed for advanced students interested in further exploring an art discipline to develop a more comprehensive portfolio. *Prerequisite: Permission of instructor.*

**ART 210 Marketing for the Visual Artist**  
**3 credits**

Provides you with the framework, tools, and professional materials necessary for the practicing visual artist. Guidelines for writing proposals, artist's statements, and resumes are discussed and practiced. The course explores theoretical and practical considerations related to portfolio presentation and exhibiting artwork through hands-on activities, readings, and discussion.

**ART 215 Stained Glass III**  
**3 credits**

Provides continued instruction in which you advance to a clearer and more advanced understanding and approach to stained glass. You will gain a greater understanding of and appreciation for the properties of glass and the nature of finished stained glass construction. This course emphasizes original, personal expression. *Prerequisite: ART 116.*

**ART 216 Stained Glass IV**  
**3 credits**

Continues instruction in stained glass with students advancing to a clearer understanding and approach. You will gain greater appreciation for the properties of glass and the nature of finished stained glass construction. This

course focuses on original, personal expression. Student independence is emphasized with regard to use of material and tools and a wide variety of glass. *Prerequisite: ART 215.*

**ART 221 Drawing II**  
**3 credits**

Explores expressive drawing techniques with an emphasis on formal composition, color media, and content or thematic development. *Prerequisite: ART 121 or permission of instructor.*

**ART 222 Drawing III**  
**3 credits**

Offers a continued study of expressive drawing techniques and development of individual style, with an emphasis on composition and technique variation. *Prerequisite: ART 221 or permission of instructor.*

**ART 223 Drawing IV**  
**3 credits**

Explores advanced drawing problems with an emphasis on conceptual development and portfolio and/or exhibition quality presentation. *Prerequisite: ART 222 or permission of instructor.*

**ART 224 Watercolor II**  
**3 credits**

Continues the study of watercolor techniques, emphasizing original compositions and experimentation with materials. Color theory is included. *Prerequisite: ART 124, or permission of instructor.*

**ART 225 Watercolor III**  
**3 credits**

Concentrates on the advanced study of subject development, form, color, and theme in watercolor. *Prerequisite: ART 224 or permission of instructor.*

**ART 226 Watercolor IV**  
**3 credits**

Concentrates on the advanced study of techniques, individual style of expression, and consistency of compositional problem-solving in watercolor. *Prerequisite: ART 225 or permission of instructor.*

**ART 228 Advanced Figure Drawing**  
**3 credits**

Provides continuing study of the various methods of drawing the human figure, with emphasis on the description of form and individual style. *Prerequisite: ART 128.*

**ART 229 Printmaking II****3 credits**

Introduces more advanced techniques and skills of printmaking as a fine art medium. Instruction includes an understanding of visual concepts as they relate to prints. The course may include introduction to relief, intaglio, lithography and screen printing techniques.

*Prerequisite: ART 129 or permission of instructor.*

**ART 230 Color Theory****3 credits**

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 231 Advanced 2D Design****3 credits**

Provides continued study of the principles and elements of two-dimensional design with an emphasis on visual communication for further application in fine art, commercial art, and/or applied arts.

*Prerequisite: ART 131.*

**ART 232 Advanced 3D Design****3 credits**

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.

*Prerequisite: ART 132.*

**ART 233 Jewelry and Metal Work II**  
**3 credits**

Emphasizes conceptual design development, using casting and specialized techniques.

*Prerequisite: ART 133, or permission of instructor.*

**ART 234 Jewelry and Metal Work III**  
**3 credits**

Focuses upon advanced work and emphasizes experimentation with materials and techniques, individual designs, and superior craftsmanship.

*Prerequisite: ART 233 or permission of instructor.*

**ART 235 Jewelry and Metal Work IV**  
**3 credits**

Provides continued study of the properties of metal and stone in creating decorative work. You will employ advanced design and techniques to explore original, personal expression. A variety of materials and approaches are used in discovering new and independently creative finished pieces.

*Prerequisite: ART 234 or permission of instructor.*

**ART 243 Figure Photography II**  
**3 credits**

Students continue to explore the social, artistic and photographic aspects of fine art figure studies in photography. The human figure is one of the most studied and practiced subjects in the field of creative visual expression. Students continue at their own pace 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 continue to develop technical skills used in figure and other areas of fine art photography. At the end of the course students will present a series of images to add to their portfolio. Choice of camera, either digital or film, is left up to the student.

*Prerequisite: ART 143 Figure Photography I.*

**ART 251 Painting II****3 credits**

Further explores techniques, materials, and concepts used in opaque painting processes in oil or acrylic painting, with emphasis on composition and content development.

*Prerequisite: ART 151 or permission of instructor.*

**ART 252 Painting III****3 credits**

Provides continued exploration of techniques, materials, and concepts used in opaque painting processes in oil or acrylic painting, with emphasis on composition and content development.

*Prerequisite: ART 251 or permission of instructor.*

**ART 253 Painting IV****3 credits**

Explores advanced techniques, materials, and concepts used in opaque painting processes, with emphasis on the development of themes and a cohesive body of work.

*Prerequisite: ART 252 or permission of instructor.*

**ART 254 Advanced Figure Painting**  
**3 credits**

Offers continued study of painting the human figure with advanced problem-solving in composition and experimentation with materials and techniques.

*Prerequisite: ART 154.*

**ART 261 Ceramics II****3 credits**

Intermediate wheel throwing and hand building skills are introduced. Students begin to learn how to mix glazes, fire kilns and the differences in a variety of atmospheric firings. Continued exposure to historical and contemporary ceramics.

*Prerequisite: ART 161.*

**ART 262 Ceramics III****3 credits**

Encourages students to develop an individual style of wheel thrown and hand built ceramic forms. Students continue to learn glaze calculation, a variety of firing skills and expand their knowledge of contemporary and historical ceramics.

*Prerequisite: ART 261.*

**ART 263 Ceramics IV****3 credits**

Students continue to develop their individual style of wheel thrown and hand built ceramic forms. Emphasis is on developing original ideas inspired by looking at historical and contemporary ceramics.

*Prerequisite: ART 262.*

**ART 265 Sculpture II****3 credits**

Develops an understanding and focus on manipulation of three-dimensional form, with greater concentration on individual creativity and style.

*Prerequisite: ART 165*

**ART 266 Sculpture III****3 credits**

Focuses on advanced individual sculpture projects, emphasizing experimentation with materials, accomplished technique and conceptual significance.

*Prerequisite: ART 265 or permission of instructor.*

**ART 275-277 Special Topics****1-6 credits**

Covers specific topics in art. These courses are offered as needed for credit appropriate to the topic. Each offering includes a description of the topic(s).

*Prerequisite: Permission of instructor.*

### **ART 280 Internship**

#### **1-6 credits**

Provides the opportunity for you 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 your occupational experience plan.

*Prerequisite: Permission of instructor.*

## **ASE – Automotive Service Technology Courses**

[www.rccc.edu/autotech](http://www.rccc.edu/autotech)

### **ASE 101 Auto Shop Orientation**

#### **2 credits**

Provides you 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 102 Introduction to the Automotive Shop**

#### **2 credits**

Prepares the incoming automotive student to work in the shop safely and gain familiarity with the shop and common equipment.

### **ASE 110 Brakes I**

#### **3 credits**

Covers basic operation of automotive braking systems. The course includes operation, diagnosis, and basic repair of disc brakes, drum brakes, and basic hydraulic systems.

### **ASE 120 Basic Auto Electricity**

#### **2 credits**

Introduces automotive electricity and includes basic electrical theory, circuit designs, and wiring methods. Focuses on multi-meter usage and wiring diagrams.

### **ASE 123 Battery Starting and Charging**

#### **2 credits**

Covers the operation, testing, and servicing of automotive battery, starting, and charging systems. Includes voltage and amperage testing of starter and generator, load testing and maintenance of a battery, and starter and generator overhaul.

### **ASE 130 General Engine Diagnosis**

#### **2 credits**

Focuses on lecture and related laboratory experiences in the diagnosis and necessary corrective actions of automotive engine performance factors.

### **ASE 132 Ignition System Diagnosis and Repair**

#### **2 credits**

Focuses on theory and related laboratory experiences in the diagnosis, service, adjustments and repair of various automotive ignition systems.

*Prerequisite: ASE 130.*

### **ASE 134 Automotive Emissions**

#### **2 credits**

Focuses on lecture and laboratory experiences in the diagnosis and repair of automotive emission control systems.

*Prerequisite: ASE 132.*

### **ASE 140 Suspension and Steering I**

#### **3 credits**

Focuses on theory and related experiences in the diagnosis and service of suspensions and steering systems and their components.

### **ASE 150 Automotive U-joint and Axle Shaft Service**

#### **2 credits**

Studies the operating principles and repair procedures relating to axle-shafts, drive shafts, and universal joints.

### **ASE 151 Automotive Manual Transmission/Transaxles and Clutches**

#### **2 credits**

Focuses on theory and related laboratory experiences in the diagnosis and repair of automotive manual transmissions, transaxles, clutches, and related components.

### **ASE 152 Differentials and 4WD/AWD Service**

#### **2 credits**

Focuses on lecture and related laboratory experiences in the diagnosis and repair of automotive differentials, transfer cases, four wheel and all wheel drive units.

### **ASE 160 Automotive Engine Removal and Installation**

#### **1 credit**

Focuses on theory and laboratory experiences in the removal and installation procedures of the automotive engine as they relate to front-wheel and rear-wheel drive vehicles.

### **ASE 161 Engine, Disassembly Diagnosis and Assembly**

#### **5 credits**

Focuses on theory 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 170 Auto Parts Lab I**

#### **2 credits**

Continues to build upon the principles that are expected to be understood by students.

### **ASE 171 Auto Parts Lab II**

#### **2 Credits**

Continues to build upon the principles that are expected to be understood by students.

### **ASE 201 Automotive Parts Management I**

#### **1 credit**

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 203 Automotive Parts Management II**

#### **2 credits**

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 210 Brakes II**

#### **3 credits**

Covers the operation and theory of the modern automotive braking systems. This course includes operation, diagnosis, service, and repair of anti-lock braking systems, power assist units, and machining operations of today's automobile.

*Prerequisite: ASE 110.*

### **ASE 221 Automotive Body Electrical**

#### **4 credits**

Provides a comprehensive study of the theory, operation, diagnosis, and repair of vehicle accessories.

*Prerequisite: ASE 120.*

**ASE 231 Automotive Computers**  
**2 credits**

Focuses on lecture and laboratory experiences in the inspection and testing of typical computerized engine control systems.  
*Prerequisites: ASE 120, ASE 134, ASE 220.*

**ASE 233 Fuel Injection and Exhaust Systems**  
**4 credits**

Focuses on lecture and related laboratory experiences in the diagnosis and repair of electronic fuel injection systems and modern exhaust systems.  
*Prerequisites: ASE 120, ASE 134, ASE 231.*

**ASE 235 Driveability Diagnosis**  
**1 credit**

Emphasizes lecture and related laboratory experience in diagnostic techniques and the use of diagnostic scan tools, oscilloscopes, lab scopes, multi-meters, and gas analyzers. You will diagnose live vehicle driveability problems.  
*Prerequisite: ASE 233.*

**ASE 240 Suspension and Steering II**  
**3 credits**

Emphasizes lecture and related experiences in the diagnosis and service of electronic suspensions and steering systems and their components.  
*Prerequisite: ASE 140.*

**ASE 250 Automatic Transmission/Transaxle Service**  
**1 credit**

Focuses on practical methods of maintaining, servicing, and performing minor in car adjustments on an automatic transmission and transaxle.

**ASE 251 Automatic Transmission/Transaxle Diagnosis and Assemblies**  
**5 credits**

Covers diagnosis, principles of hydraulics, principles of electronic components, power flow, theory of operation, removal of transmission/transaxle, tear down, replacement of components, measurement and subsequent adjustment of components, and replacement of transmission/ transaxle.  
*Prerequisite: ASE 250.*

**ASE 265 Automotive Heating and Air Conditioning**  
**5 credits**

Emphasizes lecture and related laboratory experiences in the diagnosis and service of vehicle heating and air conditioning systems and their components.

**ASE 282 Internship: General (Summer)**

**0.5-6 credits**

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.  
*Prerequisite: Permission of instructor.*

**ASL – American Sign Language Courses**

[www.rccc.edu/languages](http://www.rccc.edu/languages)

**ASL 121 American Sign Language I**  
**5 credits**

Exposes you to American Sign Language. Readiness activities are conducted focusing on visual/receptive skills and basic communication. The course uses the direct experience method. You must complete this course with a **B** or higher or pass the ASL proficiency test with a score of at least 80 percent or higher prior to registering for ASL 122, if planning to enroll in the Interpreter Preparation Program.

**ASL 122 American Sign Language II**  
**5 credits**

Develops a basic syntactic knowledge of American Sign Language (ASL), basic vocabulary, and basic conversational skills. It incorporates vital aspects of deaf culture and community. The direct experience method is used to enhance the learning process. You must complete this course with a **B** or higher or pass the ASL 121 proficiency test at 80% or higher prior to acceptance into the Interpreting and Transliterating Preparation program.  
*Prerequisite: Successful completion of ASL 121 or passing the ASL 121 proficiency exam.*  
*Corequisite: Permission of instructor.*

**AST – Astronomy Courses**

**AST 101 Astronomy I: GT-SC1**  
**4 credits**

Focuses on the night sky, the history of astronomy, the tools of the astronomer, and the contents of the solar system, including the planets, moons, and small bodies.  
*Prerequisite: ENG 090 and MAT 090 (grade C or higher) or equivalent assessment scores.*

**AST 102 Astronomy II: GT-SC1**  
**4 credits**

Emphasizes the structure and life cycle of the stars, the sun, galaxies, and the universe as a whole, including cosmology and relativity.  
*Prerequisite: ENG 090 and MAT 090 (grade C or higher) or equivalent assessment scores.*

**AST 108 Colorado Night Sky I**  
**1 credit**

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 109 Colorado Night Sky II**  
**1 credit**

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 110 Colorado Night Sky III**  
**1 credit**

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 150 Astrobiology**  
**3 credits**

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.

### **AST 155 Astronomy of Ancient Cultures**

**3 credits**

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.

### **AST 160 Cosmology**

**3 credits**

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.

## **AUT - Auto Motorsports Technology Courses**

### **AUT 109 Performance Suspension and Chassis**

**2 credits**

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 110 High Performance Suspension and Chassis Setup**

**4 credits**

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 116 High Performance Brake Systems**

**2 credits**

Introduces high performance brake systems as applied to racing vehicles.

## **BIO – Biology Courses**

[www.rccc.edu/biology](http://www.rccc.edu/biology)

### **BIO 105 Science of Biology: GT-SC1**

**4 credits**

Examines the basis of biology in the modern world and surveys the current knowledge and conceptual framework of the discipline. BIO 105 explores biology as a science - a process of gaining new knowledge - and the impact of biological science on society. This course includes laboratory experiences and is designed for non-science majors.

*Prerequisite: ENG 090 and MAT 090 (grade C or higher) or equivalent assessment scores.*

### **BIO 106 Basic Anatomy and Physiology**

**4 credits**

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 Medical Office Technology Program.

### **BIO 111 General College Biology I: GT-SC1**

**5 credits**

Examines the fundamental molecular, cellular, and genetic principles characterizing plants and animals. This course includes cell structure and function and the metabolic processes of cellular respiration, photosynthesis, cell reproduction, and basic concepts of heredity. This course includes laboratory experience.

*Prerequisite: ENG 090 and MAT 090 (grade C or higher) or equivalent assessment scores.*

### **BIO 112 General College Biology II: GT-SC1**

**5 credits**

A continuation of General College Biology I. This course includes ecology, evolution, classification, structure, and function in plants and animals. This course includes laboratory experience.

*Prerequisites: MAT 090 or equivalent, BIO 111.*

### **BIO 116 Introduction to Human Disease: GT-SC2**

**3 credits**

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.

*Prerequisites: MAT 090 or equivalent, BIO 111.*

### **BIO 201 Human Anatomy and Physiology I: GT-SC1**

**4 credits**

Focuses on an integrated study of the human body, including the histology, anatomy, and physiology of each system. This course examines molecular, cellular, and tissue levels of organization plus integumentary, skeletal, articular, muscular, nervous, and endocrine systems.

*Prerequisites: MAT 090 or equivalent, BIO 111.*

### **BIO 202 Human Anatomy and Physiology II: GT-SC1**

**4 credits**

A continuation of BIO 201. BIO 202 focuses on the integrated study of the human body and the histology, anatomy, and physiology of the following systems and topics: cardiovascular, hematology, lymphatic and immune, urinary, fluid and electrolyte control, digestive, nutrition, respiratory, reproductive, and development.

*Prerequisites: MAT 090 or equivalent, BIO 201.*

### **BIO 204 Microbiology: GT-SC1**

**4 credits**

Designed for health science majors. This course 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.

*Prerequisites: MAT 090 or equivalent, BIO 111.*

### **BIO 208 General College Microbiology: GT-SC1**

**5 credits**

Designed for biology and health science majors. Surveys microorganisms with an emphasis on their structure, development, physiology, classification, and identification. Includes microbial diversity, functional anatomy, biochemistry, genetics, ecology, and disease. Mandatory hands-on laboratory experience covers sterile technique,

microscopy, culture procedures, and biochemical and genetic analysis.

### **BIO 220 General Zoology: GT-SC1** **5 credits**

Designed for biology majors. This course 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 emphasizes the characteristics, zoological contributions, and classification of animal phyla and major classes. This course requires hands-on laboratory and field experience.

*Prerequisites: MAT 090 or equivalent, BIO 111.*

### **BIO 221 Botany: GT-SC1** **5 credits**

Designed for biology majors. This course is a study of nonvascular and vascular plants. It emphasizes photosynthetic pathways, form and function, reproduction, physiology, genetics, diversity, evolution, and ecology. This course requires mandatory hands-on laboratory and field experience.

*Prerequisites: MAT 090 or equivalent, BIO 111.*

### **BIO 228 Field Biology III** **4 credits**

Involves in-depth field study of natural environments within and outside of the United States. This course varies from seven to twenty-one days in length, focuses on the identification of organisms, as well as an examination of ecological concepts and principles. This course requires hands-on laboratory and field experience, including extensive hiking.

## **BTE– Business Technology Courses**

[www.rrcc.edu/cis](http://www.rrcc.edu/cis)

### **BTE 100 Computer Keyboarding** **1 credit**

Designed for students who have minimal or no keyboarding skills. This course introduces the touch method of keyboarding, as well as the basic operation and functions of the equipment. It emphasizes learning the alphanumeric keyboard, proper technique, and speed control.

### **BTE 108 Ten-Key by Touch** **1 credit**

Introduces touch control of the PC ten-key pad. This class emphasizes the development of speed and accuracy using proper techniques.

### **BTE 125 Records Management** **3 credits**

Offers instruction on how records are created, stored, and retrieved. It covers the basic filing rules—classifying, indexing, coding, storing, and retrieving as applied to the basic methods—alphabetic, chronological, subject, numeric, and geographic. Emphasizes "hands-on" records management through the use of simulations, which include manual and/or computer software.

*Prerequisite: Acceptable keyboarding proficiency.*

### **BTE 166 Business Editing Skills** **3 credits**

Provides instruction in proofreading techniques and reviews spelling, punctuation, grammar and formatting of various business documents and worksheets.

## **BUS – Business Courses**

[www.rrcc.edu/business](http://www.rrcc.edu/business)

### **BUS 102 Entrepreneurial Operations** **3 credits**

Covers the major aspects of small business management to enable the entrepreneur to successfully begin his own business. This course provides the basic concepts of marketing, principles of management, and finance needed to manage a small business. Further, students develop a business plan and explore methods of obtaining the financing required to launch the business.

### **BUS 115 Introduction to Business** **3 credits**

Focuses on the operation of the American business system. The course covers fundamentals of the economy, careers and opportunities, marketing, management, production, governmental regulations, tools of business, and social responsibilities.

### **BUS 116 Personal Finance** **3 credits**

Surveys the basic personal financial needs of most individuals. The course 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 118 Business Survival Skills** **3 credits**

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 120 Introduction to E-Commerce** **3 credits**

Provides an introduction to electronic commerce—the business trend of the future. It covers definition of e-commerce, technology and software requirements, security issues, electronic payment and marketing strategies. It focuses on what to expect when creating a dot com as well as the business-to-business use of e-commerce.

*Prerequisite: BUS 115 suggested.*

### **BUS 192 Service Learning** **1-3 credits**

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.

*Prerequisite: Permission of instructor.*

### **BUS 215 Global E-Commerce** **3 credits**

The World Wide Web levels the business playing field and eliminates geographic barriers. The Internet provides global business potential for even the smallest business. BUS 215 teaches how to approach and maximize this business opportunity. This course includes global e-marketing and promotion, import and export management, legal issues, and language and cultural issues.

*Prerequisite: BUS 115 suggested.*

### **BUS 216 Legal Environment of Business**

#### **3 credits**

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. You will develop an understanding of the role of law in social, political, and, economic change.

*Prerequisite: A grade of C or higher in REA 090 and ENG 090 or appropriate SAT, ACT or Accuplacer score that indicates college reading and writing readiness, or permission of instructor. BUS 115 suggested.*

### **BUS 217 Business Communication and Report Writing**

#### **3 credits**

Emphasizes effective business writing, and covers letters, memoranda, reports, application letters, and resumes. The course includes the fundamentals of business communication and an introduction to international communication.

*Prerequisite: ENG 090 or appropriate SAT, ACT or Accuplacer score that indicates college writing readiness, or permission of instructor.*

### **BUS 226 Business Statistics**

#### **3 credits**

Focuses on statistical study, descriptive statistics, probability, the binomial distribution, index numbers, time series, decision theory, confidence intervals, linear regression, and correlation. It is intended for business majors.

*Prerequisite: MAT 099 (Intermediate Algebra) or equivalent.*

### **BUS 275 Special Topics**

#### **1-3 credits**

Provides you 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 281 Internship**

#### **1-3 credits**

Provides continued instruction and the opportunity for you to supplement coursework with practical work experience related to their educational program. You will 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 285 Independent Study**

#### **1-3 credits**

Meets the individual needs of students. You will engage in intensive study or research under the direction of a qualified instructor.

*Prerequisite: Permission of instructor.*

## **CAD – Computer-Aided Drafting Courses**

[www.rccc.edu/egt](http://www.rccc.edu/egt)

### **CAD 101 Computer Aided Drafting I**

#### **3 credits**

Focuses on basic computer-aided drafting skills using the latest release of CAD software. The course includes file management, Cartesian coordinate system, drawing set-ups, drawing aids, layer usage, drawing geometric shapes, editing objects, array, text applications, basic dimensioning, and Help access.

### **CAD 102 Computer Aided Drafting II**

#### **3 credits**

Focuses on advanced computer aided drafting skills using the latest release of CAD software. Includes blocks and wblocks, polylines, multilines, polyline editing, advanced editing, editing with grips, hatching, isometric drawings, dimensions and dimension variables, paper space and viewports, templates, external references, and printing/plotting.

*Prerequisite: CAD 101.*

### **CAD 224 Revit**

#### **3 credits**

Provides you with the software application training in AutoDesk Revit necessary to produce 3D architectural models and 2D drawings using AIA standards.

*Prerequisite: CAD 102 or permission of instructor.*

### **CAD 227 Revit Advanced**

#### **3 credits**

Focuses on the advanced applications of the Revit software. Includes Family Editing, Topographic Site Plans, Worksharing, Phases, Advanced Scheduling, Custom Annotation, and Presentation Techniques.

*Prerequisite: CAD 224*

### **CAD 233 Civil 3D (Software)**

#### **3 credits**

Provides you with the basics of advanced software application necessary to produce 3D Civil models and 2D drawings using the latest release of the Civil 3D software. This course will cover topics including components and program interface, linework, geometry, and 2D to 3D civil CAD applications.

*Prerequisite: CAD 101 or equivalent.*

### **CAD 256 SolidWorks Basics**

#### **6 credits**

Examines the basics of SolidWorks software to produce parametric models.

### **CAD 257 SolidWorks Intermediate**

#### **6 credits**

Teaches you to apply intermediate SolidWorks applications to produce parametric models of parts and assemblies.

*Prerequisite: CAD 256.*

### **CAD 258 SolidWorks Advanced**

#### **6 credits**

Demonstrates the advanced applications of SolidWorks software.

*Prerequisite CAD 257.*

### **CAD 280 Internship**

#### **1-6 credits**

Provides you with the opportunity to supplement course work with practical work experience related to your educational program. You will 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 285 Independent Study**

#### **1-6 credits**

Meets individual needs. You will engage in intensive study or research under the direction of a qualified instructor.

*Prerequisite: CAD 289 or permission of instructor.*

### **CAD 289 Capstone**

#### **1-6 credits**

A demonstrated culmination of learning within a given program of study.

*Prerequisite: EGT 231 related to discipline of study.*

## CAR – Carpentry Courses

[www.rrcc.edu/carpentry](http://www.rrcc.edu/carpentry)

### **CAR 102 Hand and Power Tools 1 credit**

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.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 103 Carpentry Basics 4 credits**

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.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 115 Form and Foundation Systems 1 credit**

Covers materials and methods for concrete forms and foundations. Includes various reinforcement methods such as re-bar and welded-wire fabric.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 122 Wall Framing 1 credit**

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.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 123 Roof Framing 1 credit**

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.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 125 Roofing Materials & Methods 1 credit**

Covers application techniques and estimation of asphalt and wood roofing products and accessories including gutters and flashing.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 130 Windows and Exterior Doors 1 credit**

Describes the various types of windows, skylights, and exterior doors and provides instructions for installing them. Includes instructions for installing weather-stripping and locksets.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 134 Exterior Finishes and Trim 4 credits**

Utilizes hands-on techniques to illustrate exterior moisture, trim, and exterior doors 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.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 135 Thermal/Moisture Methods/Materials 1 credit**

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.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 136 Remodeling, Renovation, and Additions 4 credits**

Covers conversions of attic and basement spaces to usable living spaces and additions for renovation to existing residential structures, including kitchens and baths. The course examines materials scheduling, estimation, and construction methods.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 146 Interior Finish/Drywall Construction 1 credit**

Covers the use of gypsum wall board and the techniques of concealing joints and fasteners, construction methods, estimation and a variety of texture finishes.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 150 Interior Trim - General 1 credit**

Covers material choices and installation techniques of various interior trim, including interior doors, baseboard, and casement. Includes an overview of additional interior trim choices.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 153 Interior Trim: Cabinet/Countertops 1 credit**

Covers the selection/installation/terminology of factory built cabinets and countertops. Includes various types and design and examines estimation of cost.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 155 Interior Trim and Built-ins 4 credits**

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.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 156 Shop Tools: Stationary, Hand, and Portable 4 credits**

Covers the safe use and care of stationary, hand, and portable tools. This course is designed to help you develop skills through tool utilization to pass competency and safety tests for each tool. You will study standard practices for bench carpentry through the actual construction of a project.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 160 Floor Finishes 1 credit**

Covers installation and finishing of hardwood floors, laminate/engineered floors, and tile. Includes discussion on advantages and disadvantages of various choices available.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 165 Shop Carpentry 4 credits**

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 mill-workers.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **CAR 166 Stair Design & Construction**

#### **4 credits**

Focuses on both site and off-site stair lay-out and construction. You will have a chance to explore various techniques for building the stairs and millwork involved in the construction and installation of handrail assemblies.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications, and CAR 156 or permission of Instructor.*

### **CAR 175 Special Topics: EPA Certified Lead Renovator/Dust Sampling**

#### **0.5 credits**

Trains the workforce in proper handling and notification of local personal of lead based paint contamination and renovation. EPA is particularly concerned about dust lead hazards generated by renovations because children, especially younger children, are at risk for high exposures of lead-based paint dust via hand-to-mouth exposure.

### **CAR 253 Advanced Interior Trim - Cabinet/Countertops**

#### **4 credits**

Emphasizes an in-depth/hands-on look at all components of cabinet-making, installation and countertops. It includes construction of traditional (face-frame) and European cabinets. It covers hardware applications and installation, and countertop construction, ranging from laminates to solid surface.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications, and CAR 156, or permission of instructor.*

### **CAR 275 Special Topics**

#### **1-6 credits**

Provides you with a vehicle to pursue in depth exploration of special topics of interest

*Corequisites: OSH 127 and HWE 113 or proof of current certifications, and CAR 156 or permission of Instructor.*

### **CAR 280 Technical Project**

#### **4-12 credits**

Enables you to participate in individual study on a special project which is related to the carpentry program. This technical project consists of a written and approved proposal and scheduled progress reports. *Corequisites: OSH 127 and HWE 113 or proof of current certifications, permission of instructor.*

### **CAR 282 Internship**

#### **0.5-12 credits**

Provides students with prior course work an opportunity to apply their course studies.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications, permission of instructor.*

### **CAR 285 Independent Study**

#### **0.5-12 credits**

Provides you the opportunity to work with the instructor on a specific area with specific objectives and a predetermined project completion date.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications, permission of instructor.*

## **CHE – Chemistry Courses**

[www.rccc.edu/chemistry](http://www.rccc.edu/chemistry)

### **CHE 101 Introduction to Chemistry I with Lab: GT-SC1**

#### **5 credits**

Includes the study of measurements, atomic theory, chemical bonding, nomenclature, stoichiometry, solutions, acid and base, gas laws, and condensed states. Laboratory experiments demonstrate the above concepts qualitatively and quantitatively. Designed for non-science majors, students in occupational and health programs, or students with no chemistry background.

*Prerequisite: ENG 090 and MAT 090*

### **CHE 102 Introduction to Chemistry II with Lab: GT-SC1**

#### **5 credits**

Focuses on introductory organic and biochemistry (sequel to Introduction to Chemistry I). This course includes the study of hybridization of atomic orbitals for carbon, nomenclature of both organic and biochemical compounds, physical and chemical properties of various functional groups of organic chemistry, and physical and chemical properties of biochemical compounds along with their biochemical pathways. Laboratory experiments are included.

### **CHE 111 General College Chemistry I with Lab: SC1**

#### **5 credits**

Focuses on basic chemistry and measurement, matter, chemical formulas, reactions and equations, stoichiometry and thermochemistry. This course covers the development of atomic theory culminating in the use of quantum numbers to determine electron configurations of atoms, and the relationship of electron configuration to chemical bond theory and molecular orbital theory. The course includes gases, liquids, and solids and problem-solving skills are emphasized through laboratory experiments.

*Prerequisite: One year of High School Chemistry or CHE 101 and MAT 121.*

### **CHE 112 General College Chemistry II with Lab: SC1**

#### **5 credits**

Presents concepts in the areas of solution properties, chemical kinetics, chemical equilibrium, acid-base and ionic equilibrium, thermodynamics, electrochemistry, nuclear chemistry, and organic chemistry. This course emphasizes problem solving skills and descriptive contents for these topics. Laboratory experiments demonstrate qualitative and quantitative analytical techniques.

*Prerequisite: CHE 111.*

### **CHE 211 Organic Chemistry I with Lab**

#### **5 credits**

Focuses on compounds associated with the element carbon. This course includes structure and reactions of aliphatic hydrocarbons, selected functional groups and some unsaturated hydrocarbons. This course covers nomenclature of organic compounds, stereochemistry, reaction mechanisms and an introduction to chemical synthesis.

*Prerequisite: CHE 112.*

### **CHE 212 Organic Chemistry II with Lab**

#### **5 credits**

Continues the investigation into the chemistry of carbon-based compounds, their reactions and synthesis. This course includes the structure, reactivities, and synthesis of organic functional groups not covered in the first semester, as well as some analytical techniques. CHE 212 explores functional groups including aromatics hydrocarbons, aldehydes, ketones, amines, amides, esters, and carboxylic acids. An introduction to biochemical topics may be included if time permits

*Prerequisite: CHE 211.*

## CIS – Computer Information Systems Courses

[www.rrcc.edu/cis](http://www.rrcc.edu/cis)

### **CIS 103 Learning Windows**

#### **1 credit**

Provides foundational skills in Windows operating system for personal use. This course is designed for the more mature learner and/or those students who wish to advance at a slower pace. Credit does not apply toward a certificate or degree.

### **CIS 105 Learning E-mail and Internet**

#### **1 credit**

Provides foundational skills in email and Internet applications for personal use. This course is designed for the more mature learner and/or the student who wishes to advance at a slower pace. Credit does not apply toward a certificate or degree.

### **CIS 106 Learning Word**

#### **1 credit**

Provides foundational skills in Microsoft Word for personal use. This course is designed for the more mature learner and/or the student who wishes to advance at a slower pace. Credit does not apply toward a certificate or degree.

### **CIS 108 Learning Excel**

#### **1 credit**

Provides foundational skills in Microsoft Excel for employment/personal development. This course is designed for the more mature learner and/or the student who wishes to advance at a slower pace. Credit does not apply toward a certificate or degree.

### **CIS 118 Introduction to PC Applications: MS Office**

#### **3 credits**

Introduces basic computer terminology, file management, and PC system components. It provides an overview of the operating system and office application software including word processing, spreadsheets, and databases. It includes the use of a Web browser to access the Internet.

### **CIS 128 Windows Complete**

#### **3 credits**

Introduces the functions and capabilities of Microsoft Windows. Includes configuring and modifying the operating system environment.

### **CIS 130 Introduction to the Internet**

#### **1 credit**

Enhances the student's knowledge of the Internet and its resources. Individuals learn terminology in dealing with the Internet. It includes privacy and copyright issues with information retrieved from the Internet. Students experience the use of e-commerce, multimedia and email. It explores searching the Internet and credibility of information obtained with searches.

*Prerequisite: A working knowledge of Windows.*

### **CIS 131 Word Processing I: MS Word**

#### **1 credit**

Gives the student an introductory working knowledge of word processing. Students will create, edit, format, save, and print documents as well as use spell check, grammar check, and thesaurus features. Students will format text, paragraphs, and pages, change margins and use the find and replace feature as well as create envelopes and labels.

*Prerequisite: CIS 128 or a working knowledge of Windows.*

### **CIS 132 Word Processing II: MS Word**

#### **1 credit**

Increases the student's working knowledge of word processing. In this module, students will learn to use the merge function, create multiple page reports using headers, footers, footnotes, endnotes, and page numbers as well as create and format documents using columns and tables.

*Prerequisite: CIS 131.*

### **CIS 133 Word Processing III: MS Word**

#### **1 credit**

Increases the student's working knowledge of word processing. In this module, students will learn to use borders, drawing, word art, and graphics. Students will create macros, charts, outlines, styles, fill-in forms, and will also sort and select records.

*Prerequisite: CIS 132.*

### **CIS 135 Complete PC Word Processing: MS Word**

#### **3 credits**

Utilizes state-of-the-art software to explore 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 the spelling checkers and thesaurus, hyphenation, tables, mail merge, document design, and graphics.

This course is the equivalent of CIS 131, 132, and 133 taken separately.

*Prerequisite: CIS 118 or CIS 128 or a working knowledge of Windows.*

### **CIS 140 Microsoft Outlook**

#### **1 credit**

Introduces the functions used in Microsoft Outlook including email messages, calendaring, contacts, tasks, journals, and notes.

### **CIS 141 PC Databases I: MS Access**

#### **1 credit**

Introduces the functions of a database. It includes skills such as file creation, searches, sorts, simple editing and indexing.

*Prerequisite: CIS 128 or a working knowledge of Windows.*

### **CIS 142 PC Databases II: MS Access**

#### **1 credit**

Continues to build on database application skills learned in CIS 141. Students will practice through hands on exercise skills such as report writing and the creation of custom forms.

*Prerequisite: CIS 141.*

### **CIS 143 PC Databases III: MS Access**

#### **1 credit**

Continues to build on database application skills learned in CIS 142. Course topics include creating a user interface, database, problem solving, and programming using macros to create automated user interfaces. Visual Basic for Applications is not covered.

*Prerequisite: CIS 142.*

### **CIS 145 Complete PC Database: MS Access**

#### **3 credits**

Explores a complete array of database skills. It includes table, query, form, and report creation and modification. Other topics include application integration and automation of database tasks within the database. This course is the equivalent of CIS 141, 142, and 143 taken separately.

*Prerequisite: CIS 118 or CIS 128 or a working knowledge of Windows.*

### **CIS 151 PC Spreadsheets I: MS Excel**

#### **1 credit**

Introduces the student to concepts and applications of an electronic spreadsheet. Topics include creating a worksheet, developing a professional looking worksheet and creating charts.

*Prerequisite: CIS 118 or CIS 128 or a working knowledge of Windows.*

**CIS 152 PC Spreadsheets II: MS Excel**

**1 credit**

Continues to build on spreadsheet skills learned in CIS 151. Students will practice through hands-on exercises, skills such as design and report writing. Database features of filters, sorts and special calculations are also covered. Other topics include working with lists, integrating with other Windows programs and working with multiple worksheets and workbooks.

*Prerequisite: CIS 151.*

**CIS 153 Advanced Spreadsheets: MS Excel**

**1 credit**

Continues to build on spreadsheet skills learned in CIS 152. This course introduces the student to advanced concepts and applications of an electronic spreadsheet, the development and execution of macros to automate the spreadsheet, development of menu driven macros, "what if" tables, advanced functions/commands for using a statistical database, and formatting are covered.

*Prerequisite: CIS 152.*

**CIS 155 PC Spreadsheet Concepts: MS Excel**

**3 credits**

Exposes the student to a wide range of uses of the electronic spreadsheet with special emphasis on using it as a business tool. It includes fundamentals and terms, creating and saving workbooks, entering and using formulas, formatting, printing, working with multiple-page workbooks, creating charts, entering and using functions, managing lists, and creating simple macros. This course is the equivalent of CIS 151, 152, and 153 taken separately.

*Prerequisite: CIS 118 or CIS 128 or a working knowledge of Windows.*

**CIS 165 Complete Presentation Graphics: MS PowerPoint**

**3 credits**

Focuses on the development of presentations using graphs, charts, illustrations and diagrams. Emphasis is on effective communication through computerized presentations. Covers features of the software and effective presentation techniques. Automated presentation with sound, video, and animation will also be covered.

*Prerequisite: CIS 118 or CIS 128 or a working knowledge of Windows.*

**CIS 220 Fundamentals of UNIX**

**3 credits**

Covers the structure and fundamentals of the UNIX operating system. Topics covered will include the files system and file processing, various utility programs, and shell, multi-user operation, text processing, and communications.

**CIS 222 UNIX System Administration**

**3 credits**

Introduces the UNIX/Linux operating system and covers the skills required to install, configure and operate a UNIX/Linux system.

*Prerequisites: CIS 220, equivalent experience, or permission of instructor.*

**CIS 240 Database Design and Development**

**3 credits**

Introduces the basic concepts of relational databases, data storage, and retrieval. It covers database design, data modeling, transaction processing, and introduces the Structured Query Language for databases.

*Co-Requisite: CIS 243.*

**CIS 243 Introduction to Structured Query Language (SQL)**

**3 credits**

Introduces students to Structured Query Language (SQL). Students learn to create database structures, store, retrieve and manipulate data in a relational database. Students will create tables and views, use indexes, secure data, develop stored procedures and triggers.

*Prerequisite: CIS 240 or equivalent experience and/or permission of instructor.*

**CIS 252 Implement and Maintain SQL Server Database**

**3 credits**

Provides you with the skills necessary to install and configure SQL Server, implement database mirroring, manage database snapshots, work with XML and flat files, manage replication, back up and restore a database, monitor and troubleshoot, and create and implement database objects.

*Prerequisite: CIS 243, equivalent experience, or permission of instructor.*

**CIS 253 Programming with a MS SQL Server Database**

**3 credits**

Provides you with the basics of programming custom database applications with Microsoft SQL Server. It includes integration with the Microsoft .NET Framework, SQL Server Management Studio, SQL Service Broker,

Notification Services, Integration Services, Reporting Services, OLAP, and Data Mining.

*Prerequisite: CIS 252, equivalent experience, or permission of instructor.*

**CIS 268 Systems Analysis and Design I**

**3 credits**

**Spring Only except Online**

Introduces you to the materials, techniques, procedures and human interrelations involved in developing computer information systems. Topics include the systems approach, fact gathering techniques, forms design, input/output, file design, file organization, various charting techniques, system audits and controls, project management, implementation and evaluation.

*Prerequisite: This course should be taken during the last semester of your certificate/degree program.*

**CIS 280 Internship**

**3-12 credits**

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 289 Capstone**

**3 credits**

**Spring Only**

Allows you to complete computerized projects demonstrating their software and programming skills. Projects will be provided by industry and vary widely as to the time and skill required to successfully complete. Each student's specific outcomes will depend on the skills that they bring to the course, the type of project that they participate in, and the role they play on the project team.

*Prerequisite: Last semester of your certificate/degree program.*

**CMD – Communication Disorders Courses**

[www.rrcc.edu/speech](http://www.rrcc.edu/speech)

**CMD 160 Introduction to Human Communication Disorders**

**3 credits**

Surveys identifying characteristics, causes, diagnosis and treatment of hearing disorders and speech-language problems, including stuttering, voice disorders, articulation/phonological disorders, child language disorders, and neurogenic disorders.

**CMD 260 Introduction to Phonetics**  
**2 credits**

Introduces characteristics of American English speech sounds and the International Phonetic Alphabet symbols used to represent them. Normal phonological development is also covered.

**CMD 265 Physiological and Biological Acoustics**  
**2 credits**

Introduces the physics of sound as it relates to speech and hearing including the acoustic and physiologic information underlying the chain of events between speakers and listeners. This course includes linguistic organization, the physics of sound, speech production, sound measurement, acoustic characteristics of speech, and speech perception.

*Prerequisite: College-level reading and math skills.*

**CMD 266 Normal Language Development**  
**3 credits**

Discusses the study of normal speech and language development and its relationship to other aspects of child development and childhood disabilities.

**CMD 267 Anatomy and Physiology of the Speech and Hearing Mechanism**  
**3 credits**

Designed to introduce you to the systems, anatomical and functional, that enable us to speak and hear. This includes the respiration, phonation, resonance, articulation, and hearing systems. Within each functional system, the nervous, muscular (including ligament and cartilage) and skeletal involvement are discussed.

*Prerequisite: CMD 160.*

**CNG – Computer Networking Courses**

[www.rrcc.edu/cis](http://www.rrcc.edu/cis)

**CNG 101 Intro to Networking**  
**3 credits**

Focuses on underlying concepts of data communications, telecommunications and networking. It emphasizes the terminology and technologies in current networking environments and provides a general overview of the field of networking as a basis for continued study in the field.

**CNG 121 Computer Technician I: A+**  
**4 credits**

Introduces personal computer hardware to gain the skills and knowledge for a successful entry-level computer service technician. This course provides extensive hands-on work with computer systems. It includes PC setup and configuration, floppy and hard drive installation and basic maintenance and troubleshooting. Successful completion prepares you for the core hardware service technician portion of the CompTIA A+ Certification Exam.

**CNG 122 Computer Technician II: A+**  
**4 credits**

Focuses on operating systems as well as installation of modems, tape backups, CD-ROM drives, and SCSI subsystems. This course covers operating systems, Windows 9x, Windows NT and Windows 2000 installation, configuration and upgrading. It includes laser printers and backup power systems. This course prepares you for the CompTIA A+ OS Technologies Exam.

*Prerequisite: CNG 121.*

**CNG 124 Networking I: Network+ 3 credits**

Provides you with the knowledge necessary to understand, identify and perform necessary tasks involved in supporting a network. This course 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 you for the Networking II: Network + course.

**CNG 125 Networking II: Network+ 3 credits**

Continues to provide you with the knowledge necessary to implement and support a network. This course focuses on the vendor-independent networking skills and concepts that affect all aspects of networking. The Networking I and II: Network + courses prepare you for the Network + certification.

*Prerequisite: CNG 124.*

**CNG 131 Principles of Information Assurance**  
**3 credits**

Provides students with the 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 will learn to

inspect and protect information assets, detect and react to threats to information assets, and examine pre- and post-incident procedures, technical and managerial responses. Students will learn about information security planning and staffing function

*Co-Requisite: CIS 132.*

**CNG 132 Network Security Fundamentals**  
**3 credits**

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: CIS 220 and CNG 124, equivalent experience, or permission of instructor.*

*Co-Requisite: CIS 131.*

**CNG 136 Guide to Disaster Recovery**  
**3 credits**

Presents methods to identify vulnerabilities and take appropriate countermeasures to prevent and mitigate failure risks for an organization. It will take an enterprise-wide approach to developing a disaster recovery plan.

*Prerequisites: CNG 131 and CNG 132, equivalent experience, or permission of instructor.*

**CNG 209 MS Windows Server Active Directory Configuration**  
**4 credits**

Provides students with the knowledge and skills to configure Active Directory Domain Services in a distributed environment, implement Group Policies, perform backup and restore, and monitor and troubleshoot Active Directory related issues.

*Co-Requisite: CIS 210.*

**CNG 210 MS Windows Server Network Infrastructure Configuration**  
**4 credits**

Provides students with the knowledge and skills to configure and troubleshoot a Windows Sever 2008 network infrastructure. Students will learn to implement and configure secure network access and implement fault tolerant storage technologies. Students will gain an understanding of the network technologies most commonly used with

Windows Server 2008 and IP-enabled networks. Students will also learn how to secure servers and maintain update compliance.

*Prerequisite: CNG 125, equivalent experience, or permission of instructor.*  
*Co-Requisite: CIS 209.*

### **CNG 211 Windows Configuration: WIN OS**

#### **3 credits**

Provides you 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 operating system in a variety of network operating system environments.

### **CNG 212 Manage MS Windows Server Environment**

#### **4 credits**

Provides you with the knowledge and skills that are required to manage accounts and resources, maintain server resources, monitor server performance, and safeguard data in a Microsoft Windows Server environment.

*Prerequisites: CNG 209 and CNG 210, equivalent experience, or permission of instructor.*

### **CNG 253 Firewalls and How They Work**

#### **3 credits**

Introduces students to the design and implementation of firewalls. Covers such topics as firewalls using CISCO Routers, Microsoft server platform and UNIX platform. Focuses on how firewalls function in these environments and the basic steps to plan and implement firewalls.

*Prerequisites: CNG 131, CNG 132 and CIS 222, equivalent experience, or permission of instructor.*

*Co-Requisite: CNG 257.*

### **CNG 257 Network Defense and Counter Measures**

#### **3 credits**

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.

*Prerequisites: CNG 131, CNG 132 and CIS 222*

*Co-Requisite: CNG 253*

### **CNG 258 Computer Forensics**

#### **4 credits**

Exposes the student to the field of Computer Forensics and investigation. Provides the student with methods to properly conduct a computer forensics investigation beginning with a discussion of ethics. Topics covered include fundamental concepts, history of computer forensics, file structures, data recovery techniques, computer forensic tools and analysis. The curriculum and objectives map to the International Association of Computer Investigative Specialists (IACIS) certification.

*Prerequisites: CNG 131, CNG 132 and CIS 222, equivalent experience, or permission of instructor.*

### **CNG 259 Enterprise Security**

#### **4 credits**

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.

*Prerequisites: CNG 131, CNG 132 and CNG 257, equivalent experience, or permission of instructor*

### **CNG 260 Cisco Network**

#### **Associate I**

#### **5 credits**

(CCNA1: Networking Basics) is the first of the four courses leading to the Cisco Certified Network Associate (CCNA) certification. CCNA 1 introduces Cisco Networking Academy Program students to the networking field. The course focuses on network terminology and protocols, local-area networks (LANs), wide-area networks (WANs), Open System Interconnection (OSI) models, cabling, cabling tools, routers, router programming, Ethernet, Internet Protocol (IP) addressing, and network standards.

### **CNG 261 Cisco Network**

#### **Associate II**

#### **5 credits**

(CCNA2: Routers and Routing Basics) is the second of four CCNA courses leading to the Cisco Certified Network Associate (CCNA) certification. CCNA 2 focuses on initial router configuration, Cisco IOS software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). You will develop skills on how to configure a router, manage Cisco IOS Software, configure routing protocols, and create access lists controlling access to the router.

*Prerequisite: CNG 260.*

### **CNG 262 Cisco Network**

#### **Associate III**

#### **5 credits**

(CCNA3: Switching Basics and Intermediate Routing) is the third of four courses leading to the Cisco Certified Network Associate (CCNA) certification. The course focuses on advanced IP addressing techniques including Variable Length Subnet Masking (VLSM), Intermediate routing protocols (RIPv2), single-area OSPF, EIGRP, command-line interface configuration of switches, Ethernet switching, Virtual LANs (VLANs), Spanning Tree Protocol (STP), and VLAN Trunking Protocol (VTP).

*Prerequisite: CNG 261.*

### **CNG 263 Cisco Network**

#### **Associate IV**

#### **5 credits**

(CCNA4: WAN Technologies) is the last of four courses leading to the Cisco Certified Network Associate (CCNA) certification. The course focuses on advanced IP addressing techniques (Network Address Translation (NAT), Port Address Translation (PAT), and DHCP), WAN technology and terminology, PPP, ISDN, DDR, Frame Relay, Network Management, and introduction to optical networking. In addition, you will prepare for taking the CCNA exam.

*Prerequisite: CNG 262.*

### **CNG 280 Internship**

#### **1-12 credits**

Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

## **COM – Communication Courses**

[www.rccc.edu/speech](http://www.rccc.edu/speech)

### **COM 105 Career Communication**

#### **3 credits**

Develops skills needed in obtaining and keeping a job. It includes job searching, applications, resumes, interviews, and the dynamics of customer, peer, and managerial relationships. It emphasizes speaking, writing, listening, critical reading skills, and vocabulary development essential to the employment world.

**COM 115 Public Speaking****3 credits**

Combines the basic theory of communication with public speech performance skills. Emphasis is on speech preparation, organization, support, audience analysis, and delivery.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**COM 125 Interpersonal Communication****3 credits**

Examines the communication involved in interpersonal relationships occurring in family, social and career situations. Relevant concepts include self-concept, perception, listening, nonverbal communication, self-disclosure and conflict.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**COM 126 Communication in Healthcare****3 credits**

Familiarizes the student with interactive concerns in settings related to patient-client care. The course includes discussions of diverse cultures, client interaction and family/caregiver issues. The student will also address the concerns of attitude, office politics, teamwork, self-initiative, and conflict management as specifically experienced in the patient as client setting.

**COM 175 Special Topics****1-12 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**COM 185 Independent Study****1-12 credits**

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

**COM 202 Communication and Teamwork for Industry****3 credits**

Explores the advantages and disadvantages of using teams as a valid method to promote learning, critical thinking and problem solving skills for the manufacturing technician. The course focuses on the roles of design-team member, facilitator, and coach. It examines how teams really work while valuing individual differences. The course covers emotional intelligence, team dynamics, conflict resolution, and multi-rater assessment.

**COM 205 Voice and Diction****3 credits**

Studies the physiological production of the speaking voice and methods for improving the quality of the spoken word in general American speech.

**COM 216 Principles of Speech Communication II****3 credits**

Emphasizes the continued study of rhetorical theory and analysis as it relates to public speaking.

*Prerequisite: COM 115.*

**COM 217 Group Communication****3 credits**

Examines group communication theories with an emphasis on leadership and group behaviors. The course provides opportunities for group participation.

**COM 220 Intercultural Communication: GT-SS3****3 credits**

Explores the link between culture and communication. The course 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.

**COM 225 Organizational Communication****3 credits**

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 230 Argumentation and Debate****3 credits**

Introduces the student to the theory of argumentation, including reasoning, evidence, refutation, critical thinking, and extemporaneous speaking. The course includes practice in preparation and oral analysis of selected arguments and styles of debating.

*Prerequisite: COM 115 or permission of the instructor.*

**COM 263 Conflict Resolution****1 credit**

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 management.

**COM 264 Negotiation****1 credit**

Focuses on protecting your interests and those of others while preserving relationships. The course examines role playing and other dynamic techniques and incorporates negotiation skills for personal and professional situations.

**COM 265 Effective Presentations****1 credit**

Focuses on effective presentation skills used in professional settings including conferences, briefings, training sessions, and sales presentations. The course emphasizes formats, strategies, and presentation tips and enables the student to develop and practice these skills.

**COM 269 Leadership****1 credit**

Emphasizes the essential skills and attributes of leadership. Through lectures, activities and readings, the students will understand the differences between leadership and management, how theory leads to practice and the appropriate leadership style to use according to the situation.

**COM 275 Special Topics****0.5-6 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**COM 285 Independent Study****0.5-6 credits**

Meets the individual needs of students. Students will engage in intensive study or research under the direction of a qualified instructor.

**CON - Construction Technology Courses****CON 105 Construction Technology****4 credits**

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.

## COS – Cosmetology Courses

[www.rccc.edu/warrentech](http://www.rccc.edu/warrentech)

### **COS 103 Shampoo/Rinses/Conditioners I 1 credit**

Introduces various types of scalp treatments and shampoos. Enables student to recognize and treat disorders of hair and scalp. Covers product knowledge and proper massage techniques to help control disorders and to cleanse the hair and scalp. Includes terminology dealing with hair structure, scalp, and hair disorders. Provides training in a lab or classroom setting.

### **COS 110 Introduction to Hair Coloring 1 credits**

Provides theory pertaining to the law of color, theory of color, chemistry of color, product knowledge, and analysis of hair and scalp. Covers basic techniques and procedures for the application of hair coloring.

### **COS 111 Intermediate I: Hair Coloring 2 credits**

Focuses on theory and practical application of color products, formulations of color, level and shades of color. Examines techniques in a specialized class or in a supervised salon setting.

### **COS 120 Introduction to Hair Cutting 2 credits**

Introduction to the theory relevant to patron protection, angles, elevations, and the analysis of hair textures as related to hair cutting. Covers the proper use and care of hair cutting implements. Focuses on basic hair cutting techniques using all cutting implements. Disinfection, sanitation procedures as they relate to haircutting.

### **COS 121 Intermediate I: Hair Cutting 2 credits**

Focuses on theory related facial shapes, head and body forms to determine the clients appropriate haircut. Incorporates practical applications of hair cutting techniques in specialized classes or in the supervised salon (clinical setting).

### **COS 130 Introduction to Hairstyling 2 credits**

Combines theory with the practical application of roller placement, shaping, pincurls, finger waves, ariforming iron curling, soft pressing and hard pressing.

### **COS 131 Intermediate I: Hairstyling 2 credits**

Focuses on the accepted methods of styling hair, air forming roller sets, finger waves, pin curls, braiding, and hair pressing.

### **COS 140 Intro to Chemical Texture 1 credit**

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 141 Intermediate I: Chemical Texture 1 credit**

Emphasizes theory and practical application of permanent waves and chemical relaxers in specialized classes or a supervised salon setting. Enables the student to practice different wrapping techniques required by trend styles.

### **COS 150 Laws, Rules and Regulations 1 credit**

Provides instruction on the laws, rules and regulations and how they govern the cosmetology and barber industry. The affects these on the student, licensed individual, salons and school owners.

### **COS 160 Intro to Disinfection, Sanitation & Safety 2 credits**

Introduces the various methods of disinfection, sanitation, and safety as used in the cosmetology industry. Includes classroom study of bacteriology and the terminology dealing with cosmetology.

### **COS 161 Intermediate I: Disinfection, Sanitation & Safety 1 credit**

Focuses on the theory and daily practice of proper methods of disinfection, sanitation and safety procedures as related to all phases of cosmetology. Covers terminology and training of disinfection, sanitation and safety procedures. Also includes customer service in a supervised salon (clinical) setting or specialized class.

### **COS 203 Shampoo/Rinse/Conditioners II 1 credit**

Provides theory and practical training in shampoos, rinses and conditioners. Examines advanced techniques to prepare the student for employment. Includes preparation for the State Board Licensing Examination in shampoos, rinses and conditioners.

### **COS 210 Intermediate II: Hair Coloring 2 credits**

Provides continued instruction in the theory and practical application of color products, formulations of color, level and shades of color. Enables students to practice techniques in a specialized class or in a supervised salon setting.

### **COS 211 Advanced Hair Coloring 2 credits**

Provides continued instruction on advanced theory and practical techniques in hair coloring. Focuses on the recognition of color problems and color correction procedures. Covers advanced techniques and product knowledge to prepare the student for employment. Prepares the student for the State Board Licensing Examination pertaining to hair coloring.

### **COS 220 Intermediate II: Hair Cutting 2 credits**

Provides continued instruction in the theory related to facial shapes, head and body forms to determine the client's appropriate haircut. Incorporates practical applications of haircutting techniques.

### **COS 221 Advanced Hair Cutting 2 credits**

Focuses on advanced cutting techniques using all the cutting tools. Emphasizes current fashion trends. Includes student preparation for the State Licensure examination.

### **COS 230 Intermediate II: Hair Styling 2 credits**

Provides continued instruction on accepted methods of styling hair, air forming, roll set, finger waves and hair pressing. Examines techniques in specialized classes or in a supervised salon setting.

**COS 231 Advanced Hair Styling  
1 credit**

Focuses on theory and advanced techniques in all phases of hair styling to prepare the student for employment. Training is a combination of supervised salon (clinical) work and specialized classes. Includes student preparation for the State Board Licensing Examination relating to hairstyling.

**COS 240 Intermediate II: Chemical Texture  
1 credit**

Provides continued instruction in the theory and practical application of permanent waves and chemical relaxers in specialized classes or a supervised salon setting. Enables students to practice different wrapping techniques required by trend styles.

**COS 241 Advanced Chemical Texture  
1 credit**

Focuses on advanced techniques to prepare the student for employment and the changes in current industry standards. Instruction is provided in specialized classes or supervised salon (clinical) setting. Includes student preparation for the State Board Licensing Examination pertaining to permanent waves and chemical relaxers.

**COS 250 Management, Ethics, Interpersonal Skills & Sales  
1 credit**

Emphasizes the importance of salon management and the knowledge and skills necessary to build a successful business. Focuses on the importance of interpersonal skills and basic techniques in salesmanship and customer services. Integrates job readiness skills and professional ethics.

**COS 260 Intermediate II: Disinfection, Sanitation & Safety  
2 credits**

Provides continued study of theory and practice of proper methods of sterilization, disinfection, sanitation and safety procedures as related to all phases of the industry. Covers terminology and training of disinfection, sanitation and safety procedures. The individual responsibility to provide a safe work environment is practiced.

**COS 261 Advanced Disinfection, Sanitation & Safety  
1 credit**

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.

**COS 262 Advanced II: Disinfection, Sanitation & Safety  
3 credits**

This course is the extra hours/credits required for the hairtylist 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**

**www.rbcc.edu/criminal**

*Prerequisite for all CRJ courses: Students must have earned an ACT score of 18. If they do not have an 18, students must take ACCUPLACER and score 95 or higher on the Writing Skills portion of ACCUPLACER and 80 or higher on the Reading Skills portion.*

**CRJ 110 Introduction to Criminal Justice  
3 credits**

Introduces a study of the agencies and processes involved in the criminal justice system: the legislature, the police, the prosecutor, the public defender, the courts, and corrections. It includes an analysis of the roles and problems of the criminal justice system in a democratic society, with an emphasis upon inter-component relations and checks and balances.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**CRJ 125 Policing Systems  
3 credits**

Examines the complexity and multidimensional aspects of the law enforcement role and career; law enforcement discretion; law enforcement values and culture in modern America. It covers the role and functions of law enforcement in occupational, social, political and organizational context.

*Prerequisite: CRJ 110.*

**CRJ 127 Crime Scene Investigation  
3 credits**

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. *Prerequisite: CRJ 110.*

**CRJ 135 Judicial Function  
3 credits**

Examines the criminal process with an analysis of the major judicial decision makers, i.e., prosecutors, defense attorneys, judges, and the discretionary aspects of adjudication. *Prerequisite: CRJ 110.*

**CRJ 145 Correctional Process  
3 credits**

Focuses on the post-conviction corrections process, the development of a correctional philosophy, theory, and practice, a description of institutional operation, programming and management, and community-based corrections, probation, and parole. *Prerequisite: CRJ 110.*

**CRJ 151 Domestic Violence  
3 credits**

Examines theories, issues, legal strategies, and intervention applicable to abuse in intimate relationships. *Prerequisites: CRJ 110 and CRJ 257.*

**CRJ 152 Sexual Assault  
3 credits**

Examines sexual assault beginning with definitions and describing the degrees of sexual assault and the penalties and realities of punishment. It covers myths, statistics, services, treatment and prevention. Both the rapist and the adolescent offender are profiled. The course emphasizes the pro-active approach with regard to prevention. *Prerequisites: CRJ 110 and CRJ 257.*

**CRJ 153 Violence Against Children  
3 credits**

Includes an in-depth study of physical, sexual, and emotional abuse and neglect of children. It focuses on identification and treatment of abusive families and victims of abuse and the response of the legal system, the community, and human service agencies. *Prerequisites: CRJ 110 and CRJ 257.*

**CRJ 190 Financial Investigation**  
**3 credits**

Introduces current perspectives dominant in the field of financial investigations. It includes concepts of law and evidence, sources of information, including financial institutions, business financial record keeping, tracing funds using a variety of methods, and interviewing as applied to detecting and resolving financial crimes. The course emphasizes theoretical principles and applications of financial investigative techniques.  
*Prerequisite: CRJ 110.*

**CRJ 209 Criminal Investigation I**  
**3 credits**

Covers the function of the preliminary investigation at a crime scene to include securing the scene, crime scene searches, police drawings, and recognition and collection of evidence  
*Prerequisite: CRJ 110 or permission from instructor*

**CRJ 210 Constitutional Law**  
**3 credits**

Focuses on the powers of government as they are allocated and defined by the United States Constitution. It includes intensive analysis of United States Supreme Court decisions.  
*Prerequisite: CRJ 110.*

**CRJ 211 Criminal Investigation II**  
**3 credits**

Builds on CRJ 209 with focus on follow-up investigation including an examination of death in all its aspects.  
*Prerequisite: CRJ 110 or permission from the instructor*

**CRJ 212 Criminal Investigation III**  
**3 credits**

Focuses on an in-depth study of the principles of conducting 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.  
*Prerequisites: CRJ 110 or permission from the instructor*

**CRJ 220 Human Relations and Social Conflict**  
**3 credits**

Highlights the environmental, organizational and socio-psychological dimensions of social control. It includes the study of individual attitudes, beliefs and behavior involved in role conflicts, community relations and conflict management in the social structure.  
*Prerequisite: CRJ 110.*

**CRJ 225 Crisis Intervention**  
**3 credits**

Provides information and application of crisis theories in working with diverse populations. It examines the interventionist role.  
*Prerequisites: CRJ 110 and CRJ 257.*

**CRJ 230 Criminology**  
**3 credits**

Examines the question of crime causation from legal, social, political, psychological and theoretical perspectives. It covers the history and development of criminology.  
*Prerequisite: CRJ 110.*

**CRJ 231 Introduction to Forensic Science and Criminalistics**  
**3 credits**

Focuses on the fundamentals of forensic science that are essential for gathering evidence at the crime scene and analyzing it in the crime laboratory.  
*Prerequisite: CRJ 110.*

**CRJ 235 Delinquent Behavior**  
**3 credits**

Focuses on the adolescent who violates social and legal norms and the consequences for the individual and society. Emphasized the social and psychological factors influencing individual delinquent patterns.  
*Prerequisites: CRJ 110.*

**CRJ 236 CRJ Research Methods**  
**3 credits**

Introduces and applies methods for criminal justice and criminology with an emphasis on the scientific method and the role of empirical inquiry into criminal justice and criminology. This course will include the study of methodologies of data collection and analysis, the logic of research, the role of theory, measurement, sampling and research designs. Field research and the professional norms and ethics of criminal justice and criminology research will also be covered.  
*Prerequisite: CRJ 110.*

**CRJ 239 Managing Emergency Worker Stress**  
**3 credits**

Provides an understanding of trauma reaction and stress management for first line responders, i.e., police officers, victim advocates, paramedics and firemen. It focuses on practical application of coping skills and stress management for first line responders.  
*Prerequisites: CRJ 110 and CRJ 257.*

**CRJ 257 Victimology**  
**3 credits**

Introduces you to the role the crime victim plays in the criminal justice system. The traditional response that a crime victim receives from the system will be studied and the psychological, emotional and financial impact these responses have on victimization will be analyzed.  
*Prerequisite: CRJ 110.*

**CRJ 268 Criminal Profiling**  
**3 credits**

Examines theories of crime causation with respect to crimes committed by the most violent offenders in society. Provides 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.  
*Prerequisites: CRJ 110 or permission from instructor*

**CRJ 275 Special Topics**  
**1-6 credits**

Provides you with a vehicle to pursue in-depth exploration of special topics of interest.  
*Prerequisite: Some topics may be restricted to criminal justice practitioners.*

**CRJ 280 Internship**  
**1-6 credits**

Provides placement in the criminal justice field to integrate theory with practice.  
*Prerequisite: Permission of internship and CRJ coordinators.*

**CRJ 285 Independent Study**  
**1-6 credits**

Meets the individual needs of students. You will engage in intensive study or research under the direction of a qualified instructor.  
*Prerequisite: Permission of instructor.*

**CRJ 289 Capstone**  
**1 credit**

Provides a demonstrated culmination of learning within a given program of study.  
*Prerequisite: Permission of Instructor.*

## CSC – Computer Science Courses

[www.rccc.edu/cis](http://www.rccc.edu/cis)

### **CSC 119 Introduction to Programming** **3 credits**

A general introduction to computer programming. The course emphasizes the design and implementation of structured and logically correct programs with good documentation. The course focuses on basic programming concepts, including numbering systems, control structures, modularization, and data processing. A structured programming language will be used to implement program designs.  
*Prerequisite: CIS 128, equivalent experience, or permission of instructor.*

### **CSC 126 Game Design and Development** **3 credits**

Combines problem-solving techniques with computer game design and implementation to introduce you to basic gaming and computer science concepts. You will 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.

### **CSC 160 Computer Science I: C++** **4 credits**

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: MAT 121, CSC 119, equivalent experience, or permission of instructor.*

### **CSC 161 Computer Science II: C++** **4 credits**

Continues the structured algorithm development and problem-solving techniques begun in Computer Science I. You will gain experience in the use of data structures and design of larger software projects. Intensive computer laboratory experience is required. Object-oriented techniques will also be emphasized.  
*Prerequisite: CSC 160 or equivalent experience or permission of instructor.*

### **CSC 165 Discrete Structures** **3 credits**

Prepares you for a fundamental understanding of computing and computer science. Topics covered will include set theory, Boolean algebra, relations, functions, graph theory, and techniques for formal reasoning.  
*Prerequisite: CSC 160 or equivalent experience or permission of instructor.*

### **CSC 225 Computer Architecture/Assembly Language Programming** **4 credits**

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: CSC 160 or equivalent experience or permission of instructor.*

### **CSC 236 C# Programming** **4 credits**

Introduces the C# programming language and covers all syntactical components of the language including arrays, structures, functions, and classes. Content will focus on writing clear properly structured and well-documented programs using C# and object oriented methodology.  
*Prerequisite: CSC 119.*

### **CSC 237 Advanced C# Programming** **4 credits**

Continues the structured algorithm development and problem solving techniques begun in CSC 236. Introduces more advanced features of the C# programming language. Explores the relationships between C# and the .NET Framework and introduces important .NET services. Emphasizes collections, copying and comparing objects, and how the .NET framework interfaces to XML. Focuses on writing clear, properly structured, and well-documented programs using C# and object oriented methodology.  
*Prerequisite: CSC 236, equivalent experience, or permission of instructor.*

### **CSC 240 Java Programming** **3 credits**

Introduces the Java programming language and covers basic graphics, threads, events/procedures, user interface, and libraries. You will write and execute a variety of Java programs. Java Applets will be incorporated into HTML

pages, allowing for the use of real-time sound, graphics, animation, and user interaction.

*Prerequisite: CSC 160, equivalent experience, or permission of instructor.*

### **CSC 241 Advanced Java Programming** **3 credits**

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: CSC 240, equivalent experience, or permission of instructor.*

### **CSC 246 Mobile App Development: (iOS)** **3 credits**

Learn how to develop mobile apps using key features and frameworks. Students will learn application design and development using a mobile development platform software development kit (SDK) and corresponding programming language. Main features include: handling UI triggered and touch events, data management, simple and complex UI views, drawing, location and application settings.  
*Prerequisite: CSC 237, or equivalent experience and/or permission of instructor.*

### **CSC 250 Programming with Microsoft ADO .NET** **3 credits**

Teaches you to build data-centric applications and Web services with Microsoft ADO.NET, Microsoft SQL Server, and the Microsoft .NET Framework. This course includes designing and building data-centric, distributed applications.  
*Prerequisite: CSC 237, or equivalent experience or permission of instructor.*

### **CSC 253 MS ASP.NET Web Application Development: C#** **3 credits**

Teaches programmers and beginning Web developers the fundamentals of Web application site implementation by using Microsoft ASP.NET and Microsoft Visual Basic .NET. This course focuses on using the Microsoft Visual Studio .NET environment and the Microsoft .NET Platform to create an ASP.NET Web application that delivers dynamic content to a website.  
*Prerequisite: CSC 237.*

### **CSC 262 VS.NET Application Development: C#**

#### **3 credits**

Provides C# programmers with the skills required to create Windows Forms applications by using the .NET Framework. The course will cover the major topics for Windows client application programming on the .NET Framework. These topics include Windows Forms, GDI+, simple data access, interoperating with unmanaged code, threading and asynchronous programming issues, simple remoting, Web access, Web Services consumption, debugging, security, and deployment issues for desktop applications.

*Prerequisites: CSC 237, or equivalent experience, or permission of instructor.*

### **CSC 280 Internship**

#### **1-12 credits**

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 – Culinary Arts Courses**

[www.rccc.edu/culinary](http://www.rccc.edu/culinary)

### **CUA 101 Food Safety and Sanitation**

#### **2 credits**

Covers the basic rules of sanitation, food-borne illnesses, safe food temperatures, safe food handling techniques, the HACCP Program, pest control procedures, and local/state health rules and regulations for food service operations. At the completion of the course, you will take a nationally recognized test from the Education Foundation of the National Restaurant Association. If passed with a score of 75% or more, you will receive a Certificate of Completion from the Education Foundation.

### **CUA 105 Food Service Concepts and Management Skills**

#### **3 credits**

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. The course 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. It covers

application, interview techniques, training, and hiring processes and incorporates preparation of menus for different styles of food service establishments.

### **CUA 121 Introduction to Food Production Principles and Practices**

#### **1 credit**

Provides you 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.

### **CUA 122 Introduction to Stocks, Soups, and Sauces**

#### **1 credit**

Focuses on the fundamental principles of stocks, soups, sauces, gravies, and thickening agents. It enables you 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. You will apply pre-preparation skills and efficient organization of work techniques.

### **CUA 123 Introduction to Garde Manger**

#### **1 credit**

Provides fundamental principles of cold food and non-alcoholic beverage preparation and production in a commercial kitchen. The course enables you 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. It introduces basic cold food decorative work, such as fruit and vegetable garnishes and carvings, terrines, and hors d'oeuvres. This course also focuses on pre-preparation procedures and efficient organization of work techniques.

### **CUA 124 Vegetable Preparation and Breakfast Cookery**

#### **1 credit**

Introduces you to vegetable preparation and breakfast cookery in a commercial kitchen. The course focuses on the significance of variety of breakfast items and the preparation of vegetable items using a variety of cooking methods. It emphasizes the effects of seasonings and cooking methods on vegetable products. You will prepare, plate, and garnish breakfast orders similar to those ordered in restaurants with egg cookery and dairy products emphasized.

### **CUA 127 Soups, Sauces, and Consommés**

#### **3 credits**

Covers the preparation of the five mother sauces and small-derived sauces. The course enables you to prepare stocks, consommés, emulsified sauces, clear soups, pureed soups, chowders, national, and cream soups in a commercial kitchen. It introduces gravies and sauce garnishing.

### **CUA 131 Starches, Pastas, Casseroles, and Grain Products**

#### **1 credit**

Provides the basics of preparing and/or cooking potatoes, starches, legumes, and pastas. The course enables you to prepare and cook a variety of casseroles and grain products using a commercial kitchen for the preparation area. It allows you to apply pre-preparation skills and efficient organization of work techniques.

### **CUA 132 Center of the Plate: Meat**

#### **1 credit**

Provides you with the basics of meat handling, including principles used for selecting meat products, their basic cuts, and cooking methods. It focuses on a variety of meat products in a commercial kitchen.

### **CUA 133 Center of the Plate: Poultry, Fish, and Seafood**

#### **1 credit**

Provides the basics of handling poultry, fish, and seafood, including principles used for selection and the basic forms these products have, as well as the methods of cooking them. It focuses on preparation of poultry, fish, and seafood products in a commercial kitchen and incorporates practice in the use of these principles and methods. The course covers pre-preparation skills and efficient organization of work techniques.

### **CUA 141 Baking: Principles and Ingredients**

#### **1 credit**

Provides you with the fundamentals of baking terminology, principles of baking, and the characteristics and functions of the main ingredients used in bakery production. It orients you to commercial equipment, tools, and utensils used in baking.

**CUA 142 Basic Yeast-Raised Products and Quick Breads**  
**1 credit**

Provides you with the fundamentals of basic yeast-raised production and quick breads. The course enables you to produce white bread, rolls, variety grain breads, specialty breads, sweet yeast-raised products, and quickbreads in a commercial kitchen.

**CUA 143 Baking: Cakes, Pies, Pastries, and Cookies**  
**1 credit**

Provides you with the fundamentals of basic cake, pie, pastry, and cookie production. The course enables you to produce a variety of cakes, pies, pastries, cookies, and assorted dessert items in a commercial kitchen.

**CUA 144 Baking Applications**  
**1 credit**

Serves as the practical vehicle for you to apply basic baking principles and practices to the production of yeast breads, quick breads, cakes, icings, pastries, pies, and cookies. It focuses on the preparation of a variety of baked goods in a commercial kitchen according to a baking production schedule. The course enables you to demonstrate comprehensive knowledge of products as well as speed and efficiency in the production of quality baked goods.

**CUA 150 Baking: Decorating and Presentation**  
**3 credits**

Examines the preparation and production of cakes, pastries, different styles of decorating, commercial equipment, and types of products used for decoration. It covers plate painting, national products, and designing show pieces.

**CUA 151 Baking: Intermediate Bread Preparation**  
**3 credits**

Focuses on preparation of types of bread products including French, rye, wheat, brioche, and croissants. The course enables you to demonstrate different styles of presentation including rolling, braiding, cloverleaf, parker-house, single knot, butter-flake, comb, and wreath shape. It examines production steps, ingredients, and commercial equipment that apply to course training.

**CUA 152 Individual Fancy Dessert Production**  
**3 credits**

Focuses on the preparation and decoration of individual dessert items in a commercial kitchen. It covers the preparation of cream horns, napoleons, éclairs, cream puffs, marzipan fruits, marzipan sculptures, tarts, flambéd desserts, international desserts, pastry shells, pulled sugar, spun sugar, and individual chocolate decorations. You will research and locate dessert menus/recipes to be used in lab production.

**CUA 156 Nutrition for the Hospitality Professional**  
**3 credits**

Provides you with the fundamentals of human nutrition. It focuses on the nutritional needs of humans throughout their life cycle as well as those with special dietary needs. You will may take a nationally recognized test from the Educational Foundation of the National Restaurant Association.

**CUA 157 Menu Planning**  
**3 credits**

Introduces you to planning menus and integrating them into foodservice operations. It equips you with a working knowledge of the function, mechanics, and results achieved by the menu, providing an overview of the existing and growing food service industry as seen through the menu.

**CUA 180 Culinary Arts Internship I**  
**5 credits**

Provides you with the opportunity to supplement coursework with practical work experience related to your educational program. You will work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

**CUA 182 Culinary Arts Internship II**  
**5 credits**

Provides you with the opportunity to supplement coursework with practical work experience related to your educational program. You will work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

**CUA 210 Advanced Cuisine and Garde Manger**  
**4 credits**

Focuses on the preparation of food display items for buffets and banquets, such as fancy garnishes, fruit and vegetable carvings, canapés, and party trays. It includes patés, galantines, terrines, and choud froid items. It also

incorporates the creation of food artistry show pieces, meeting competition guidelines developed by the American Culinary Federation, and covers the preparation of a regional, ethnic or cultural culinary presentation based upon personal research.

**CUA 242 Intermediate Garde Manger**  
**1 credit**

Focuses on producing a variety of garde manger items in the kitchen. It incorporates practice in the use of tools, utensils, and equipment and the application of safety and sanitation practices. This course emphasizes preparation skills and efficient organization of work skills.

**CUA 255 Supervision in the Hospitality Industry**  
**3 credits**

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 using management principles in the selection, training, evaluating, delegating, motivating, rewarding, and disciplining of employees. It stresses skills for success through people development.

**CUA 261 Cost Controls**  
**Credits: 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 281 Culinary Arts Internship III**  
**5 credits**

Places you in an actual work situation where you will participate in the operation of a foodservice establishment. Hours of work are arranged by the site supervisor and you, the intern. The number of hours required is determined by the number of credits the course carries.

## CWB – Computer Web Courses

[www.rrcc.edu/cis](http://www.rrcc.edu/cis)

### **CWB 110 Complete Web Authoring: HTML**

#### **3 credits**

Explores a complete set of Web authoring skills using HTML (Hypertext Markup Language). Topics include links, backgrounds, controlling text and graphic placement, tables, image maps, frames, forms, and CSS (Cascading Style Sheets).  
*Prerequisites: CIS 130 and CIS 128 or a working knowledge of Windows.*  
*Co-Requisites: CWB 130.*

### **CWB 130 Complete Web Editing**

#### **Tools: Dreamweaver**

#### **3 credits**

Explores the complete set of Web editing tools provided by the software specified. Topics include links, backgrounds, controlling text and graphic placement, tables, image maps, frames, and forms.  
*Prerequisites: Prerequisites: CIS 130 and CIS 128 or a working knowledge of Windows.*  
*Co-Requisites: CWB 110.*

### **CWB 164 XML**

#### **3 credits**

Designed to teach you how to create a well formed XML document, understand how DTDs impose structure, and how Style Sheets transform an XML document. Among the many topics that will be discussed are processing XML with application code, working with the DOM, recognizing common industry parsers, and the integration of XML into an infrastructure.  
*Prerequisite: CWB 110 or a working knowledge of HTML, including CSS.*

### **CWB 204 Cascading Style Sheets**

#### **3 credits**

This course explores the use of the Cascading Style Sheets (CSS) style language as a means of separating content and design on Web pages. The class is intended for students having a working knowledge of XHTML and who are interested in learning to use style sheets to control display properties on a website or other application using XHTML. CSS or Cascading Style Sheets, is a language which is used to apply presentational and layout formatting to Web pages. This effectively separates the page content from the page design and is the new standard for the Web. Eventually, all presentational HTML tags will be deprecated in favor of CSS style sheets and the old tags won't work. Additionally, this improves cross-device application of Web content because the style sheet for a

type of device can be applied specifically to it.

*Prerequisites: CWB 110*

### **CWB 205 Complete Web Scripting: JavaScript**

#### **3 credits**

Explores the complete set of Web scripting skills needed to develop Web Applications. Topics include variables, data types, arithmetic operations, logical operations, looping, creating and reading cookies, creating an array, displacing data based on a cookie value, setting flags, working with frames, creating objects in a hidden frame, using the History Object, writing HTML to another window, determining browser, and directing keystrokes.

*Prerequisites: CWB 110 and one programming language (CSC 154 or higher) or permission of instructor.*

### **CWB 208 Web Application Development: PHP**

#### **3 credits**

Teaches you how to work in the server-side scripting environment. You will learn the basics of application development and general principles that apply to most development environments. You will develop applications using two different server-side application development tools: PHP Hypertext Preprocessor (PHP) and Cold Fusion. You also will learn key application standards, such as source and revision control, coding standards, code optimization, and data integrity.  
*Prerequisite: CSC 160, CIS 243, and CWB 110, or permission of instructor.*

### **CWB 209 Web Content Management Systems**

#### **3 credits**

Explores the use of open source Content Management Systems to simplify the creation and maintenance of websites.  
*Prerequisite: CSC 160, CIS 243, and CWB 110, or permission of instructor.*

### **CWB 280 Internship**

Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

## DAN – Dance Courses

[www.rrcc.edu/dance](http://www.rrcc.edu/dance)

### **DAN 105 Hip Hop I**

#### **1 credit**

Consists of basic traditional jazz and ballet movements. Warm-up exercises will include body toning and stretching. You will learn diagonal step combinations leading to hip-hop dance routines.

### **DAN 106 Hip Hop II**

#### **1 credit**

Includes traditional jazz, ballet, and street dancing techniques as well as warm-up exercises, such as body toning and stretching. You will learn diagonal and center step combinations leading to hip-hop dance routines.

### **DAN 111 Modern Dance I**

#### **1 credit**

Introduces basic concepts and skills of modern dance and focuses on technique work to increase strength, flexibility, endurance, coordination, rhythm, and spatial awareness. The course also explores dance as a tool for communication and dance as an art form.

### **DAN 112 Modern Dance II**

#### **2 credits**

Includes a more in-depth study of modern dance concepts as well as more specific techniques of modern dance choreography. It focuses on more advanced technique work with more emphasis on improvisation.

### **DAN 113 Modern Dance III**

#### **2 Credits**

Builds on the skills learned in DAN 112 with more advanced technique work. Enables students to increase knowledge of specific modern choreographers' techniques and develop more experience with movement improvisation.

### **DAN 114 Modern Dance IV**

#### **2 credits**

Teaches a variety of modern dance techniques and experiment with their own movement styles. Attention is placed on the performance elements of dance technique. This intermediate/advanced modern dance class is designed to challenge a dance student.

### **DAN 115 Country Swing I**

#### **1 credit**

Includes many styles and various combinations of steps for Western dance music. Will also teach the students how to convert combinations of others dances of traditional and fad as they become popular.

**DAN 116 Country Swing II****1 credit**

Teaches advanced steps and dancing skills which will enable to Student to enjoy the art of dancing for leisure time activity.

**DAN 117 Salsa I****1 credit**

Introduces the beginning dancer to popular Salsa steps and dance combinations. This course includes basic partnering concepts and techniques. Dancers will explore rhythm, proper body alignment and music recognition. A partner is not required for this course.

**DAN 118 Salsa II****1 credit**

Continues Salsa I with an increased knowledge of Salsa dance. This course focuses on Salsa dancing in groups of couples with frequent partner exchanges. Dancers learn a more in-depth study of Salsa dance concepts and techniques. A partner is not required for this course.

**DAN 119 Salsa III****1 credit**

Continues Salsa II with an increased knowledge of Salsa dance. This course focuses on more advanced dance technique as well as performance qualities and creative expression. Students engage in more challenging footwork with frequent partner exchanges. A partner is not required for this course.

**DAN 121 Jazz I****1 credit**

Introduces the basic techniques and vocabulary of jazz dance and the basic elements of dance. The course focuses on movement-oriented dance, comprised of warm-up exercises, center combinations, traveling combinations, and cool down. May be repeated for a total of three credits.

**DAN 122 Jazz II****2 credits**

Continues Jazz I with an increased knowledge of jazz dance. The course enables you to work at an intermediate level with a basic understanding of body alignment, balance, and musicality.

**DAN 123 Jazz III****2 Credits**

Builds on skills learned in DAN 122 and incorporates work at an intermediate/advanced level. Expands on jazz dance technique through more challenging movement combinations. Requires knowledge of the learned basics of dance.

**DAN 124 Jazz IV****2 credits**

Builds on skills learned in DAN 123 and incorporates work at a more advanced level. Emphasizes more challenging movement combinations and performance techniques.

**DAN 125 History of Dance I:****GT-AH1****3 credits**

Introduces the history of dance as a theatre or performing art. Examines dance from Classical Greece through the Renaissance, including court and classical ballet to modern dance with African and Caribbean influences.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**DAN 129 Introduction to Dance****1 credit**

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 130 Dance Sampler****1 credit**

Introduces the beginning dancer to popular dances through a social dance sampler in Salsa, Swing, and Country Western Dance technique, footwork, body posturing, rhythms, and dance floor etiquette. Examines a variety of dances such as Salsa's Mambo, Cha-Cha, and Rumba; Swing's Lindy Hop (jitterbug); and Country Western's Two Step, Cowboy Waltz, Cotton-Eyed Joe and various Country Western line dances.

**DAN 131 Ballet I****1 credit**

Introduces the basic techniques of ballet, which are built upon knowledge of ballet terminology, fundamental exercises, and the basic elements of dance. It focuses on movement-oriented dance, comprised of stretching, barre warm-up exercises, simple terre à terre and jumping steps, and basic extended positions.

**DAN 132 Ballet II****2 credits**

Continues Ballet I and emphasizes ballet terminology, fundamental exercises, and the basic elements of dance. It focuses on an intermediate level within the basic structure of the ballet class.

**DAN 133 Ballet III****1 credit**

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 134 Ballet IV****2 credits**

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 141 Ballroom Dance I****1 credit**

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. A partner is not required for this course.

**DAN 142 Ballroom Dance II****1 credit**

Continues Dance 141 with focus on regional dances, customs and rhythms. A partner is not required for this course.

**DAN 143 Tap I****1 credit**

Introduces basic tap dance movements and techniques. The shuffle, ball change, brush, flap heel drop, stomp, and stamp steps are covered.

**DAN 144 Tap II****1 credit**

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.

**DAN 151 Belly Dance I****1 credit**

Presents belly dance - the oldest dance form known to humankind as a celebration of life. The course emphasizes developing balance and enables you to perform a belly dance and learn the history of belly dance and costuming techniques.

**DAN 152 Belly Dance II****1 credit**

Continues DAN 151, with emphasis on coordination and balance and additional techniques. It includes costume design.

**DAN 154 Dance and Stage Movement**

**3 credits**

Introduces you to the basic elements of modern dance and to the potential of dance and stage movement as a means of communication.

**DAN 175 Special topics**

**1-3 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**DAN 211 Dance Composition**

**3 credits**

Focuses on principles of choreography and development of individual expressive style.

**DAN 221 Dance Performance I**

**2 credits**

Enables students to rehearse and perform dances for community concerts after selection through audition. Covers warm-up/advanced technique, rehearsals and cool down in a dance company atmosphere. Focuses on choreography for original ballet, modern dance and jazz dance works.

**DAN 222 Dance Performance II**

**2 credits**

Continues Dance Performance I class offering more opportunities for students to perform in different settings.

**DAN 224 Dance for Musical Theatre**

**3 credits**

Introduces you to dance within the context of musical theatre. The course enables you to practice non-verbal communication and expressive movement techniques.

*Prerequisites: DAN 154 or permission of instructor.*

**DAN 225 Dance For Musical Theatre II**

**3 credits**

Continues Dance 224 with more emphasis on performance.

*Prerequisites: DAN 211 or permission of instructor.*

**DAN 226 Pointe**

**1 credit**

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 227 Pointe II**

**1 credit**

Offers a continuation of DAN 226 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 251 Belly Dance III**

**1 credit**

Continues Belly Dance II (DAN 152) with emphasis on coordination, balance and additional techniques. Includes costume design, fitness, and the emphasis of learning advanced dance techniques to perform professionally.

**DAN 275 Special Topics**

**1-6 credits**

Provides you with a vehicle for in-depth exploration of special topics of interest.

**DAN 285 Independent Study**

**1-6 credits**

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

**DEA - Dental Assisting Courses**

**DEA 102 Principles of Clinical Practice**

**3 credits**

Includes techniques used in four handed dentistry, instrument identification, and armamentarium for tray set-ups. Covers sterilization and aseptic procedures.

**DEA 104 Specialties in Denistry**

**2 credits**

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 104 Specialties in Denistry**

**1 credit**

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 121 Dental Science I**

**3 credits**

Includes fundamentals of the oral structures as they apply oral histology, embryology, morphology, pathology, dental anatomy, and dental charting.

**DEA 122 Dental Science II**

**3 credits**

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 123 Dental Materials I**

**3 credits**

Includes fundamentals of dental materials as they apply to clinical and laboratory applications.

**DEA 125 Dental Radiography**

**3 credits**

Focuses on the science of radiography, the application of radiographic techniques, and aseptic techniques.

**DEA 126 Infection Control**

**3 credits**

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 131 Advanced Dental Radiography**

**3 credits**

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 132 Medical Emergencies in the Dental Office**

**2 credits**

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 134 Prevention and Nutrition in Dentistry**

**2 credits**

Includes techniques in preventive dentistry with an emphasis on fluoride application and oral home care instruction. Includes nutrition as it applies to dental health and diet counseling. Covers techniques for coronal polishing.

**DEA 175 Special Topics****1-12 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**DEA 175 Special Topics****1-12 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**DEA 181 Clinical Internship I****0.25-6 credits**

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 275 Special Topics****1-12 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**DEA 276 Special Topics****1-12 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**DMS – Diagnostic Medical Sonography Courses**

*You must be accepted into the Sonography Program to take any DMS course other than DMS 101 or RTE 255. Please visit the program website, [www.rccc.edu/dms](http://www.rccc.edu/dms), for information regarding the application and admission process.*

**RTE 255 Multiplanar Sectional Imaging****2 credits**

A multi-planar sectional anatomy course with co-relative MRI and CT images. This course is designed for both post-graduate imaging professionals and radiologic technology students who want to enhance knowledge and skills. You will be able to identify normal anatomy, anatomic variants, and selected pathologies in orthogonal trans-axial, sagittal, and coronal planes through the study of line drawings, plasticized cadaverous sections, and related MR and CT images. This course is designed to develop, in you, a working knowledge of anatomy and pathologies encountered in sectional imaging modalities such as MRI and CT.  
*Program prerequisite*

**DMS 101 Introduction to Sonography****2 credits**

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.

*Program prerequisite*

**DMS 201 Survey of General Sonography****2 credits**

Provides an overview of general sonography emphasizing normal abdomen, superficial structures, female pelvis and obstetrical ultrasound including common abnormalities and typical career opportunities.

**DMS 202 Neurosonology****2 credits**

Introduces students to gross anatomy, sectional anatomy, and pathology of the brain and spinal cord in addition to the sonographic appearances of normal and abnormal structures.

**DMS 203 Cerebrovascular Sonography****2 credits**

Provides an in-depth study of cerebrovascular disease and the ultrasonic evaluation of it. You 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. You will be introduced to correlating ultrasound test results with angiography, computed tomography, nuclear medicine, vascular procedures, and magnetic resonance imaging.

**DMS 204 Venous Sonography****2 credits**

Provides you with an in-depth study of the evaluation of peripheral venous disease using duplex ultrasound and plethysmographic techniques. You will learn to evaluate for venous thrombosis and insufficiency. Superficial venous mapping will be demonstrated. You will review techniques for evaluating the presence of venous disease. You 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 205 Small Parts Ultrasound****2 credits**

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 integral part of the class.

**DMS 206 Vascular Ultrasound****2 credits**

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 207 Advanced Obstetric Sonography****2 credits**

Introduces students to the practice and concepts of advanced/high-risk obstetrical sonography. Students will study genetics and genetic testing, maternal and fetal conditions, fetal testing and interventions, and perinatal screening.

**DMS 208 Survey of Echocardiography****2 credits**

Provides an overview of echocardiography emphasizing normal anatomy, including common abnormalities and typical career opportunities.

**DMS 221 OB/GYN Ultrasound I****2 credits**

Provides a systematic study of embryology to include development of the major organ systems with correlation to sonographic imaging at all stages of embryologic, fetal development and the surrounding environment. You will master the foundations of obstetric and gynecologic sonography.

**DMS 222 OB/GYN Ultrasound II****2 credits**

Covers a detailed study of the high-risk pregnancy and the use of ultrasound in detection of fetal abnormalities in organ systems to include: neural, musculoskeletal, gastrointestinal, heart, multiple pregnancy. Maternal factors such as infertility, disease, and teratogens are also covered.

**DMS 225 Fetal Echocardiography  
2 credits**

Provides an overview of fetal echocardiography including fetal cardiac anatomy, physiology, normal fetal heart, the abnormal fetal heart to include congenital anomalies and an overview of scanning techniques.

**DMS 231 Abdominal Ultrasound I  
2 credits**

Provides 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. You will master the foundations of cross-sectional anatomy and abdominal sonography.

**DMS 232 Abdominal Ultrasound II  
2 credits**

Provides a systematic study of the gastrointestinal tract, pediatric abdomen, neonatal brain and transplanted organs. You will review the necessary sterile technique preceding invasive and intraoperative procedures and 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 prepare you for writing the national registry examination.

**DMS 235 Pediatric Echocardiography  
2 credits**

Provides an overview of pediatric echocardiography including cardiac anatomy, physiology, normal pediatric heart, the abnormal pediatric heart to include congenital anomalies and an overview of scanning techniques using the ASE guidelines.

**DMS 241 Ultrasound Physics I  
2 credits**

Provides theoretical and practical approaches to understanding ultrasound physics fundamentals. You will learn the ergonomics of proper scanning, cart, chair, and room setup to aid in the prevention of musculoskeletal injury seen in many sonographers with improper technique.

**DMS 242 Ultrasound Physics II  
2 credits**

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 bioeffects are covered.

**DMS 244 Ultrasound Scanning Lab  
6 credits**

Prepares the sonography student for ultrasound internship with an emphasis on applied instrumentation, ergonomics, and image optimization.

**DMS 251 Cardiovascular Anatomy and Physiology  
2 credits**

Equips you with an understanding of the anatomy and physiology of the circulatory system. You will learn the anatomy of the veins and arteries of the human body from the great vessels to the microscopic structures at the capillary level. You will study the physiology of the circulatory system, including the effects of disease processes.

**DMS 252 Abdominal Vascular Sonography  
2 credits**

Teaches you 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. You 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 255 Adult Echocardiography I  
2 credits**

Introduces the student to the field of echocardiography to include echocardiographic anatomy, physiology, scanning technique with an emphasis on 2-D, M-mode and Doppler imaging following ASE guidelines.

**DMS 256 Adult Echocardiography II  
2 credits**

Expands echocardiographic imaging techniques with an emphasis on stress echocardiography, transesophageal, intraoperative, advanced cardiac imaging. ECG techniques are introduced with an emphasis on normal and abnormal rhythms encountered in echocardiography.

**DMS 261 Introduction to Vascular Testing  
2 credits**

Introduces you to the field of vascular technology. You will receive an introduction to vascular terminology, patient assessment, and the role of imaging and non-imaging procedures in the diagnosis of vascular disease.

**DMS 262 Arterial Sonography  
2 credits**

Provides an in-depth study of peripheral arterial disease and non-invasive evaluation of it. You will learn how to perform B-mode and Doppler evaluation of the upper and lower extremities. You 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. You 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 265 Adult Echo Pathology I  
2 credits**

Introduces echocardiographic pathology with an emphasis on valvular heart disease, ventricular function and hypertensive heart disease.

**DMS 266 Adult Echo Pathology II  
2 credits**

Expands echocardiographic pathology with an emphasis on pericardial disease, cardiomyopathies, congenital heart disease and diseases of the aorta.

**DMS 267 Adult Echocardiographic Pathology  
3 credits**

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 as well.

**DMS 270 Clinical Observation  
2.5 credits**

Prepares the beginning ultrasound student for clinical internship under the direct supervision of a registered sonographer with a focus on introductory skills necessary for clinical internship to include instrumentation, scanning techniques and image evaluation. The student will spend seven to eight hours per week at the clinical site for training in patient care and work efficiency in the clinical setting.

**DMS 271 Clinical I  
6 credits**

Provides clinical experience for the beginning ultrasound student. You will master the foundations of instrumentation, scanning techniques and image evaluation of sectional anatomy. You will spend 30 hours per week at the clinical site to additionally provide sufficient time for training in appropriate patient care and work efficiency in the scanning lab.

**DMS 272 Clinical II  
6 credits**

Continues the clinical experience for the ultrasound student. Application of the didactic lectures will be applied and will include image evaluation and cross-sectional anatomy. Students will spend 30 hours per week at the clinical site under the direct supervision of a registered sonographer.

**DMS 273 Clinical III  
6 credits**

Continues the clinical experience for the ultrasound student. Application of the topics covered in advanced didactic lectures will include an introduction to invasive procedures using ultrasound guidance. Sterile technique and standard precautions will be reviewed. Students will spend 30 hours per week at the clinical site under the direct supervision of a registered sonographer.

**DMS 274 Clinical IV  
6 credits**

Continues the clinical experience for the sonography student. Application of the didactic lectures to include image evaluation and sectional anatomy. The foundations of anatomy, instrumentation, scanning techniques and image evaluation will be stressed.

**DMS 281 Ultrasound Internship I  
10 credits**

Provides clinical experience for the beginning ultrasound student. You will master the foundations of instrumentation, scanning techniques and image evaluation of sectional anatomy. You will spend 30 hours per week at the clinical site to additionally provide sufficient time for training in appropriate patient care and work efficiency in the scanning lab.

**DMS 282 Ultrasound Internship II  
10 credits**

Continues the 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. You will spend 30 hours per week at the clinical site under the direct supervision of a registered sonographer.

**DMS 283 Ultrasound Internship III  
10 credits**

Continues the clinical experience for the ultrasound student. Application of the topics covered in advanced didactic lectures will include an introduction to invasive procedures using ultrasound guidance. Sterile technique and standard precautions will be reviewed. You will spend 30 hours per week at the clinical site under the direct supervision of a registered sonographer.

**DMS 288 Practicum  
6 credits**

Exposes students to their professional roles as sonographers. Students will apply skills and knowledge to perform procedures across all applications of sonography, including advanced procedures and examinations.

**DMS 289 Ultrasound Capstone  
3 credits**

Prepares the sonography student to effectively search for a job and sit for the American Registry of Diagnostic Medical Sonographers examination in their specialty.

**DPM – Diesel Courses**

**DPM 106 Diesel Fuel Systems  
3 credits**

Covers the theory of operation and repair of fuel injection systems. Provides laboratory assignments that involve disassembly, assembly, and service procedures on fuel system components.

**ECE – Early Childhood Education  
Courses**

[www.rccc.edu/ece](http://www.rccc.edu/ece)

**ECE 101 Introduction to Early  
Childhood Education  
3 credits**

Provides an introduction to early childhood education. It includes the eight key areas of professional knowledge: child growth and development; health, nutrition, and safety; developmentally appropriate practices; guidance; family and community relationships; diversity; professionalism; and administration and supervision. This course focuses on birth through age eight.

*Prerequisite: A grade of B or higher in ENG 060 or appropriate SAT, ACT or Accuplacer score.*

**ECE 102 Introduction to Early  
Childhood Lab Techniques  
3 credits**

Focuses on a classroom seminar and required placement in a child care setting (ECE 188). The supervised placement provides you with the opportunity to observe children, to practice appropriate interactions, and to develop effective guidance and management techniques. This class addresses ages birth through eight.

*Prerequisite or corequisite: ECE 101 and a grade of B or higher in ENG 060 or appropriate SAT, ACT or Accuplacer score.*

**ECE 103 Guidance Strategies for  
Children  
3 credits**

Explores guidance theories, applications, goals, techniques, and factors that influence expectations, classroom management issues, and prosocial skills from birth through age eight.

*Prerequisite: A grade of B or higher in ENG 060 or appropriate SAT, ACT or Accuplacer score.*

**ECE 111 Infant and Toddler Theory  
and Practice  
3 credits**

Presents an overview of theories, applications (including observations), and issues pertinent to infant and toddler development in group and/or family settings. It also includes the state mandated infant and toddler requirements for licensing, health, safety, and nutrition issues.

*Prerequisite: A grade of B or higher in ENG 060 or appropriate SAT, ACT or Accuplacer score.*

**ECE 112 Introduction to Infant/Toddler Lab Techniques**  
**3 credits**

Includes a classroom seminar and placement in an infant and/or toddler setting. The supervised placement provides you with the opportunity to observe, to practice appropriate interactions, and to develop effective guidance and nurturing techniques with infants and/or toddlers. The class includes topics from prenatal development through age two.

*Recommended corequisite: ECE 111.*  
*Prerequisite: A grade of B or higher in ENG 060 or appropriate SAT, ACT or Accuplacer score.*

**ECE 125 Science/Math and the Young Child**  
**3 credits**

Examines theories of cognitive development as a framework for conceptualizing the way young children acquire scientific and mathematical skills, concepts, and abilities. It enables you to research and develop appropriate individual and group scientific and mathematical activities for young children.

*Prerequisite: ECE 101.*

**ECE 126 Art and the Young Child**  
**2 credits**

Prepares you to plan and implement a comprehensive and developmentally appropriate art program for young children. Additionally, you will investigate the development of self-taught art techniques in young children.

*Prerequisite: ECE 101.*

**ECE 127 Music/Movement for the Young Child**  
**1 credit**

Focuses on the purposes of incorporating music and movement into the early childhood curriculum. Through active participation with hands-on experiences, you will work with the concepts of age and developmental appropriateness when designing fun activities in both subjects.

*Prerequisite: ECE 101.*

**ECE 188 Practicum: Early Childhood Education**  
**1-3 credits**

Provides you with field experience and coaching in early childhood programs. One credit requires 60 hours of field-based experience; three credits requires 120 hours of field-based experience. Please see ECE advisor for more information on program completion requirements.

*Prerequisite: ECE 101 and a grade of B or higher in ENG 060 or appropriate SAT, ACT or Accuplacer score.*

**ECE 191 School Age Theory and Practice**  
**3 credits**

Emphasizes processes for planning and implementing developmentally appropriate environments and experiences and selection of appropriate materials in school age programs working with children ages 6 to 12 years of age. It also includes expression and problem-solving skills in school age children.

**ECE 192 School Age Lab Techniques**  
**3 credits**

Incorporates lab experience in before/after school, summer camp, or elementary school programs. The class focuses on planning and implementing developmentally appropriate curriculum for school age children and includes assisting the supervising teacher in all activities.

**ECE 205 Nutrition, Health and Safety**  
**3 credits**

Focuses on nutrition, health, and safety as key factors for optimal growth and development of young children. It includes nutrient knowledge, menu planning, food program participation, health practices, management and safety, appropriate activities, and communication with families around these issues. This course addresses information from before birth through age eight.

*Prerequisite: ECE 101 and a grade of B or higher in ENG 090 or appropriate SAT, ACT or Accuplacer score.*

**ECE 220 Curriculum Development: Methods and Techniques**  
**3 credits**

Provides an overview of early childhood curriculum development. It includes processes for planning and implementing developmentally appropriate environments and experiences, selection of appropriate materials, and quality in early childhood programs. Focuses on ages birth through eight.

*Prerequisite: ECE 238 or PSY 238 or permission of instructor and a grade of B or higher in ENG 090 or appropriate SAT, ACT or Accuplacer score.*

**ECE 225 Language and Cognition for the Young Child**  
**3 credits**

Examines theories of cognitive and language development as a framework for conceptualizing the way children acquire thinking skills. It addresses observation, planning, facilitation, creative representation, and evaluation strategies within the context of play with a focus on

language, science, math, problem solving, and logical thinking. Ages addressed are birth through age eight.

*Prerequisite: ECE 238 or PSY 238 or permission of instructor and a grade of B or higher in ENG 090 or appropriate SAT, ACT or Accuplacer score.*

**ECE 226 Creativity and the Young Child**  
**3 credits**

Provides an emphasis on encouraging and supporting creative self expression and problem solving skills in young children. It explores creative learning theories and research and focuses on developmentally appropriate curriculum strategies in all developmental domains. Ages addressed are birth through eight.

*Prerequisite: ECE 238 or PSY 238 or permission of instructor and a grade of B or higher in ENG 090 or appropriate SAT, ACT or Accuplacer score.*

**ECE 228 Language and Literacy**  
**3 credits**

Presents strategies for optimum language development, literacy, and the social/emotional development which supports acquisition of these skills. It addresses children's language and literacy in home, classroom, and community settings and provides appropriate teacher/child verbal interactions, classroom environments, and activities. Ages addressed are birth through eight.

*Prerequisite: ECE 101 and a grade of C or higher in REA 090 and ENG 090 or appropriate SAT, ACT or Accuplacer score that indicates college reading ability.*

**ECE 237 Theories and Techniques of Social and Emotional Growth**  
**3 credits**

Incorporates student specific techniques and strategies for guiding and enhancing the social and emotional growth of children 0-8 years. The class introduces and compares the theories and theorists underlying quality interactions and patterns of social and emotional progression.

*Prerequisite: ECE 238 or PSY 238 and a grade of B or higher in ENG 090 or appropriate SAT, ACT or Accuplacer score.*

**ECE 238 Child Growth and Development**  
**3 credits**

Covers the growth and development of the child from conception through the elementary school years. It examines the physical, cognitive, language, social and emotional domains and the concept of the whole child. It also addresses how adults can provide a supportive environment for

optimum growth and development. Ages addressed: prenatal through age 12.  
*Prerequisite or corequisite: ECE 101 and a grade of B or higher in ENG 090 or appropriate SAT, ACT or Accuplacer score.*

### **ECE 240 Administration of Early Childhood Care and Education Programs**

#### **3 credits**

Examines Colorado's minimal licensing requirements, as well as optimal standards pertaining to the operation of programs for young children ages birth to eight. The focus is on the director's administrative skills and role as a community advocate for young children. Addresses ages birth to 12.

*Prerequisite: ECE 101 and a grade of B or higher in ENG 090 or appropriate SAT, ACT or Accuplacer score. This is the capstone course for director certification and it is recommended that you are in your final semester of director certification courses before taking this course.*

### **ECE 241 Admin: Human Relations for Early Childhood Professions**

#### **3 credits**

Focuses on the human relations component of an early childhood professional's responsibilities. Topics include director-staff relationships, staff development, leadership strategies, parent-professional partnerships, and community interaction.

*Prerequisite: ECE 101 and a grade of B or higher in ENG 090 or appropriate SAT, ACT or Accuplacer score.*

### **ECE 256 Working with Parents, Families, and Community Systems**

#### **3 credits**

Examines attitudes and family values systems and how they affect parent-professional partnerships. It addresses communication, problem-solving, and conflict resolution strategies. You will learn how to plan effective activities and programs for parent involvement in facilities serving children birth to age eight.

*Prerequisite: ECE 101 and a grade of B or higher in ENG 090 or appropriate SAT, ACT or Accuplacer score.*

### **ECE 260 Exceptional Child**

#### **3 credits**

Presents an overview of critical elements related to educating young children with disabilities in the early childhood setting. Course includes planning techniques, learning strategies, legal requirements, and accommodations and adaptations that are necessary in order to create an integrated classroom environment for a child with a wide range of

exceptionalities. Students will learn how a disability will impact a young child's learning process. This course focuses on birth through age eight.

*Prerequisite: ECE 238 or PSY 238 or permission of instructor and a grade of B or higher in ENG 090 or appropriate SAT, ACT or Accuplacer score.*

### **ECE 275 Special Topics**

#### **1-6 credits**

Explores current topics, issues, and activities related to one or more aspects of the early childhood care and education profession.

### **ECE 280 Internship in Early Childhood Education**

#### **1-12 credits**

Focuses on work experience in a licensed child care and education program (30 contact hours per credit).

### **ECE 288 Practicum: Early Childhood Education**

#### **3 credits**

Provides students with advanced field experience opportunities in early childhood education programs. Requires 120 hours of field-based experience. Please see ECE advisor for more

Information

*Prerequisite: ECE 101 and a grade of B or higher in ENG 090 or appropriate SAT, ACT or Accuplacer score.*

*Capstone course for AAS Degree.*

## **ECO – Economics Courses**

[www.rccc.edu/economics](http://www.rccc.edu/economics)

*Prerequisite for all ECO courses: Students must have earned an ACT score of 18. If they do not have an 18, students must take ACCUPLACER and score 95 or higher on the Writing Skills portion of ACCUPLACER and 80 or higher on the Reading Skills portion.*

### **ECO 101 Economics of Social Issues: GT-SS1**

#### **3 credits**

Examines the major socio-economic issues of the past century. It covers poverty and growth, education, health care, pollution and discrimination.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **ECO 201 Principles of Macroeconomics: GT-SS1**

#### **3 credits**

Focuses on the study of the American economy, stressing the interrelationships among household, business, and government sectors. The class explores saving and investment decisions,

unemployment, inflation, national income accounting, taxing and spending policies, the limits of the market and government, public choice theory, the Federal Reserve System, money and banking, and international trade.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores. MAT 121 suggested.*

### **ECO 202 Principles of Microeconomics: GT-SS1**

#### **3 credits**

Studies the firm, the nature of cost, and how these relate to the economy as a whole. The class analyzes economic models of the consumer, perfect competition, monopoly, oligopoly and monopolistic competition. It explores economic issues including market power, population growth, positive and negative externalities, income distribution, poverty and welfare, discrimination, and international economic interdependence.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores. MAT 121 suggested.*

### **ECO 245 Issues in Environmental Economics: GT-SS1**

#### **3 credits**

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.

## **EDU – Education Courses**

[www.rccc.edu/education](http://www.rccc.edu/education)

### **EDU 101 CRLA Tutor Certification- Regular**

#### **1 credit**

Introduces tutors to effective tutoring strategies. Topics include guidelines for tutoring; how to plan, conduct, and evaluate a productive tutoring session; how to recognize needs of students; and how to develop effective learning strategies with students.

### **EDU 131 Introduction to Adult Education**

#### **3 credits**

Introduces you to the basic concepts in the instruction of adults. Emphasis will be placed on understanding the adult learner and how individual backgrounds and experiences can affect the learning process. Additionally, the course will cover applicable federal and state legislation which affects adult learning programs and will provide information on

the resources and associations in the field of adult education.

### **EDU 132 Planning, Organizing, and Delivering Adult Education Instruction**

#### **3 credits**

Covers the basics of planning an adult education program, organizing instruction within the various content areas and delivering the material in a variety of ways, both in groups and individualized instruction.

A wide variety of learning principles and theories will be addressed, showing their applicability to the adult learner and his/her education.

### **EDU 133 Adult Basic Education (ABE) and Adult Secondary Education (ASE/GED)**

#### **3 credits**

Specifically addresses the different levels within an adult education program. Each level will be addressed in terms of appropriate assessment tools and instructional techniques. Emphasis will be placed on teaching ways that the adult education instructor can encourage the development of cognitive skills at each level, as a springboard to the next higher level.

### **EDU 134 Teaching English as a Second Language (ESL) to Adult Learners**

#### **3 credits**

Introduces the development and implementation of a program to teach English to adults whose first language is not English. Topics will range widely from assessment and placement to the theories behind language acquisition. You will also cover a wide variety of methodologies, both group and individualized, that are aimed at teaching the non-English speaker the written and verbal skills necessary to successfully function in the U.S.

### **EDU 135 Family Literacy in Adult Education**

#### **3 credits**

Introduces the philosophy and theory behind family literacy, as well as giving practical advice on the development and implementation of a family literacy program. The four-component model—adult education, early childhood education, parent and child together time (PACT), and parent time—will be covered, both in theory and practical application.

### **EDU 221 Introduction to Teacher Education**

#### **3 credits**

Focuses on the historical, social, political, philosophical, cultural, legal, and economic forces that shape the United States public school system as students explore teaching as a career choice. Topics will include current issues of diversity in the classroom, educational reform, technology as it relates to education, and considerations related to becoming a teacher in the state of Colorado.

*Corequisite: EDU 288.*

### **EDU 222 Effective Teaching**

#### **1 credit**

Focuses on strategies for becoming an effective teacher. Topics included are: course goals and objectives, the first day, planning a lesson, higher levels of thought, test design and grading, assessment, and teaching and learning styles.

### **EDU 234 Multicultural Education**

#### **3 credits**

Focuses on the need to recognize and understand the similarities and differences among people and to develop a respect for all individuals and groups. The course assists teachers who need to recognize the special learning needs of children from different racial, ethnic, cultural, and socio-economic groups and to encourage teachers to integrate multicultural/diversity teaching into the school curriculum. This class can also count toward teacher recertification.

### **EDU 240 Teaching the Exceptional Learner**

#### **3 credits**

Focuses on the individual differences and modifications that are necessary in the educational practices of the exceptional learner. The course covers applicable law - IDEA, ADA and 504, discusses IEPs and IFSPs, and covers the major disability categories. The class also discusses the various challenges, problems and contradictions of the law and its application both in early childhood and the K-12 educational settings. Finally, the class discusses ways to work with the entire family, and not just the child.

### **EDU 250 CTE in Colorado**

#### **1 credit**

Explores common elements of Career and Technical Education (CTE) philosophy and current practices. Topics will include the federal Carl D. Perkins legislation and related guidelines for CTE, the Colorado Technical Act, national and state regulatory agencies, the CCCS program approval process, enrollment

management and advising strategies, relevant local and national issues, and quality assurance principles.

### **EDU 259 Outdoor Education Leadership**

#### **3 credits**

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, 6th graders, high school leaders, and visitors to 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 260 Adult Learning and Teaching**

#### **3 credits**

Examines the philosophy of community colleges and/or secondary schools and the roles and responsibilities of the faculty member within the college/school community. This course introduces basic instructional theories and applications, with particular emphasis on adult learners. The course includes syllabus development, learning goals and outcomes, and lesson plan and emphasizes teaching to a diverse student body, classroom management, assessment and instructional technology.

### **EDU 261 Teaching, Learning, and Technology**

#### **3 credits**

Prepares you to integrate technology into your teaching curriculum. It enables you to design educational and training materials by incorporating instructional technology. The course explores a variety of technologies, including the computer, Internet, Smartboards, multimedia, graphics, audio, and text with an emphasis on increasing learning through their use. It examines combining technology with a variety of instructional methodologies. This class can also count toward teacher recertification.

### **EDU 266 Adv College Teaching Methods**

#### **1 credit**

Explores current adult learning theory, and relates this theory to the practice of teaching. The course covers a variety of factors that influence teaching and learning, including social and individual psychological aspects of adult learning, patterns of participation and motivation, the role of instructional technology,

handling challenging classroom behaviors, and assessment and evaluation strategies. The main point raised and discussed throughout the course is that effective teaching requires that instructors utilize a range of teaching and assessment approaches and methods in order to enhance learning.

### **EDU 288 Practicum II** **1 credit**

Provides you with the opportunity to supplement coursework with 30 hours of practical field experience related to your educational program. You will work under the immediate supervision of experienced teachers at an education facility and with the direct guidance of an RRCC faculty member.

Corerequisite: EDU 221.

## **EGT – Engineering Graphics Technology Courses**

[www.rrcc.edu/egt](http://www.rrcc.edu/egt)

(See CAD on page 150 for more listings)

### **EGT 230 Drafting and Design I** **6 credits**

Develops a fundamental understanding of Single Family Residence design using 2D drawings. Project management for a complete set of Construction Drawings is emphasized, as well as pertinent design data relative to the AAS degree emphasis. Use of Model Space / Paper Space, floating viewports manipulation, external references, and interface tools is emphasized. Material is relative to the certificate or degree program.

*Prerequisite: CAD 101, CAD 102, or equivalent.*

### **EGT 231 Drafting and Design II** **6 credits**

Examines ideas, sketches, and layouts to create working drawings of a design relative to the certificate of degree program while working within Industry Standards. Projects require full documentation details and the presentation of working drawings. 3D applications are used and "real world" methods are taught through the course of the semester, from basic understanding to the most complex design.

*Prerequisite: EGT 230 and CAD 102.*

## **EIC – Electricity Industrial/Commercial/Residential Courses**

[www.rrcc.edu/electrical](http://www.rrcc.edu/electrical)

### **EIC 100 Electrical Constructions and Planning** **4 credits**

Introduces the planning of electrical system installations from blueprints to the completed job and preparation of material lists, job sheets, and time schedules for various phases of construction. The course emphasizes the National Electrical Code.

### **EIC 102 Electrical Print Reading** **4 credits**

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 110 Electrical Installations I** **4 credits**

Covers residential building wiring in conformance with the current National Electrical Code and local codes using non-metallic cable. The course emphasizes proper use of tools and safety.

### **EIC 120 Electrical Installation II** **4 credits**

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: EIC 110 or permission of instructor.*

### **EIC 124 Electrical Safety Requirements** **1 credit**

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. The course teaches the safe installation and maintenance of electrical equipment and covers the use of personal protective equipment.

### **EIC 125 Electrical Principles and Applied Calculations** **3 credits**

Provides the fundamental principles that are involved with all electrical calculations and operations as well as practical applications of various concepts.

### **EIC 130 National Electrical Code I** **4 credits**

Focuses on the National Electrical Code and local code requirements for electrical installation. It covers chapters one through four of the National Electrical Code.

### **EIC 135 National Electrical Code II** **4 credits**

Builds on course EIC 130 and covers chapters five through nine of the National Electrical Code, including hazardous locations, special occupancies, conditions, and equipment.

### **EIC 144 Grounding and Bonding** **1.5 credits**

Prepares you for the latest technology and techniques available for code and standards-compliant grounding and bonding systems. This course focuses on grounding and bonding requirements as they relate to Article 250 and other articles of the NEC. The course covers installation, testing and inspection procedures for eleven power systems. This course includes rules to minimize the risk of electricity as a source of electric shock and as an ignition source for fires.

### **EIC 150 DC Circuit Fundamentals** **4 credits**

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. It addresses common measuring instruments and safety.  
*Prerequisite: EIC 125 or MAT 107 or equivalent.*

### **EIC 155 AC Circuit Fundamentals** **4 credits**

Emphasizes resistance, current, voltage, and power in AC, measurements, computations of series and parallel circuits, circuit analysis, and troubleshooting with basic test equipment. It 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. The course explores the principles of polyphase alternating current systems, Wye and Delta circuit configurations; safety procedures will be explored.  
*Prerequisites: EIC 150 or permission of instructor.*

### **EIC 160 Electrical Instruments and Measurements**

#### **4 credits**

Covers the proper techniques for using electrical instruments, including volt/ohm, amp, phase- rotation, oscilloscopes, and recording meters. The course focuses on instrument transformers for journeymen and in-plant electricians.

*Prerequisite: EIC 150 or permission of instructor.*

### **EIC 165 Solid State Devices and Circuits**

#### **4 credits**

Explores the basic properties of diodes, transistors, triacs, SCRs, and other solid state devices. It covers applications of solid state devices in control and power conversion and the circuits in equipment likely to be encountered in power installations.

*Prerequisites: EIC 150, EIC 155, or permission of instructor.*

### **EIC 167 Electrical Maintenance**

#### **4 credits**

Introduces you to common electrical repairs, electrical systems, tools, and test equipment. It includes replacing or repairing devices such as receptacles, light fixtures and ballasts, circuit breakers, fuses, and switches. The course addresses electrical safety and code applications.

### **EIC 169 Electrical Code Calculations**

#### **4 credits**

Discusses calculations used in the application of the National Electrical Code. It emphasizes sizing of branch circuit and feeder conductors and calculating ratings of protective devices.

### **EIC 205 Advanced Electrical Planning**

#### **4 credits**

Explores the planning and layout of large commercial and industrial electrical installations.

### **EIC 210 Advanced National Electrical Code**

#### **4 credits**

An Advanced National Electrical Code course for the in-plant technician. The course emphasizes how to interpret NEC rules that apply to industrial/commercial installations. Maintenance electricians and residential wiremen desiring to upgrade their knowledge of these rules can benefit from this class.

*Prerequisite: EIC 130, EIC 135, or permission of instructor.*

### **EIC 211 IECC International Energy Conservation Code**

#### **4 credits**

IECC International Energy Conservation Code encourages energy conservation through efficiency in envelope design, mechanical systems, lighting systems and the use of new materials and techniques. This class provides an overview of critical concepts of the latest edition of the IECC and provides a basis for the correct use of the code in the design, plan review, inspection, and analysis of projects. It provides a clear understanding and correct use of the requirements identified by these basic code provisions, tables and categorizations that allow code users to apply the code in clear-cut situations, and helps to build their understanding of the intent of the code when asked to make code compliance decisions.

### **EIC 215 Advanced Code Calculations**

#### **4 credits**

An extension of EIC 190. The course emphasizes calculations for sizing conductors, conduits, fittings, protective devices, relays related to branch circuits, and feeders for motor loads. Other loads as they apply to industrial/commercial situations are also explored. Sizing of transformers and power factor correction calculations is discussed as well.

*Prerequisite: EIC 169 or permission of instructor.*

### **EIC 217 Electrical Estimating/Costing**

#### **4 credits**

Focuses on the fundamentals of electrical estimating, material takeoffs from prints, required labor hours, material loss allowances, and scheduling to ensure orderly work progress.

### **EIC 220 Industrial Electrical Controls I**

#### **4 credits**

Studies the application of electrical and electromechanical sensing/ control devices; heating, ventilating, and air conditioning applications; motor control; conveyor drives; and other industrial applications. You will design control systems to meet assigned conditions, use principles of relay logic to prepare correct ladder diagrams and wire up, and test and trouble-shoot systems in the laboratory. The course stresses accuracy, safety, and National Electric Code requirements.

*Prerequisite: EIC 150 or permission of instructor.*

### **EIC (pending) Advanced Industrial Electrical Controls**

#### **4 credits**

Builds on the application of electrical and electromechanical sensing/control devices; heating, motor control; conveyor drives; and other industrial applications. It focuses on variable speed drive technology, including operation, set-up, troubleshooting, maintenance, proper selection and application for drives, and basic drive overview and comparison. You will be introduced to real world uses of pneumatic and electro-pneumatic control through hands-on learning; you will learn to read symbols, and understanding of component technologies. You will design advanced control systems to meet assigned conditions, use principles of relay logic to prepare correct ladder diagrams and wire up, and test and trouble-shoot systems in the laboratory. The course stresses accuracy, safety, and National Electric Code requirements.

*Prerequisite: EIC 220 or permission of instructor.*

### **EIC 225 Programmable Controllers**

#### **4 credits**

Studies the use of solid-state control equipment, primarily the programmable controller and associated solid-state sensors to control equipment, machinery, or complete processes. The course 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. It enables you to design, implement, and test control systems in the laboratory to meet specifically-assigned control problems and also emphasizes accuracy, safety and National Electrical Code requirements.

*Prerequisites: EIC 150 and EIC 220 or permission of instructor.*

### **EIC 226 PLC Controllers II**

#### **4 credits**

Studies the advanced uses and applications of programmable logic controllers toward automated equipment, machines, and processes. The course 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. It enables you to create, implement, and troubleshoot ladder logic programs that simulate automated machine control and processes.

*Prerequisite: EIC 225 or permission of instructor.*

### **EIC 230 Instrumentation & Controls II**

#### **4 credits**

Introduces the advanced concepts, principles, equipment, and components of instrumentation and control systems found in the process and energy supply industries. Controllers, control schemes and advanced control schemes are covered at a level appropriate for the process technician. The function and operation of a proportional-integral-derivative (PID) controller will be explored. You will assemble and operate advanced control loops in a laboratory setting.

### **EIC 233 Electric Motors**

#### **1.5 credits**

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 240 Fire Alarm Fundamentals**

#### **4 credits**

Covers terminology, symbols, diagrams, devices, circuits, and wiring. The course focuses on basic layouts and principles involved in fire alarm system design and construction.

### **EIC 241 Advanced Fire Alarm Systems**

#### **4 credits**

Covers design, installation, documentation, testing, and codes. The course focuses on advanced layout and principles involved in fire alarm system design and construction, allowing you to test for NICET II certification.

*Prerequisite: EIC 240.*

### **EIC 242 National Fire Alarm Code**

#### **4 credits**

Covers Fire Alarm Code (NFPA72) and local codes terminology, symbols, diagrams, devices, circuits, and the wiring of fire alarm systems. The basic code layouts and principles involved in fire alarm design and construction also will be addressed. Students testing for NICET certifications can benefit from this class.

### **EIC 275 Special Topics**

#### **0.5-12 credits**

Provides you with a vehicle to pursue in-depth exploration of special topics of interest.

*Prerequisite: Permission of instructor.*

### **EIC 282 Internship**

#### **0.5-12 credits**

Provides you with the opportunity to supplement course work with practical work experience related to your educational program. You will 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 285 Independent Study**

#### **0.5-12 credits**

Meets the individual needs of students. You will engage in intensive study or research under the direction of a qualified instructor.

*Prerequisite: Permission of instructor.*

## **EMP – Emergency Management and Planning Courses**

[www.rccc.edu/emplan](http://www.rccc.edu/emplan)

### **EMP 101 Principles of Emergency Management**

#### **3 credits**

Presents a broad overview of an emergency management system and the importance of an integrated approach to managing emergencies.

### **EMP 105 Emergency Planning**

#### **3 credits**

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.

### **EMP 106 Exercise Design and Evaluation**

#### **3 credits**

Provides knowledge and the development of skills that enable you to train a staff and to conduct an exercise that tests a community's plan and its operational response capability.

### **EMP 107 Emergency Operations Center and Communications**

#### **3 credits**

Provides the knowledge and skills to manage and operate an EOC during crisis situations.

### **EMP 109 Incident Command System**

#### **3 credits**

Explores the dynamics of managing major emergency incidents and examines the National Incident Management System.

### **EMP 240 Leadership and Influence**

#### **3 credits**

Examines the dynamics of leadership techniques as they apply to emergency and disaster situations.

### **EMP 242 Effective Communication**

#### **3 credits**

Sharpens presentation and media skills of emergency management officials when giving and receiving information in emergency management contexts.

### **EMP 244 Developing Volunteer Resources**

#### **3 credits**

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.

### **EMP 247 Decision Making in a Crisis**

#### **3 credits**

#### **3 credits**

Focuses on individual and group decisions based on a model problem-solving process.

### **EMP 280 Business Emergency Management**

#### **3 credits**

#### **3 credits**

Develops contingency planning and emergency response skills required by private sector companies.

### **EMP 291 Basic Public Information Officer**

#### **3 credits**

#### **3 credits**

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 Services Courses**

[www.rccc.edu/ems](http://www.rccc.edu/ems)

### **EMS 115 First Responder**

#### **3 credits**

Provides you 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 121 EMT Fundamentals**

#### **3 credits**

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.

*Prerequisites: High school diploma or GED, assessment scores at the college level in reading and writing or equivalent.*

### **EMS 122 EMT Medical Emergencies**

#### **4 credits**

Introduces 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 or Co requisite: EMS 121*

### **EMS 123 EMT Trauma Emergencies**

#### **2 credits**

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 or Co requisites: EMS 121, EMS 122*

### **EMS 124 EMT Special**

#### **Considerations**

#### **2 credits**

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 or Co requisites: EMS 121, EMS 122, EMS 123, EMS 170*

### **EMS 126 Emergency Medical**

#### **Technician – Basic Refresher**

#### **2 credits**

Provides required didactic and skills review for renewing EMT students.

*Prerequisites: Current or less than 6 months expired Colorado or NREMT EMT Basic certification, or initial EMT course completion within the last 2 years.*

### **EMS 127 Advanced EMT Special**

#### **Considerations**

#### **2 credits**

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: Current Colorado State EMT Basic certification; permission of instructor.*

### **EMS 129 Advanced Emergency Medical Technician Pharmacology**

#### **1 credit**

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: Current Colorado State EMT Basic certification; permission of instructor.*

### **EMS 130 Emergency Medical Technician Intravenous Therapy**

#### **2 credits**

Focuses on cognitive and skill practice as required by Colorado Prehospital Care Program for EMT Basic level IV approval. It examines criteria, procedures and techniques for IV therapy, discusses fluid and electrolyte balance and principles and treatment for shock.

*Prerequisite: Current Colorado State EMT Basic certification; permission of instructor.*

### **EMS 131 Advanced Emergency Medical Technician Fundamentals**

#### **2 credits**

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: Current Colorado State EMT Basic certification; permission of instructor.*

### **EMS 133 Advanced Emergency Medical Technician Medical Emergencies**

#### **2 credits**

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: Current Colorado State EMT Basic certification; permission of instructor*

### **EMS 135 Advanced Emergency Medical Technician Trauma Emergencies**

#### **2 credits**

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: Current Colorado State EMT Basic certification; permission of instructor*

**EMS 138 Basic EMS Simulation Lab  
3 credits**

Integrates the knowledge and skills learned during Emergency Medical Technician (EMT) training. The participants will be exposed to the environment they will function in upon completion of their Emergency Medical Service (EMS) education. Participants will be expected to manage all aspects of an EMS call at the basic life support level from the time of dispatch to patient transfer. This will include radio, verbal and written communications; legal and ethical issues; response activities; scene assessment and management; patient interaction, assessment, and treatment; patient disposition; and preparation for the next call. Simulations are realistic representations of calls an EMT may encounter, and are conducted in "real time." There is no verbalization of any aspect of the call. Unless a safety issue exists there is no instructor interaction with the learner until the call is complete and the debriefing session occurs. The knowledge base for this course is based on current EMT certification.

**EMS 138 Basic EMS Simulation Lab  
3 credits**

Builds upon the knowledge gained in the basic simulation lab. The participants will be exposed to the environment they will function in upon completion of their Emergency Medical Service (EMS) education. Participants will be expected to manage all aspects of an EMS call at the advanced life support level from the time of dispatch to patient transfer. This will include radio, verbal and written communications; legal and ethical issues; response activities; scene assessment and management; patient interaction, assessment, and treatment; patient disposition, and preparation for the next call. Simulations are realistic representations of calls an advanced life support clinician may encounter, and are conducted in "real time." There is no verbalization of any aspect of the call. Unless a safety issue exists there is no instructor interaction with the learner until the call is complete and the debriefing session occurs. The knowledge base for this course is based on current EMT certification, information gained during the basic simulation lab, and knowledge and skills acquired from advanced life support classes.

**EMS 150 Pediatric Education for  
Prehospital Professionals  
1 credit**

Provides the student with core knowledge and skills necessary to provide emergency care to the pediatric patient.  
*Prerequisite: EMT-Basic or higher certification.*

**EMS 154 Trauma Life Support  
1 credit**

Provides the student with information and skill practice to treat trauma patients in the prehospital environment.  
*Prerequisite: EMT-Basic or higher certification.*

**EMS 155 Medical Life Support  
1 credit**

Provides the student with information and skill practice to assess and treat medical patients in the prehospital environment.  
*Prerequisite: EMT-Basic or higher certification.*

**EMS 162 Wilderness EMT Upgrade  
2 credits**

Provides the student with information and skill practice to apply their assessment and treatment skills to patients in a remote setting.  
*Prerequisite: EMT-Basic or higher certification.*

**EMS 170 EMT-Basic Clinical  
1 credit**

Provides the EMT student with the clinical experience required.  
*Prerequisites or Co requisites: EMS 121, EMS 122, EMS 123, EMS 124*

**EMS 171 Advanced Emergency  
Medical Technician Clinical  
Internship  
2 credits**

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: EMS 127, 129, 130, 131, 133, 135 or Permission of instructor.*

**EMS 178 EMS Seminar  
2 credits**

Provides the student the opportunity to explore local interests and needs in a less formal setting

**EMS 180 EMT-Clinical Internship  
1-6 credits**

Provides the Emergency Medical Technician (EMT) with supervised clinical learning experience that goes beyond the initial EMT requirements for the State of Colorado Department of Health. The course enables you to work with an assigned preceptor to develop an understanding of the role and responsibilities of the EMT-Basic.  
*Prerequisite: Current Colorado State EMT Basic certification; permission of instructor.*

**EMS 181 EMS Internship I  
1-6 credits**

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.

**EMS 182 EMS Internship II  
1-6 credits**

Serves as a continuation of EMS 181 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.

### **EMS 220 Paramedic Refresher 3 credits**

Updates the Paramedic in four specific areas of prehospital emergency care. It includes trauma, medical, Advanced Life Support (ALS) and elective topics focused on ancillary issues in EMS.

*Prerequisite: Current or less than 6 months expired Colorado or NREMT Paramedic certificate.*

## **Hospital-based Paramedic Programs**

### **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 Basic course, IV approval, Basic EKG interpretation, Anatomy and Physiology, and approximately one year of experience as an EMT-Basic. Contact an EMS faculty advisor for more information.*

### **EMS 225 Fundamentals of Paramedic Practice 3 credits**

Serves as the first course of the National Standard Paramedic Curriculum as approved by the Colorado State Department of Health and Environment.

### **EMS 226 Fundamentals of Paramedic Practice Lab 2 credits**

Serves as the lab experience to coincide with EMS 225 topics.

### **EMS 227 Paramedic Special Considerations 3 credits**

Focuses on a comprehensive study of Advanced Life Support Practice.

### **EMS 228 Paramedic Special Considerations Lab 2 credits**

Serves as the lab experience for those students enrolled in EMS 227.

### **EMS 229 Paramedic Pharmacology 3 credits**

Focuses on a comprehensive study of emergency pharmacology.

### **EMS 230 Paramedic Pharmacology Lab 2 credits**

Serves as the required lab course in the paramedic education program.

### **EMS 231 Paramedic Cardiology 5 credits**

Addresses cardiology topics as presented in the National Standard Curriculum for paramedics.

### **EMS 232 Paramedic Cardiology Lab 1 credit**

Incorporates a hands-on application of principles of cardiac care in the pre-hospital environment.

### **EMS 233 Paramedic Medical Emergencies 4 credits**

Focuses on a comprehensive study of adult and pediatric medical emergencies.

### **EMS 234 Paramedic Medical Emergencies Lab 1 credit**

Focuses on a clinical study of adult and pediatric medical emergencies.

### **EMS 235 Paramedic Trauma Emergencies 4 credits**

Focuses on a comprehensive study of adult and pediatric trauma emergencies.

### **EMS 236 Paramedic Trauma Emergencies Lab 1 credit**

Serves as a lab presenting various acute trauma scenarios.

### **EMS 237 Paramedic Internship Preparatory 2 credits**

Reviews concepts and techniques used in the pre-hospital setting.

### **EMS 279 Seminar 2 credits**

Provides the student with an experiential learning opportunity

### **EMS 280 Paramedic Internship I 6 credits**

Serves as the preceptor/internship program for paramedic students.

### **EMS 281 Paramedic Internship II 6 credits**

Serves as the continuation of EMS 280, preceptor program for paramedic students.

## **ENG – English Courses**

[www.rbcc.edu/english](http://www.rbcc.edu/english)

### **ENG 030 Basic Writing Skills 2 credits**

Focuses on sentence and basic paragraph structure and development. The course reviews grammar, usage, and punctuation skills while employing critical thinking strategies and the writing process to respond to a wide variety of writing situations.

*Prerequisite: Accuplacer Sentence Skills (25-49).*

### **ENG 060 Writing Fundamentals 3 credits**

Focuses on paragraph structure and development and introduces the formal essay. The course reviews grammar, usage, and punctuation skills while employing critical thinking strategies and the writing process to respond to a wide variety of writing situations.

*Prerequisites: A grade of C or above in ENG 030 and REA 030 or equivalent assessment scores.*

### **ENG 090 Basic Composition 3 credits**

Emphasizes critical thinking and explores writing for specific purposes and audiences. The course develops skills required for college-level writing while reviewing paragraph structure and focusing on essay development.

*Prerequisites: A grade of C or above in ENG 060 and REA 060 or equivalent assessment scores.*

### **ENG 121 English Composition I: GT-C01 3 credits**

Emphasizes the planning, writing, and revising of compositions, including the development of critical and logical thinking skills. Composition assignments stress analytical, evaluative, and persuasive/argumentative writing.

*Prerequisites: A grade of C or above in ENG 090 and REA 090 or equivalent assessment scores. An English score of 18 or above on the ACT also allows a student to enter ENG 121.*

## **ENG 122 English Composition II: GT-C02**

### **3 credits**

Expands and refines the objectives of English Composition I. The course emphasizes critical/logical thinking and reading, problem definition, research strategies, and writing analytical, evaluative, and/or persuasive papers that incorporate research.

*Prerequisite: A grade of C or above in ENG 121.*

## **ENG 131 Technical Writing I**

### **3 credits**

Focuses on principles for organizing, writing, and revising clear, readable technical documents for industry, business, and government.

*Prerequisite: A grade of C or above in ENG 090 and REA 090 or equivalent assessment scores. An English score of 18 or above on the ACT also allows a student to enter ENG 131.*

## **ENG 221 Creative Writing I**

### **3 credits**

Teaches techniques for creative writing. The course explores imaginative uses of language through creative genres (fiction, poetry, literary nonfiction) with emphasis on your own unique style, subject matter, and needs.

*Prerequisites: A grade of C or above in ENG 090 and REA 090 or equivalent assessment scores.*

## **ENG 226 Fiction Writing**

### **3 credits**

Teaches techniques for creating fiction, including the study and appreciation of the language and forms of the short story.

*Prerequisite: A grade of C or above in ENG 090 and REA 090 or equivalent assessment scores.*

## **ENG 227 Poetry Writing**

### **3 credits**

Teaches techniques for creating poems, including study of figurative language, forms, and sound patterns of poetry.

*Prerequisite: A grade of C or above in ENG 090 and REA 090 or equivalent assessment scores.*

## **ENG 228 Writing for the Graphic Novel**

### **3 credits**

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: A grade of C or above in ENG 090 and REA 090 or equivalent assessment scores.*

## **ENG 230 Creative Nonfiction**

### **3 credits**

Teaches the incorporation of literary techniques into factual writing. The course enables you to survey a wide range of readings and to analyze form and content. The course includes critical review, biographical profiles, travel writing, and memoirs. This course provides the opportunity for you to write and review your own nonfiction in a supportive, constructive setting.

*Prerequisite: A grade of C or above in ENG 090 and REA 090 or equivalent assessment scores.*

## **ENG 231 Literary Magazine**

### **3 credits**

Teaches the editorial process involved in preparing a literary magazine for publication. The course 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. The course enables you to produce a literary magazine.

*Prerequisite: A grade of C or above in ENG 090 and REA 090 or equivalent assessment scores.*

## **ENT – Engineering Technology Courses**

### **ENT 106 - Print Reading for Manufacturing**

#### **3 credits**

Focuses on blueprint reading techniques related to manufacturing operations. The course will cover basic drafting standards, sketching, machine shop math, symbol interpretation, tolerance, and dimensioning standards.

## **ENV – Environmental Science Courses**

### **ENV 101 Introduction to Environmental Science: GT-SC1**

#### **4 credits**

Provides an introduction to 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. Using a holistic approach, students will study how the foundations of natural sciences interconnect with the environment. This course includes laboratory experience.

*Prerequisites: ENG 090 and MAT 090 (grade C or higher) or equivalent assessment scores.*

## **ENY – Energy Technology Courses**

[www.rrc.edu/renewable](http://www.rrc.edu/renewable)

### **ENY 101 Introduction to Energy Technologies**

#### **3 credits**

Introduces the energy technologies in use today and those that are in the research stage as possible alternatives. The course presents technologies including active solar heating, passive solar heating, wind energy systems, biomass, photovoltaic, co-generation, low and high head hydro, hydrogen, geothermal, power towers and energy storage systems.

### **ENY 102 Building Energy Audit Techniques**

#### **3 credits**

Teaches the principles of building energy audit techniques including the use of diagnostic software. During the course the student will perform an energy audit. As a result of the audit, he/she will be able to recommend an application of the most appropriate energy-saving treatments such as insulation, windows, appliances and HVAC equipment.

### **ENY 120 Solar Thermal System Install**

#### **4 credits**

Teaches the student about solar thermal panels, and installation techniques. The student will apply the principles of solar energy, site analysis, cost vs. payback, sizing, energy audit, and solar system design into a project.

**ENY 130 Solar PV Grid-Tie****2 credits**

Students learn about current solar collection and conversion equipment, and how size a grid-tied system and to install for maximum performance. They will layout and orient these systems using standard industry tools such as a solar path finder. Conduit bending, wiring and roof attachments and penetrations are also part of the course.

**ENY 131 Advanced PV Install****2 credits**

Exposes the student to additional labs having to do with panel racking and installation and testing. Sizing systems with battery storage and usage calculations for off-grid applications will be part of the course.

**ENY 132 NABCEP Entry-level Prep Class****1 credit**

Provides the student with a review of the material and concepts that might be on the NABCEP Entry-Level Test of Knowledge.

**ENY 141 Passive Solar Systems I****3 credits**

Beginning application of Passive Solar design concepts in the built environment. Learn to Calculate the Solar resource and its effects on structures, mass storage and natural energy transfer methods also examined. Assessment of building heat loss and insulation methods, energy conservation and efficiency included. Passive concepts are applied to both existing retrofit and new construction.

**ENY 153 Renewable Energy Construction****4 credits**

Introduces solar construction techniques, terminology and construction materials in detail. This course covers moisture and air quality in tight construction as well as an overview of the building shell and interior walls.

**ENY 175 Special Topics: Insulation and Air Sealing****1 credit**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**ENY 176 Special Topics: Applied Information Technology for Energy****4 credits**

Explores a variety of new software applications now available for the trades engaged in energy management. Introduces computer applications such as CAD, scheduling, estimating, and accounting programs. Explores technology choices and compares them. (Previously CON 105 and ENY 105).

**ENY 177 Special Topics: Commercial Building Energy Audit****4 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**ENY 230 PV Troubleshooting and Maintenance****3 credits**

Students explore and identify the trouble areas as they might encounter while servicing a PV system. Course includes safety and maintenance procedures for off-grid battery/hybrid systems, and tracking arrays.

**ENY 231 Solar Contracting****4 credits**

Helps students to understand the PV electrical code (NEC 690). Permitting, Utility rebate forms and sample forms from local jurisdictions will be explored. Course details the entire installation aspect of the business from design through final inspection.

**ENY 240 Estimating****4 credits**

A capstone class for the student "bringing it all together". The student will learn how to, and be required to provide a bid package to include all materials properly priced with labor, sub contracting, taxes and all other required fees in a package that will provide a quality job to the customer while showing a profit.

**ENY 275 Special Topics: Thermal Install II & Controls****4 credits**

A continuation of the skills learned in ENY 120 with additional labs to help reinforce the learning process. The student will learn additional system control and operation techniques. System and equipment troubleshooting is also included.

**ENY 276 Special Topics: Energy Auditing Field Course****3 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**ENY 277 Special Topics: Advanced PV Concepts and Commercial Applications****4 credits**

Building on concepts learned earlier in the program, this course expands upon the use of photovoltaic commercial and utility scale systems. Included are troubleshooting and maintenance practices as well as battery back-up and off-grid applications. (Replaces ENY 230: PV Troubleshooting and Maintenance)

**ENY 280 Internship****3 credits**

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.

**ESL – English as a Second Language Courses**

[www.rcc.edu/international](http://www.rcc.edu/international)

**ESL 012 Intermediate Pronunciation****3 credits**

Provides listening, speaking and reading activities that help you recognize and produce a variety of stress and intonation patterns in English. It helps you to produce problematic English sounds.  
*Prerequisite: appropriate placement score.*

**ESL 033 Advanced Conversation****3 credits**

Provides you with opportunities to increase the listening and speaking skills required in academic and work situations. It emphasizes vocabulary building, listening and note-taking strategies, as well as questioning, discussion, and presentation skills.  
*Prerequisite: appropriate placement score.*

**ESL 043 Advanced Reading  
3 credits**

Prepares you for academic reading assignments. It assists you to read more accurately and critically thought the development of vocabulary knowledge and reading skills. It introduces research skills.

*Prerequisites: completion of Intensive English Program or appropriate placement score.*

**ESL 053 Advanced Composition  
3 credits**

Reviews paragraph organization and develops the skill of writing essays using selected rhetorical modes. It emphasizes accurate use of advanced grammatical structures. It includes summarizing, paraphrasing, and research writing.

*Prerequisites: completion of Intensive English Program or appropriate ACCUPLACER score.*

**ESL 091 Basic Intensive English  
8 credits**

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. It provides the first of six levels of intensive English as a second language.

*Prerequisite: appropriate assessment score.*

**ESL 092 High Basic Intensive English  
8 credits**

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. It provides the second of six levels of intensive English as a second language.

*Prerequisite: ESL 091 or appropriate assessment score.*

**ESL 093 Low Intermediate Intensive English  
8 credits**

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. It provides the third of six levels of intensive English as a second language.

*Prerequisite: ESL 092 or appropriate assessment score.*

**ESL 094 Intermediate Intensive English  
8 credits**

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. It provides the fourth of six levels of intensive English as a second language.

*Prerequisite: ESL 093 or appropriate assessment score.*

**ESL 095 High Intermediate Intensive English  
8 credits**

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. It provides the fifth of six levels of intensive English as a second language.

*Prerequisite: ESL 094 or appropriate assessment score.*

**ESL 096 Low Advanced Intensive English  
8 credits**

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. It provides the sixth of six levels of intensive English as a second language.

*Prerequisite: ESL 095 or appropriate assessment score.*

**ESL 275 Special Topics:  
Semi-Intensive ESL  
6 credits**

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.

*Prerequisites: appropriate assessment score.*

**ESL 276 Special Topics: iBT TOEFL Preparation  
4 credits**

Provides non-native speakers of English with training for the iBT TOEFL exam. TOEFL is required for non-native speakers who wish to continue their education in four-year college and university settings. The integrated speaking, listening, reading, and writing skills required for the new iBT TOEFL are emphasized in this course.

*Prerequisite: successful completion of Intensive English Program or appropriate assessment score.*

**EST – Esthetician Courses**

[www.rccc.edu/warrentech](http://www.rccc.edu/warrentech)

**EST 110 Introduction to Facials and Skin Care  
3 credits**

Provides a basic understanding of massage manipulations when providing facials and the study of skin in both theory and practical applications. Benefits derived from proper facial and good skin care routines. Training is conducted in a classroom or lab setting using mannequins or models.

**EST 111 Intermediate Facials & Skin Care  
2 credits**

Covers theory and practical application pertaining to anatomy, skin disorders, skin types and facial shapes. Students help patrons to select the proper skin care treatment. Practical and theory application can be done in specialized classes or supervised salon (clinical) setting using models or customer service.

**EST 160 Introduction to Disinfection, Sanitation and Safety  
2 credits**

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 161 Intermediate Disinfection, Sanitation & Safety  
2 credits**

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 210 Advanced Massage & Skin Care**

### **2 credits**

Provides the student with advanced techniques in massage, skin care, and lash/brow tinting. Theory and practical procedures ready the student for employment. Instruction is provided in specialized classes or in a supervised salon (clinical) setting. Student preparation for State Board Licensing Examination.

## **EST 211 Facial Makeup**

### **1 credit**

Provides instruction on cosmetics and their functions. The importance of color theory, facial types and skin tones as they relate to facial makeup. Instruction from the basic makeup application to the corrective makeup procedure is taught. Disinfection and sanitation is taught as it pertains to all aspects of makeup.

## **EST 212 Hair Removal**

### **3 credits**

Provides 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 230 Preparation for State Board**

### **2 credits**

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 260 Advanced Disinfection, Sanitation & Safety**

### **2 credits**

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.

## **FIW – Fine Woodworking Courses**

[www.rrcc.edu/finewood](http://www.rrcc.edu/finewood)

## **FIW 100 Fundamentals of Woodworking**

### **3 credits**

Introduces students to the materials, drawings and tools used in the joinery, assembly, preparation and finishing of a woodworking project. The course uses a project that directs students to develop working drawings from which a furniture piece is built.

## **FIW 101 Introduction to Woodworking**

### **6 credits**

Provides an introduction to woodworking based on an old-world approach to the instruction of basic woodworking skills. This is an intense course intended for serious/professional students only. 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 102 Classical Guitar Construction**

### **6 credits**

Create a Spanish-style, nylon string classical guitar from scratch. Beginning with raw materials, the student is expected to build a classical guitar.

## **FIW 103 Steel String Guitar Construction**

### **6 credits**

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.

## **FIW 104 Elements of Design**

### **2 credits**

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 105 Guitar Setup and Repair**

### **3 credits**

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 109 Introduction to Cabinetmaking**

### **4 credits**

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 118 Introduction to Turning**

### **3 credits**

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 covered.

## **FIW 119 Intermediate Turning I**

### **3 credits**

Expands on FIW 118 (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

## **FIW 120 Intermediate Turning II**

### **3 credits**

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 119 Intermediate Turning I.

## **FIW 121 Advanced Turning**

### **3 credits**

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 120 Intermediate Turning II.

## **FIW 122 Wood Carving**

### **3 credits**

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 125 Wood Finishing****3 credits**

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 126 French Polish****1 credit**

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 128 Doormaking****4 credits**

Involves the planning, design, selection and purchase of materials, construction, finishing and hanging of a door you have made. Assorted styles of door construction, joinery, glues and fabrication techniques are examined.

*Prerequisites: FIW 100, FIW 101, FIW 109 or permission of instructor*

**FIW 130 Mandolin Construction****6 credits**

Design and build a carved top/back mandolin from a set of plans.

**FIW 131 Electric Guitar****Construction****6 credits**

Design and build an electric guitar from a set of plans. The class also teaches students the various parts of an electric guitar and how they work together to form a functioning instrument, as well as basic finishing and setup.

**FIW 175 SpTp: Advanced Instrument Finishing****3 credits**

Assists students who are interested in individual topics within the normal curriculum. The student identifies and selects objectives that he/she needs for industry upgrades or special training to enter the workforce. The student may explore current

**FIW 200 Veneering and Marquetry****3 credits**

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 201 Furniture I: Frame Joinery****4 credits**

Explores different types of wood joinery used when working with furniture designs utilizing curves. Final project requires design and fabrication of a small table that includes a drawer and veneer.

*Prerequisite: FIW 100, FIW 101, FIW 109 or permission of instructor.*

**FIW 202 Furniture II: Carcass and Chair Construction****4 credits**

Explores different types of wood connections, using both hand and power tool techniques in frame and carcass joinery. Students will cut, fit, and assemble projects.

**FIW 203 Furniture III: Period Furniture Reproduction****4 credits**

Create and reproduce a piece of furniture from a selected time period. Ancient and modern techniques and materials are examined while selecting the construction process for an individual piece. This class is an extension to FIW 202 - Furniture II.

**FIW 207 Workbench Construction****6 credits**

Design and fabricate a workbench to be used in woodworking, based on specific needs and from a complete set of drawings.

**FIW 208 Furniture Restoration and Repair****3 credits**

Teaches the student to repair and restore furniture. Students will learn how to determine the adhesive and finish used, repair veneer, replace broken pieces, reassemble reconditioned furniture repair, and restore finishes. Students will learn how to determine the original construction methods employed in order to repair furniture.

*Prerequisites: FIW 100 (or equivalent) and FIW 125.*

**FIW 209 Intermediate Cabinetmaking****4 credits**

Covers cabinet types, kitchen and cabinet design, layout, construction, hardware installation, materials, power tool use, accessories and estimation.

*Prerequisites: FIW 109, FIW 100, FIW 101 or permission of instructor.*

**FIW 210 Bending and Laminations****4 credits**

Involves the process of curving natural and manmade panels through a variety of methods including spaced kerfs, bent lamination and steam bending. Form construction, various qualities of different

wood species and adhesive selection are studied.

*Prerequisites: FIW 100, FIW 101, FIW 109 or permission of instructor.*

**FIW 212 Contemporary Furniture Making****4 credits**

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 104 Elements of Design and FIW 201 Furniture I.

**FIW 213 Advanced Contemporary Furniture Making****4 credits**

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: FIW 212.*

**FIW 217 Advanced Cabinetmaking****4 credits**

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 109 – Intro to Cabinetmaking and FIW 209 – Intermediate Cabinetmaking.

*Prerequisite: FIW 109 and FIW 209.*

**FIW 219 Woodworking Lab****4 credits**

Provides the opportunity for the experienced woodworker to create a piece to expand their woodworking skills through the design and construction of a carefully selected woodworking project. In collaboration with the instructor you will create drawings, choose materials, resolve joinery techniques, estimate and construct the proposal. Emulation of a profitable woodworking business is part of this class experience and the ability to anticipate, plan, complete, and work individually will be expected.

*Prerequisite: FIW 200.*

### **FIW 230 Advanced Mandolin Construction**

**6 credits**

Design and build a carved top/back mandolin from a set of plans. This class is an extension of FIW 130 Mandolin Construction.

*Prerequisite: FIW 130.*

### **FIW 231 Advanced Electric Guitar Construction**

**6 credits**

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 131 Electric Guitar Construction.

### **FIW 232 Advanced Acoustic Guitar Construction**

**6 credits**

Design and build a steel string or classical guitar using advanced techniques including material selection, inlay, scale lengths, cutaways, and composite materials. Advanced traditional and modern construction techniques are explored. This course expands upon techniques learned in FIW 102 Classical Guitar Construction or FIW 103 Steel Guitar Construction.

### **FIW 275 Special Topics**

**0 – 6 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest

### **FIW 285 Independent Study**

**0-12 credits**

Students engage in intensive study or research under the direction of a qualified instructor.

*Prerequisite: Permission of the instructor.*

## **FRE – French Courses**

[www.rccc.edu/languages](http://www.rccc.edu/languages)

### **FRE 101 Conversational French I**

**3 credits**

Introduces beginning students to conversational French and focuses on understanding and speaking French. It covers basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

### **FRE 102 Conversational French II**

**3 credits**

Continues the sequence for beginning students who wish to understand and speak French. It covers basic conversational patterns, expressions, and grammar.

*Prerequisite: FRE 101 or instructor permission.*

### **FRE 111 French Language I**

**5 credits**

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 112 French Language II**

**5 credits**

Expands students' interpretive, interpersonal, and presentational communicative abilities in the language across the disciplines. Integrates these skills with the study of the cultures in which the language is used. Offers a foundation in the analysis of culture and develops intercultural communicative strategies.

*Prerequisite: FRE 111 or instructor permission.*

### **FRE 211 French Language III:**

**GT-AH4**

**3 credits**

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.

*Prerequisite: FRE 112 or instructor permission.*

### **FRE 212 French Language IV:**

**GT-AH4**

**3 credits**

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

*Prerequisite: FRE 211 or instructor permission.*

## **FST – Fire Science Technology Courses**

[www.rccc.edu/fire](http://www.rccc.edu/fire)

### **FST 100 Firefighter I**

**9 credits**

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 course is a classroom section in which the IFSTA 200 Essentials of Firefighting Manual is taught.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*  
*Corequisite FST 107.*

### **FST 102 Principles of Emergency**

**Services**

**3 credits**

Introduces the fire service organization and operation from past to present operations. It includes operation and organization of federal, state, local and private protection forces. The course emphasizes extinguishing methods and equipment, special extinguishing agents, and special hazard considerations. It serves as a prerequisite for students with no previous fire suppression training or experience.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **FST 103 Firefighter Occupational**

**Health and Safety**

**3 credits**

Focuses on on-scene and on-the-job firefighter health, safety and fitness, the safety officer, mental well-being, stress management, and standards related to health, safety, and fitness. This course parallels NFPA 1500 Standards.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **FST 104 Fire Protection Systems**

**3 credits**

Addresses principles and functions involved in the installation and use of sprinkler systems, special suppression systems, and fire detection and alarm systems. It covers portable fire extinguishing equipment requirements, sprinkler systems, installation, inspection and maintenance, special protection systems, and residential sprinklers.

*Prerequisites: FST 100, ENG 090 (grade C or higher) or equivalent assessment scores or permission of instructor.*

**FST 105 Building Plans and Construction****3 credits**

Covers various methods of building construction, the materials used in building construction, and their relationship to methods of fire attack and extinguishments. The course includes types of building construction, principles of fire resistance, flame spread, smoke and fire containment, basic knowledge of plan review, and blueprint specifications. *Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**FST 106 Fire Prevention****3 credits**

Introduces the organization of the fire prevention agency; inspections, surveying, mapping and company inspections; recognition of fire hazards; engineering a solution to the hazard; enforcement of the solution; and public relations as affected by fire prevention. *Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**FST 107 Hazardous Materials Awareness Operations****3 credits**

Covers 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: ENG 090 (grade C or higher) or equivalent assessment scores.*

**FST 110 Job Placement and Assessment****3 credits**

Addresses all aspects of the fire service entrance examination process and 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: ENG 090 (grade C or higher) or equivalent assessment scores.*

**FST 151 Driver-Operator****3 credits**

Provides you with the basic knowledge and skills to safely operate fire apparatus according to the NFPA professional standard. The course enables you to display and demonstrate knowledge of fire apparatus, operation of apparatus, pumps and pumping, hydraulics calculations, maintenance, and testing. *Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**FST 160 Candidate Physical Abilities Test Prep Course****3 credits**

Prepares students for the job of a firefighter as well as the testing requirements to test for CPAT. The tools for all classes will be fire service tools, such as, sledge hammer, hose, nozzle, ladders, pike pole, power saws, and rescue dummy. The course will include the basic fire skills of rescue, hose lay, equipment movement, ladder raise and extend, forcible entry, search, and ceiling breach. The course also includes aerobic and strength training to assist student in passing CPAT.

**FST 170 Clinical I****1 credit**

Provides the clinical practicum to apply the knowledge & skills related fire science technology. The clinical allows the student an inside view of the workings of a fire department and the day to day operations of a fire station. The student will be part of a crew and experience the teamwork involved in running the station and the emergency calls they may be involved in. *Prerequisites: FST 100, FST 107, or permission of instructor.*

**FST 175 Special Topic****1-6 credits**

Provides foundational (100 level) and advanced (200 level) classes that are offered in the fire service field that do not fall under the standard curriculum. These may be seminar classes or may be prior-learning credit portfolio classes that apply to fire electives, including National Fire Academy courses, NFPA courses, and local seminars and other professional courses and certifications. *Prerequisite: Permission of instructor.*

**FST 180 Internship****1-6 credits**

Allows you to gain experience and knowledge from on-the-job training. Positions are non-paid. This course must be arranged through the office of Job Placement/Cooperative Education and with approval of your advisor. *Prerequisite: Permission of program advisor.*

**FST 201 Instructional Methodology (Fire Instructor I)****3 credits**

Covers the role and responsibility of the fire service instructor. It includes oral communication skills, concepts of learning, developing lesson plans, instructional materials and delivery methods, testing and evaluations, records, reports, and demonstration of instructional abilities. *Prerequisites: FST 100 and 102, or permission of instructor.*

**FST 202 Firefighting Strategy and Tactics****3 credits**

Covers firefighting strategy and tactics, methods of fire attack, fire behavior, building construction, and pre-fire planning. *Prerequisites: FST 102, 104, and 107, or permission of instructor.*

**FST 203 Fire Science Hydraulics****3 credits**

Covers hydraulic calculations that are necessary in water delivery and supply for fire suppression, hydraulic laws and formulas as applied to fire protection requirements, and fire apparatus UL requirements. *Prerequisites: FST 105 and MAT 107.*

**FST 204 Fire Codes and Ordinances****3 credits**

Covers familiarization and interpretation of national, state, and local codes, ordinances, and laws which influence the field of fire prevention. Fire code and life safety code are reviewed and referred to throughout the course. *Prerequisites: FST 102, 104, 105, 106 or permission of instructor.*

**FST 205 Fire Cause Determination****3 credits**

Covers the proper method(s) of conducting basic fire investigation, determining area and point of origin, cause and methods of fire spread, and recognition and preservation of evidence. The course includes arson law, Constitutional law, interviewing, court procedures, and testimony.

### **FST 206 Fire Company Supervision and Leadership**

#### **3 credits**

Covers fire department organization, management philosophies, leadership traits, time management, group dynamics, communications, motivation counseling, conflict resolution, and employee discipline. The course meets the components of Fire Officer I State Certificate.

*Prerequisites: ENG 121; FST 102, 202, or permission of instructor.*

### **FST 207 Firefighting Strategy and Tactics II**

#### **3 credits**

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: FST 202, or permission of instructor.*

### **FST 250 Chemistry for Fire Protection**

#### **3 credits**

Addresses the actions and reactions of commonly encountered products and chemicals, chemical properties, and field applied chemistry

### **FST 251 Fire Service and the Law**

#### **3 credits**

Provides the professional fire officer with detailed information on federal, state, and local laws, ordinances, and civil and criminal liabilities that impact the fire service. It includes the OSHA and NFPA standards in-depth, as well as pensions, Workman's Compensation, drug testing, union bargaining agreements, and other topics.

### **FST 252 Fire Arson Investigation**

#### **3 credits**

Studies cause and origin as related to arson fires, evidence preservation and chain of evidence, interviewing, giving testimony, and laws associated with fire and arson investigation, records, and reports.

*Prerequisites: FST 100, 102, and 205, or permission of instructor.*

### **FST 253 Fire Ground Organization and Command (National Incident Management System)**

#### **3 credits**

Focuses on fire ground management, resource availability, management and deployment, National Incident Management System and all related components, communications, problem solving, and table top exercises.

*Prerequisite: FST 202, or permission of instructor.*

### **FST 254 Hazardous Materials Technician**

#### **3 credits**

Focuses on techniques associated with hazardous materials mitigation, the use of monitoring devices, components of a mitigation team, and command and control of hazardous materials incidents.

*Prerequisite: FST 107.*

### **FST 255 Fire Service Management**

#### **3 credits**

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. It introduces you to current management practices and philosophies and real-world applications from the supervisor's point of view. The course 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.

*Prerequisites: FST 202 and FST 206, or permission of instructor.*

### **FST 256 Fire Service EMS Management**

#### **3 credits**

Addresses budgeting, staffing, training, and equipment issues; transportation, standard of care, and protocols; operations, communications, incident and disaster management; and legal issues associated with EMS operations.

### **FST 257 Fire Department Administration**

#### **3 credits**

Focuses on the operations of volunteer and combination fire departments; compliance with standards and ordinances; funding and budgeting; recruiting, hiring, and retaining employees; organizational planning; and public relations.

*Prerequisite: FST 206, or permission of instructor.*

### **FST 258 Wildland Fire Incident Management and Organization**

#### **3 credits**

Introduces and develops supervisory and decision-making skills for fireline management individuals. The course 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. The course also covers fireline safety, size-up, incident planning, ordering, tactics, strategies, and administrative duties.

*Prerequisite: FST 152 or previous certified red card training.*

### **FST 259 Wildland Firefighting**

#### **3 credits**

Focuses on management of uncontrolled fire burning, urban/wildland interface, strategy and tactics used in controlling wild land fires, prevention methods, and incident command practices.

### **FST 260 Intermediate Fire Behavior**

#### **\$290**

#### **2 credits**

Analyzes the effects of fuels, weather, topography, and fire behavior on the wildland fire environment and acquaints prospective fire line supervisors in wildland fire behavior for effective and safe fire management operations.

### **FST 261 Fire Operations in the Urban Interface**

#### **2 credits**

Examines fireline personnel skills to anticipate and predict wildland fire behavior, weather, and rates of spread. This course was developed under the Interagency Curriculum established and coordinated by the National Wildfire Coordinating Group. The course covers fire environment, fuels classification, topography and fire behavior, temperature-moisture relationship, fuel moisture, local and general winds, atmospheric stability and instability, keeping current with the weather, extreme fire behavior, fire behavior affecting fireline tactics, and fire behavior predictions.

*Prerequisites: Firefighter II in the National Wildfire Coordinating Group and ability to perform wildland firefighting tasks.*

### **FST 262 Wildland Fire Behavior**

#### **3 credits**

Gives students fireline personnel skills to anticipate and predict wildland fire behavior, weather, and rates of spread. This course was developed under the Interagency Curriculum established and

coordinated by the National Wildfire Coordinating Group. The course covers fire environment, fuels classification, topography and fire behavior, temperature- moisture relationship, fuel moisture, local and general winds, atmospheric stability and instability, keeping current with the weather, extreme fire behavior, fire behavior affecting fireline tactics, and fire behavior predictions.

*Prerequisites: Firefighter II in the NWCG system and ability to perform wildland firefighting tasks in the field.*

### **FST 263 Powersaws S212**

#### **2 credits**

Teaches the wildland firefighter the skills necessary to use, repair, and maintain a chainsaw in the field and focuses on techniques to fell trees and buck material in a fireline operation.

*Prerequisites: Firefighter Type II in National Wildfire Coordinating Group and ability to perform chainsaw operations.*

### **FST 264 Helicopter Crew S217**

#### **2 credits**

Provides training for fire and nonfire personnel involved in project assignments with helicopters. It enables you to develop skills and to work with a helicopter in performing tasks common to all helicopter operations.

### **FST 265 Ignition Operations S234**

#### **2 credits**

Teaches the wildland firefighter techniques in conducting firing operations. It focuses on the duties and responsibilities in applying fire to the ground, the devices used, techniques and sequences, fire behavior descriptions, evaluations of the operation, and related safety concerns.

*Prerequisite: FST 152 or equivalent, Intermediate Fire Behavior; qualification as a Squad Boss/Firefighter Type 1.*

### **FST 266 Crew Boss S230**

#### **2 credits**

Meets the training needs of a crew boss on an incident. It includes preparation, mobilization, tactics and safety, off-line duties, demobilization, and postincident responsibilities.

*Prerequisite: FST 260 or completion of S290 Intermediate Fire Behavior, squad boss qualification.*

### **FST 270 Basic Air Ops S270**

#### **1 credit**

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. The course introduces you to current management practices and philosophies and real-world applications from the supervisor's point of view. It covers decision-making/problem-solving, communication skills, conflict resolution, and 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.

*Prerequisites: FST 202 and FST 206 or permission of instructor.*

### **FST 275 Special Topics- Fire**

#### **Analysis Thesis**

#### **1-4 credits**

Provides you with a vehicle to pursue in-depth exploration of special topics of interest not previously offered. The course 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 285 Independent Study**

#### **1-6 credits**

Meets the individual needs of students. You will engage in intensive study or research under the direction of a qualified instructor. The product of this course is an applied research project that will not only benefit the student but the student's organizational skills as well.

*Prerequisite: Permission of instructor.*

### **FST 289 CAPSTONE**

#### **1-12 credits**

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.*

## **GED – General Education Courses**

[www.rccc.edu/ged](http://www.rccc.edu/ged)

### **GED 011 GED Preparation**

#### **1 credit**

GED 011 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**

[www.rccc.edu/geography](http://www.rccc.edu/geography)

### **GEO 105 World Regional Geography: GT-SS2**

#### **3 credits**

Facilitates an understanding of spatial relationships between and among the geographic regions of the world. It includes demographic and cultural (political, economic, and historic) forces related to the physical environments of selected regions. The course focuses on analysis of interrelationships between developed and developing regions and the interactions between human societies and natural environments.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **GEO 106 Human Geography: GT-SS2**

#### **3 credits**

Introduces geographic perspectives and methods with applications to the study of human activities. The course emphasizes the distribution of humans, adjustments to the natural environment, and land use practices.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **GEO 111 Physical Geography w/Lab: Landforms: GT-SC1**

#### **4 credits**

Introduces the principles of landforms as a major aspect of our natural environment. The course incorporates an integrated process of lecture, discussion, and laboratory assignments. GEO 111 may be transferred to colleges and universities as a science credit. The course is offered in the fall.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **GEO 112 Physical Geography w/Lab: Weather & Climate: GT-SC1**

#### **4 credits**

Introduces the principles of meteorology, climatology, world vegetation patterns, and world regional climate classification. The course incorporates an integrated process of lecture, discussion, and laboratory assignments. GEO 112 may be transferred to colleges and universities as a science credit. The course is offered in the spring.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

## **GEO 165 Human Ecology**

### **3 credits**

Provides a current outlook for the global environment, describing the threats imposed on different natural ecological systems. The course enables the student to develop a set of intellectual tools and ways of thinking about the environment to evaluate for themselves how serious a given environmental problem will be.

## **GER – German Courses**

[www.rccc.edu/languages](http://www.rccc.edu/languages)

## **GER 101 Conversational German I**

### **3 credits**

Introduces beginning students to conversational German and focuses on understanding and speaking German. It covers basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

## **GER 102 Conversational German II**

### **3 credits**

Continues the sequence for students who wish to understand and speak German. It covers basic patterns, expressions, and grammar.

*Prerequisite:* GER 101 or permission of instructor.

## **GER 111 German Language I**

### **5 credits**

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 112 German Language II**

### **5 credits**

Expands students' interpretive, interpersonal, and presentational communicative abilities in the language across the disciplines. Integrates these skills with the study of the cultures in which the language is used. Offers a foundation in the analysis of culture and develops intercultural communicative strategies.

*Prerequisite:* GER 111 or instructor permission.

## **GER 211 German Language III:**

### **GT-AH4**

### **3 credits**

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.

*Prerequisites:* GER 112 or instructor permission.

## **GER 212 German Language IV:**

### **GT-AH4**

### **3 credits**

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.

*Prerequisite:* GER 211 or instructor permission.

## **GEY – Geology Courses**

[www.rccc.edu/geology](http://www.rccc.edu/geology)

*Note: General Oceanography is offered as a GT-SC1 lab science course, as NRE 251.*

## **GEY 108 Geology of U.S. National Parks**

### **3 credits**

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.

## **GEY 111 Physical Geology w/Lab:**

### **GT-SC1**

### **4 credits**

Studies the materials of the earth, its structure, surface features, and the geologic processes involved in its development. This course includes laboratory experience.

*Prerequisite:* ENG 090 and MAT 090 (grade C or higher) or equivalent assessment scores.

## **GEY 112 Historical Geology w/Lab:**

### **GT-SC1**

### **4 credits**

Studies the physical and biological development of the earth through the vast span of geologic time. The course emphasizes the investigation and interpretation of sedimentary rocks, the record of ancient environments, fossil life-forms, and physical events, all within the framework of shifting crustal plates. This course includes laboratory experience.

*Prerequisites:* GEY 111, ENG 090 and MAT 090 (grade C or higher) or equivalent assessment scores.

## **GEY 116 Gems, Crystals, and Minerals**

### **1 credit**

Introduces basic information on the definition, formation, identification, and uses of gems, crystals, and minerals.

## **GEY 118 Rock and Mineral Identification**

### **1 credit**

Introduces basic information on the definition, formation, identification, and uses of rocks and minerals.

## **GEY 119 The Great Ice Age**

### **1 credit**

Analyzes the effect of the last ice age on the development of North America and also explores theories of climatic change.

## **GEY 112 Historical Geology w/Lab:**

### **GT-SC1**

### **4 credits**

Studies the physical and biological development of the earth through the vast span of geologic time. The course emphasizes the investigation and interpretation of sedimentary rocks, the record of ancient environments, fossil life-forms, and physical events, all within the framework of shifting crustal plates. This course includes laboratory experience.

*Prerequisites:* GEY 111, ENG 090 and MAT 090 (grade C or higher) or equivalent assessment scores.

## **GEY 125 Plate Tectonics**

### **1 credit**

Presents the theory of plate tectonics and its relationship to continental movement, oceans, mountain building, earthquakes, and volcanoes.

**GEY 130 Dinosaurs of Colorado  
2 credit**

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 135 Environmental Geology  
w/Lab: GT-SC1  
4 credits**

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 course includes laboratory experience.

*Prerequisite: ENG 090 and MAT 090 (grade C or higher) or equivalent assessment scores.*

**GEY 140 Introduction to Global Positioning Systems  
1 credit**

Provides instruction on the use and application of hand-held global positioning systems (GPS). The course includes navigation, using a GPS with a topographic map, mapping geologic and man-made features using a GPS, and exchanging information with computerized digital maps.

**GEY 143 The Geology and Evolution of Caves  
2 credits**

Introduces the science of caves. The course includes cave formation and evolution, cave decorations (speleothems), and the adaptations of living organisms to life below ground. It incorporates a one-day field trip to a nearby cave system.

**GEY 205 The Geology of Colorado  
3 credits**

Covers the geologic history of Colorado with emphasis on formation of mountain ranges; igneous, sedimentary, and metamorphic rock types; ore deposits; and landforms. It incorporates field experience and/or classroom lectures.  
*Prerequisites: Permission of Instructor.*

**GEY 206 Colorado Mines and Ores  
2 credits**

Presents the geology of the mines and ores of Colorado in the context of the mines, mills, and smelters of the historic mining camps and districts of Colorado. Emphasis is on the geology of the Colorado Mineral Belt, identification of rocks and ore minerals from these districts, and introduction to the processes which create ore deposits.

**GEY 208 Geology Field Trip  
3 credits**

Involves in-depth field studies into the geology of specific regions both within and outside Colorado. Trips lasting from one to several days to study the area constitute the major activity of the course. The specific area of investigation is indicated in the schedule of classes each time the course is offered.

*Prerequisites: Permission of Instructor.*

**GIS – Geographic Information Systems Courses**

[www.rccc.edu/geography](http://www.rccc.edu/geography)

**GIS 101 Introduction To Geographic Information Systems  
3 credits**

Surveys the development and operation of automated geographic information systems. The course focuses on the fundamentals of using computers to draw maps and incorporates the study of cartographic fundamentals such as map projections, map scales, selective display of data on maps, and various computer software applications in GIS.

**GIS 110 Introduction To Cartography  
3 credits**

Examines a broad range of map types, emphasizing maps as a communication system with both symbology and specific organizational hierarchies. Discussion and demonstration focuses on essential cartographic principles and practices used for designing maps, with emphasis on cartographic protocol resulting in the effective communication of both qualitative and quantitative information. The course is generally taught in the fall.

**GIS 210 Intermediate GIS  
3 credits**

Builds upon the spatial analysis principles and concepts of GIS 101. Students work with more advanced analytical tools and develop skills in spatial problem solving. The course is generally taught in the spring.

**HEM – Heavy Equipment Mechanics Courses**

**HEM 110 Gasoline and Power Plants and Electrical Systems  
5 credits**

Focuses on construction, operation, parts identification and service procedure for two and four cycle engines, cooling systems, lubrication, clutches, and electrical systems. Includes instruction on special equipment such as micrometers, cylinders gauges, valve grinding machines, electrical testing equipment, and various other necessary power tools.

**HEM 113 Diesel Fuel Systems  
3 credits**

Focuses on the study of fuel injection systems of both gasoline and diesel engines. Covers diagnostics, service, and standard repair techniques.

**HEM 161 Heavy Equipment Laboratory  
4 credits**

Incorporates work on equipment pertaining to the concurrent theory classes with practical application on available equipment.

**HEM 210 Hydraulics and Transmissions  
3 credits**

Focuses on the study of hydraulic systems and power flow from the engine to the drive wheels or tracks. Provides the fundamentals of pumps, cylinders, valves, transmissions, clutches, and related components. Covers the proper uses of testing equipment and troubleshooting of systems.

**HEM 211 Final Drives and Brakes  
2 credits**

Focuses on the study of single and double final drives and brake systems on both light and heavy duty equipment. Covers diagnostics, service and repair techniques.

**HEM 268 Heavy Equipment Laboratory I  
4 credits**

Incorporates work on equipment pertaining to the concurrent theory classes with practical application of available equipment.

**HEM 269 Heavy Equipment Laboratory II  
4 credits**

Incorporates actual work experience on equipment pertaining to the concurrent theory classes with practical application of available equipment.

## HHP – Holistic Health Professional Courses

[www.rrcc.edu/health](http://www.rrcc.edu/health)

*The prerequisite for all HHP courses is a grade of C or higher in ENG 090 or appropriate SAT, ACT, Accuplacer score, or a college degree of AA, AS or higher, or successful completion of ESL 053 and 093.*

### HHP 100 Complementary Healing Methods

**1 credit**

Explores some of the more widely used alternative/complimentary healing methods. It expands your health horizons and enables you to converse in a knowledgeable manner with patients and practitioners.

### HHP 103 Introduction to Circle of Healing

**1 credit**

Enables you to synthesize different energy methods in order to work as part of a healing group using intuition and group consensus of imagery as the vehicle to create the healing environment.

### HHP 104 The Healing Mind

**0.5 credits**

Explores the scientific research surrounding mind-healing as well as enhancing mind-body communication skills.

### HHP 107 Managing Life's Stresses

**1 credit**

Enables you to work with energy, confidence and enthusiasm in your life by learning specific skills that will give you control over stressful situations or people in your life. This experiential class is designed for all who are interested in a higher quality of life and want to reach their full potential. Learn how to relax quickly, improve self-image, improve concentration, and how to control your worry. You can experience freedom from old patterns that create stress, fatigue and restricting beliefs.

### HHP 108 Aromatherapy

**1 credit**

Informs you of the use of essential oils in health maintenance and the healing of disease. (Tantalizing data from the ancient Egyptians exists and has been verified by modern scientific research.) The course explores the pharmacokinetics and neurophysiology of essential oils, looking into their origins, extraction, storage, and use. This course enables you to observe a large number of essential oil remedies and their applications.

### HHP 109 Jin Shin-Self Care

**1 credit**

Jin Shin Jyutsu is the "Art of the Compassionate Person" and is a relatively simple way of restoring harmony by releasing energy congestion, tension, and stress. Jin Shin Jyutsu can achieve powerful results by applying nothing more than the hands. This Art provides tools for the individual to actively participate in the balancing and maintenance of physical, mental and emotional health. This course primarily focuses on applying these tools for one's own Self-Care with hands-on experience in class.

### HHP 110 Neuro-Linguistic Programming (NLP) I

**0.5 credits**

Familiarizes students with the core presuppositions of NLP, explores conscious and unconscious communications on a structural level, and experientially teaches how verbal & non-verbal communications can allow each of us to effectively establish (and maintain) rapport with others. Students will discover how people get "stuck" and how they can get themselves and others "unstuck," culminating with an elegant change pattern; proven to be as useful with intrusive memories as it is with accessing new choices in the present.

### HHP 111 Herbology I

**1 credit**

Explores the pharmacokinetics and composition of herbs and their effect on the body systems. The use of herbs in health maintenance and the healing of disease predates written history. Herbs have been found by archeologists in Paleolithic burials and throughout literature of the ancient Chinese and Egyptians verified by modern scientific research. The course focuses on the habitat, harvesting, storage, and usage of a select group of herbs.

### HHP 113 Your Heart's Intention

**1 credit**

Looks at our heart's intention and what this means in our healing practice, work practice and everyday living. We will observe and discuss: intuition, knowing, seeing, different techniques for manifesting, the laws of attraction, and journaling growth as a healer or as you continue your chosen path. Discussion about self, self worth and how to accept success. The student will be exposed to different types of medications, journaling, and working on manifesting their personal goals.

### HHP 130 Reiki Level One

**1 credit**

Explores the traditional Usui use of Reiki. The course covers the history and development of Reiki work, beginning in Japan, to Hawaii, to the U.S., and later Europe, and focuses on the fundamental beliefs and the dynamics of the Reiki process. It enables each student to receive Reiki attunements to prepare for the Reiki energy work. Each class member gives and receives a Reiki hands-on treatment session.

### HHP 142 Introduction to Traditional Chinese Medicine

**3 credits**

Introduces the theories and practice of Traditional Chinese Medicine (TCM), an ancient medical art. Basic theories are discussed, differentiation skills are practiced and treatment modalities are demonstrated.

### HHP 145 Digestive Wellness

**1 credit**

Provides you with information on nutritional and herbal self-care treatments. Digestive disorders will be discussed such as acid reflux, Crohns, heartburn, hernia, gas, and bloating.

### HHP 153 Acupressure Tap Technique Level 1 (EFT)

**1 credit**

Introduces the theory and practical application of light finger tapping on meridian end points used in traditional Chinese acupuncture. This course offers hands-on instruction emphasizing identifying, assessing, balancing, and clearing the mind-body energy system in self and others.

### HHP 154 Acupressure Tap Techniques level II (EFT2)

**1 credit**

Allows the student who has completed Acupressure Tapping Techniques 1 (EFT 1) to gain advanced experience with light finger tapping on meridian end points used in traditional Chinese acupuncture. This course offers and expansion of Level 1 material including additional clearing points, gentle techniques for trauma, clearing limiting beliefs, finding core issues, surrogate tapping, and working with groups.

### HHP 161 Meditation for Healing

**1 credit**

Incorporates the practice of fundamental techniques for training your mind to be quiet and peaceful; to focus your thoughts on what you choose; to stimulate the Mind-Body conversation to enhance your own health.

**HHP 164 Introduction to Hand Reflexology****1 credit**

Teaches hand anatomy, basic stroke techniques, and hand reflex points. Reflexology is a gentle art that holistically facilitates opening the channels for healing energy to circulate to all parts of the body. The benefits of reflexology include stress reduction and deep relaxation, improved circulation, cleansing of body toxins and impurities, energy revitalization, and preventative health care.

**HHP 166 Introduction To Reflexology****1 credit**

Provides you with knowledge and skill in foot anatomy, basic hand stroke, and foot reflex points. Reflexology is a gentle art that holistically facilitates opening the channels for healing energy to circulate to all parts of the body. Benefits include stress reduction and deep relaxation, improved circulation, cleansing of body toxins and impurities, revitalization of energy and preventative health care.

**HHP 169 Introduction to Healing Hands and Feet****1 credit**

Studies combining the gentle healing hand energy work and gentle foot massage of reflexology in order to bring harmony to the body, mind, spirit, and emotions. You will be provided with the knowledge of how to combine these healing modalities into practice. Seven major energy charkas, how they affect one's own self-healing, and the four energy fields that surround people will be explored.

*Prerequisite HHP 164 or 166. Corequisite HHP 188.*

**HHP 188 Reflexology Practicum****1 credit**

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 HHP 169.*

**HHP 190 Crystal and Mineral Usage in Health Care****0.5 credits**

Introduces you to crystal and mineral types, their properties and how to clear, clean, and use for personal use or with clients. The course incorporates hands-on experience to feel the different energies of crystals and minerals.

**HHP 204 Applied Aromatherapy****3 credits**

Examination of aromatherapy will be implemented from a holistic view. How different practitioners use this healing art will also be studied, including aromatherapists, medical practitioners, nurses, counselors, psychologists, massage therapists, herbalists, and manufacturers of perfume. Current research on essential oils will be covered, and how this research is advancing the practical applications of aromatherapy. This course will also explore holistic factors in aromatherapy, among them the spiritual, biological, social, and environmental sectors.

**HHP 211 Herbology II****2 credits**

Builds upon the information and skills obtained in HHP 111 and further explores the pharmacokinetics and composition of herbs and their effect on the body systems.

*Prerequisite: HHP 111.*

**HHP 212 Neuro-Linguistic Programming (NLP) II****0.5 credits**

Offers further integration of the rapport skills taught in NLP 1 and moves on toward setting "well-formed" outcomes for any and all contexts. Students will discover why many goals don't manifest and the differences that can make the difference. They'll also learn how the mind (literally) codes experience and how it can be recoded. Additionally, students will be taught a powerful change pattern, which will allow a person to either stop unwanted habits or create desired behaviors.

**HHP 213 Spiritual Care****0.5 credits**

Explores individual development through the life span. The course presents the healing aspects of various religions with correlation to the energy system with Florence Nightingale's thoughts. Spiritual assessment and interventions for client care are covered.

**HHP 215 The Role of Art in Healing****1 credit**

Provides an overview of the role of visual art in healing and includes both didactic information and experiential learning. This course enables you to learn how the role of art in healing has evolved over the years and how to explore different models, approaches, and focuses of healing through visual art. A secondary goal of the course is to help you discover, through art, things about yourself which can enhance your professional work.

**HHP 221 High Level Wellness****1 credit**

Explores the positive dimensions of healthy lifestyles and covers the techniques required to meet the basic needs of illness, prevention, and burnout.

**HHP 224 Introduction to Massage Therapy****1 credit**

Provides hands-on techniques to complete a full body massage along with integration of healing touch. Swedish massage techniques and basic foot reflexology combined with a complete energy balance are performed and experienced by each student.

*Corequisite HHP 225.*

**HHP 225 Expanded Concepts of Massage****1 credit**

Builds on techniques you learned during HHP 224 Introduction to Massage. It includes application of massage techniques with special populations and it also examines related basic therapeutic approaches such as hydrotherapy and acupressure. Considerations for developing professional practice are also addressed.

**HHP 227 Communication Skills****0.5 credits**

Assists you in acquiring essential skills in communication, conflict resolution, negotiation, and team building.

**HHP 228 Solution Focused Personal Coaching****0.5 credits**

Explores the practice of the effective, quick, Emotional Freedom Technique (EFT), allowing you and others to become more focused.

**HHP 229 Wellness Counseling****1 credit**

Provides the tools to facilitate yourself and others in the movement towards wellness. It enables you to learn assessment and basic counseling skills to establish contacts and goals for change.

**HHP 235 Mind, Body Healing and Health****3 credits**

Focuses on the survey of the rapidly developing awareness of the inner-connectedness of mind and body and spirit. The course explores the dialog between eastern and western health care and the many choices which could enhance health and well-being.

**HHP 237 Stress Reduction with Biofeedback****3 credits**

Focuses on the biological and psychological basis of stress and the detrimental effects it may have on our health. Emphasizes learning and applying stress reduction skills which are monitored with simple biofeedback instruments.

**HHP 239 Issues in Holistic Nutrition****1 credit**

Examines the nutritional alternatives to traditional medical therapies. The discussions will focus on a more optimum level of health using various nutritional techniques.

**HHP 241 Healing with Imagery**  
**0.5 credits**

Explores the ancient mysteries of shaman healers and the clinical research now validating this power. Learn effective techniques which accelerate healing and develop insight.

**HHP 242 Healing Touch Level I**  
**1 credit**

Healing Touch is energy-based therapeutic approach to healing. The course enables you to develop and use touch as a means of assessing a client's/patient's state of wellness through the intentional use of touch. Participants are given specific instructions in developing touch sensitivity and practice the assessment and healing methods. Healing Touch is a multi-level program that moves from beginning to advanced practice. After completion of Level 3, you are eligible to apply for certification as a healing touch practitioner.

**HHP 243 Healing Touch Level II**  
**1 credit**

Builds upon the knowledge and skills obtained in HHP 242. You will gain the specific skills necessary to become an advanced practitioner. The course emphasizes experiential learning and focuses on developing healing sequences for specific client needs. Back techniques are introduced, and the therapeutic interactions for specific emotional and physiological problems are discussed and practiced.

*Prerequisite: HHP 242.*

**HHP 244 Holistic Health Level I**  
**1 credit**

Introduces holistic philosophy, theory and practice and how it integrates with nursing in the art and science of caring and healing. The course focuses on conscious application of self-responsibility, caring, human development, stress reduction, communication, problem-solving, teaching, learning, leadership, and change.

**HHP 245 Healing Touch Level III**  
**1 credit**

Includes further development of Higher Sense Perception (HSP), sequencing of healing techniques, working with guidance, self-healing, self-development, learning about other healers, and advanced healing methods. Level III Healing Touch is for students who have completed Level I and Level II and desire more in-depth experience. (30 Continuing Education Contact Hours)  
*Prerequisite: HHP 243.*

**HHP 246 Reiki Level II**  
**1 credit**

Builds upon the knowledge and skills obtained in HHP 130. You will learn the meaning of the three traditional Usui symbols. It incorporates in-depth discussion about application of the three symbols. You will learn about the necessary preparation of a Reiki therapist in offering treatments. One attunement is given to each student. Each member gives and receives a Reiki treatment using the three Reiki symbols. Long Distance and Mental Reiki processes are learned. Reiki Therapist Certification is available at completion.  
*Prerequisite: HHP 130.*

**HHP 249 Healing and Spiritual Journaling**  
**1 credit**

Incorporates using a journal as an effective tool for looking at personal growth process, as well as for helping clients in their healing process. The course teaches journaling skills and how to focus specifically on healing through various techniques.

**HHP 250 Yoga Teacher Training**  
**10 credits**

Covers the requirements to be professional Hath Yoga teachers. Enables participants to understand and practice Yoga and develop skills to teach a wide variety of people in various settings.

**HHP 254 Holistic Health Level II**  
**2 credits**

Provides a more comprehensive study of modalities to strengthen the whole person in the process of facilitating and maintaining optimal health using the basic theory of Holistic Health Level I.  
*Prerequisite: HHP 244.*

**HHP 256 Holistic Health Level III**  
**2 credits**

Builds on the basic theory introduced in Holistic Health Level II and provides a more comprehensive study of modalities to strengthen the whole person in the process of facilitating and maintaining optimal health.  
*Prerequisites: HHP 244 and HHP 254.*

**HHP 260 Advanced Reflexology**  
**1 credit**

Incorporates a hands-on approach with an emphasis on developing techniques. It continues the basic reflexology class and allows you to work on hand positions while addressing specific techniques for specific issues.  
*Prerequisite: HHP 164 or 166.*

**HHP 263 Creating a Holistic Practice**  
**0.5 credits**

Focuses on the necessary skills to start an independent practice. It includes self-assessment of professional skills, the business plan for marketing, finances, and the actual design of the practice.

**HHP 265 Gift of Self-Esteem**  
**1 credit**

Explores self-talk, self-appreciation, self-responsibility, belief, expectations and provides tools for increasing personal power.

**HHP 269 Healing Presence**  
**1 credit**

Provides the opportunity to explore the meaning of presence through the process of increased self-awareness and self-discovery, as well as development of essential skills for connecting on a higher level with yourself and others.

**HHP 270 Clinical**  
**2 credits**

Continues to build upon the principles that are expected to be understood by students in the holistic health discipline.

## HIS – History Courses

[www.rccc.edu/history](http://www.rccc.edu/history)

### **HIS 101 Western Civilization: Antiquity-1650: GT-HI1 3 credits**

Explores a number of events, people, groups, ideas, institutions, and trends that have shaped Western Civilization from the prehistoric era to 1650. The course reflects the multiple perspectives of gender, class, religion, and ethnic groups. It focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 102 Western Civilization: 1650-Present: GT-HI1 3 credits**

Explores a number of events, people, groups, ideas, institutions, and trends that have shaped Western Civilization from 1650 to the present. The course reflects the multiple perspectives of gender, class, religion, and ethnic groups. It focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 111 The World: Antiquity-1500: GT-HI1 3 credits**

Enables you to view history up to 1500 CE in a broad global sense. This course focuses on the common denominators among all people. This approach goes beyond political borders to provide a better appreciation for different cultures.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 112 The World: 1500-Present: GT-HI1 3 credits**

Enables you to view history post-1500 CE in a broad global sense. This course focuses on the common denominators among all people. This approach goes beyond political borders to provide a better appreciation for different cultures.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 201 U.S. History to Reconstruction: GT-HI1 3 credits**

Explores events, trends, people, 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. It focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in the discipline.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 202 U.S. History Since Civil War: GT-HI1 3 credits**

Explores events, trends, people, groups, cultures, ideas, and institutions in United States history, including perspectives of gender, class, and ethnicity between the period of the American Civil War and the present. It focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in the discipline.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 205 Women in World History 3 credits**

Examines the roles, experiences and contributions of women in world history. Further explores the ways in which women's history modifies the traditional interpretation of historic events across the globe. In terms of skill sets the course focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in the discipline.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 207 American Environmental History 3 credits**

Traces and analyzes the relationships between Americans and their natural environments throughout the history of the United States. Environmental history interprets the changing ways diverse people have used and viewed their environments over time. It examines the development of conservation movements and environmental policies in modern America.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 208 American Indian History: GT-HI1 3 credits**

Analyzes historical and socio-cultural change for Native Americans (Indians) from pre-colonial America to the present, emphasizing those processes and relations with non-Native Americans which have contributed to the current conditions.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 215 Women in U.S. History: GT-HI1 3 credits**

Examines women's changing roles in American history from the pre-colonial native population to the present. The course emphasizes the nature of women's work and the participation of women in the family, political, religious, and cultural activities and in social reform movements.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 216 History and Hollywood 3 credits**

Examines the role of film on informing the historical perspective of modern Americans. Focus on the status of film as historical document or evidence. Students are introduced to the methods and sources employed to critique historical films effectively while developing, practicing, and strengthening the skills historians use to construct knowledge in the discipline.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 225 Colorado History: GT-HI1 3 credits**

Presents the story of the people, society, and cultures of Colorado from its earliest Native Americans through the Spanish influx, the explorers, the fur traders and mountain men, the gold rush, railroad builders, the cattlemen and farmers, the silver boom, the tourists, and the modern state.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 235 History of the American West 3 credits**

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. The course emphasis is the northern and central parts of the West.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 236 U.S. History Since 1945: GT-HI1 3 credits**

Focuses on the major political, economic, social, and cultural developments that have shaped modern America.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 244 History of Latin America: GT-HI1**

#### **3 credits**

Focuses on the political, social, cultural and economic developments that have shaped Latin America from Pre-European conquest to the present.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 247 20th Century World**

#### **History: GT-HI1**

#### **3 credits**

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. The course emphasizes the interactions of global regions and nation-states.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HIS 248 History of Modern Russia**

#### **3 credits**

Traces the major political, ideological, economic, religious, social, and cultural developments of Russia from the establishment of the Kievan State to the present. This course emphasizes the sources and development of the Soviet Union and the former Soviet Union states.

### **HIS 275 Special Topics**

#### **3 credits**

Focuses on the exploration of current topics, issues, and activities related to one or more aspects of history.

## **HPR – Health Professional Courses**

### **www.rccc.edu/health**

*The prerequisite for all HPR courses is a grade of C or higher in ENG 090 or appropriate SAT, ACT, or Accuplacer score into ENG 121.*

### **HPR 100 Introduction to Health**

#### **3 credits**

Provides an exploratory course for students interested in a health career. Basic health skills such as vital signs and CPR will be included

### **HPR 102 CPR for Professionals**

#### **0.5 credits**

Meets the requirement for the American Red Cross Professional Rescuer CPR or American Heart Association Basic Life Support for those who work in emergency services, health care, and other professional areas. Material presented in the course is basic patient assessment, basic airway management, rescue breathing, and CPR for infant, children, and adult patients.

### **HPR 103 CPR for Professionals Renewal**

#### **0.25 credits**

For students that hold a current Health Professionals CPR card. Meets the requirement for the American Red Cross Professional Rescuer CPR or American Heart Association Basic Life Support; for those who work in emergency services, health care, and other professional areas. Material presented in the course is basic patient assessment, basic airway management, rescue breathing, and CPR for infant, children, and adult patients.

### **HPR 106 Law and Ethics for Health Professions**

#### **2 credits**

Advances your knowledge in the study and application of medico-legal concepts in medical careers and establishes a foundation for ethical behavior and decision-making.

### **HPR 108 Dietary Nutrition**

#### **1 credit**

Studies the basic principles in clinical practice involved in the assistance of health care. The course will cover factors which influence the nutritional status of individuals, methods of nutritional assessment and support, and diet modification for specific disease states.

### **HPR 112 Phlebotomy**

#### **4 credits**

Teaches the duties associated with the practice of venipuncture, capillary puncture, and special collection procedures. You will have experience with quality control, infection control and safety procedures as well as waived laboratory tests. Those students who successfully complete this course may apply for a National Phlebotomy Registry Examination.

*Permission of the instructor needed.*

### **HPR 115 Gerontology for Care Providers**

#### **1 credit**

Prepare the care provider to care for the older adult by understanding how normal aging affects a person physiologically, psychosocially, and culturally. The learner

will be introduced to current theories on aging, nutritional needs, safety issues, community resources, and health care guidelines for the older adult.

*Prerequisite: HPR 102, NUA 101 and NUA 170*

*Corequisites: HPR 240, HPR 156, HHP 213, NUA 171*

### **HPR 120 Advanced Cardiac Life Support (ACLS)**

#### **1 Credit**

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 121 Advanced Cardiac Life Support Renewal**

#### **0.5 credits**

Presents the required material for ACLS renewal. The course will cover rhythm recognition, cardiac drugs, cardiac monitors, and case-based scenarios.

*Prerequisite: ACLS completion with current card.*

### **HPR 125 Outdoor Emergency Care**

#### **4 credits**

Prepares you 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 126 Outdoor Emergency Care Refresher**

#### **0.5 credits**

Provides maintenance of a uniform skill level and acts as a means of national recertification for Outdoor Emergency Care.

### **HPR 130 Pediatric Advanced Life Support (PALS)**

#### **1 credit**

Provides the needed information and skills required by health care agencies for pediatric emergencies.

### **HPR 131 Pediatric Advanced Life Support Renewal**

#### **0.5 credits**

Provides updates and skill practice to complete renewal requirements for the PALS completion card.

*Prerequisite: Current PALS card.*

### **HPR 156 Intro to Hospice Nursing (Pending Approval)**

#### **0.5 credits**

Provides an overview of hospice care with an emphasis on the role of the nurse while accompanying the patient on this most sacred of journeys.

*Prerequisite: HPR 102, NUA 101 and NUA 170*

*Corequisites: HPR 240, HPR 115, HHP 213*

### **HPR 178 Medical Terminology**

#### **2 credits**

Introduces the structure of medical terms with emphasis on combining and using the most common prefixes, roots, and suffixes. It includes terms related to clinical laboratory, diagnostic imaging, nuclear medicine, and oncology as well as major body systems. Classroom structure provides accepted pronunciation of terms and relative use in the health care setting.

### **HPR 180 Phlebotomy Internship**

#### **3 credits**

Provides you with the opportunity to supplement coursework with practical work experience related to their educational program. You will work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor. Documentation of immunizations, criminal background check, and permission of instructor are required.

*Prerequisite: HPR 112.*

### **HPR 190 Basic EKG Interpretation**

#### **2 credits**

Provides instruction for interpretation of EKG strips, and anatomy and physiology of the heart using three-lead monitoring as a guide. Twelve-lead EKG may be discussed.

### **HPR 200 12 Lead EKG**

#### **Interpretations**

#### **2 credits**

Focuses on each wave and interval of the complex, the axis, and the 12-lead presentation of some rhythm disturbances.

*Prerequisite: HPR 190.*

### **HPR 210 Physical Assessment**

#### **2 credits**

Explores how to obtain a complete health history, which is integrated with a physical exam. The assessment skills of inspection, palpation, percussion and

auscultation are practiced in class. Proper use of equipment such as the otoscope, tuning fork, ophthalmoscope, and reflex hammer are included.

*Prerequisite: Current RN license.*

### **HPR 215 Phlebotomy Refresher**

#### **1 credit,**

Covers collection procedures, and requirements for various laboratory tests, phlebotomy technique, and problem-solving. Basic review and practice of venipuncture techniques will be focused on.

*Prerequisite: HPR 112.*

*Permission of the instructor needed.*

### **HPR 230 Trauma Assessment and Intervention**

#### **1 credit**

Presents the steps for a systematic head-to-toe assessment and intervention in traumatic emergencies.

### **HPR 269 Stress Management**

#### **0.5 credits**

Provides you with the specific skills that provide control over stressful situations or people. The class is designed for all who are interested in a higher quality of life and want to reach their full potential.

## **HUM – Humanities Courses**

[www.rccc.edu/human](http://www.rccc.edu/human)

### **HUM 115 World Mythology:**

#### **GT-AH2**

#### **3 credits**

Introduces students to the mythologies of various cultures. Common themes are illustrated and an interdisciplinary approach is used incorporating some of the following: religion, philosophy, art history, theater, literature, music, cultural studies, and history.

### **HUM 118 Religion in American**

#### **Culture**

#### **3 credits**

Investigates the various ways in which religion and American culture interact. The course begins with the religion of Native Americans, which existed in a pre-modern society where religion went unchallenged as the pre-eminent organizing principle, to the post-modern era, where religion competes with a multiplicity of other belief systems in a complex societal matrix. This course pays close attention to the sundry ways in which religion and American culture interface.

### **HUM 121 Humanities: Early**

#### **Civilizations: GT-AH2**

#### **3 credits**

Introduces you to the history of ideas that have defined cultures through a study of the visual arts, literature, drama, music, and philosophy. It emphasizes connections among the arts, values, and diverse cultures, including European and non-European, from the ancient world to 1000 C.E.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HUM 122 Humanities: From**

#### **Medieval to Modern: GT-AH2**

#### **3 credits**

Examines written texts, visual arts, and musical compositions to analyze and reflect the evolution and confluence of cultures in Europe, Asia, and the Americas from 800 C.E. to 1750. Any two of the three Survey of Humanities courses equal a sequence.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HUM 123 Humanities: The Modern**

#### **World: GT-AH2**

#### **3 credits**

Examines the cultures of the 17th through the 20th centuries by focusing on the inter-relationships of the arts, ideas, and history. The course considers the influences of industrialism, scientific development, and non-European people.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

## **HVA – Heating Ventilation and Air Conditioning Courses**

[www.rccc.edu/hvac](http://www.rccc.edu/hvac)

### **HVA 102 Basic Refrigeration**

#### **4 credits**

Introduces the basic theory of refrigeration systems, components, charging, recycling, and evacuation of refrigeration units.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **HVA 105 Electricity for HVAC/R**

#### **4 credits**

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.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

## **HVA 110 Fundamentals of Gas Heating**

### **4 credits**

Introduces you to the fundamentals of gas heating. You will 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.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications, and HVA 105 or permission of instructor.*

## **HVA 111 Piping Skills**

### **4 credits**

Studies the installation of common piping materials in plumbing and HVAC/R systems. Pipe math, terminology, common piping materials and application, figuring offsets and common pipe joints are also covered. Shop projects including pipe support and hanging, center to center measurements and a variety of pipe joining methods are explored.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

## **HVA 113 Refrigerant Recovery Training**

### **1 credit**

Explains the laws regarding refrigerant recovery. The course includes hands-on use of recovery equipment. Upon successful completion of this course you will be prepared to take the EPA certification test. Test is offered following the class. Test fee is not included in course fee.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications, and HVA 102 or permission of instructor.*

## **HVA 132 Air Conditioning and Refrigeration Controls**

### **4 credits**

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.

*Prerequisites: OSH 127 and HWE 113 or proof of current certifications, HVA 102, HVA 105, or permission of instructor.*

## **HVA 134 Air Conditioning Systems**

### **4 credits**

Studies the basics of air conditioning system design, operation and installation. You will 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.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications, HVA 102, HVA 105, or permission of instructor.*

## **HVA 140 Basic Sheet Metal**

### **4 credits**

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.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

## **HVA 141 Sheet Metal Fabrication**

### **2 credits**

Covers the basics of shop based sheet metal tools and hand tools and how they can be used to create fittings for residential ducting systems. Safety and operation of tools will be stressed. You will learn to layout and fabricate a furnace plenum, a transition, square and radius elbows, and other fittings as time permits.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

## **HVA 162 Heating Controls**

### **4 credits**

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.

*Prerequisites: HVA 110 and 105, or permission of the instructor.*

## **HVA 192 Refrigerant Retrofit Training**

### **1.5 credits**

Allows you to understand and gain knowledge to perform refrigerant retrofit. This course will provide you with a working knowledge of alternative refrigerants plus an understanding of retrofit procedures. A quick history of CFC ozone depletion will give you an understanding of EPA mandates. You have an opportunity to become EPA certified.

*Prerequisites: OSH 127 and HWE 113 or proof of current certifications, HVA 102 or permission of instructor.*

## **HVA 200 International Residential Code – Mechanical & Fuel Gas**

### **2 credits**

Covers the mechanical and fuel gas requirements of the IRC. You will be given the opportunity to learn and apply the general requirements of this code. The course will review and apply the sizing requirements of parts V & VI of this code.

## **HVA 206 Mechanical Codes**

### **4 credits**

Reviews in detail the International Mechanical Code. The course is intended to give those entering the HVAC/R trade as well as experienced trades people taking certification examinations a solid knowledge of this code.

## **HVA 231 Pneumatic Controls**

### **4 credits**

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. You will work with controls from most of the major manufacturers.

*Prerequisites: HVA 102,105,132 or permission of the instructor.*

## **HVA 232 Advanced Air Conditioning and Refrigeration Controls**

### **4 credits**

Covers the advanced study of air conditioning and refrigeration controls.

*Prerequisites: HVA 102, HVA 105, HVA 113, HVA 132.*

## **HVA 233 Advanced Refrigeration**

### **4 credits**

Builds on the skills acquired in refrigeration fundamentals. You will have an opportunity to study and to work on rooftop units, ice machines, and commercial reach-in and walk-in coolers.

*Prerequisites: OSH 127, HVA 102, HVA 105, HVA 113, HVA 132, HWE 113.*

## **HVA 240 Servicing Forced Air Systems**

### **4 credits**

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.

*Prerequisites: OSH 127, HWE 113, HVA 110, HVA 105, HVA 162 or permission of the instructor.*

## **HWE – Health and Wellness Courses**

### **HWE 100 Human Nutrition 3 credits**

Introduces basic principles of nutrition with emphasis on personal nutrition. It satisfies the nutrition requirement of students entering health care professions. *Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HWE 113 First Aid and Adult CPR 0.5 credits**

Teaches the recognition and care for breathing and cardiac emergencies for victims 8 years old and up. This course also teaches the student to identify and care for life-threatening bleeding, sudden illness, and injuries.

### **HWE 120 Wilderness First Aid 1 credit**

Provides limited medical information to cope with basic wilderness emergencies. *Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HWE 129 Wilderness First Responder 4 credits**

Provides you with those skills and emergency medical care techniques used by guides, trip leaders, and others providing primary care in backcountry setting. You will be able to respond correctly to those medical and trauma situations commonly encountered when entry into the EMS system is delayed or unlikely. *Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HWE 130 WFR Refresher 1 credit**

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. *Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **HVA 247 Hot Water Heating Systems 4 credits**

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 convactor sizing are also discussed.

*Prerequisites: HVA 105, HVA 110, HVA 111 or PLU 101, HVA 162 or permission of the instructor.*

### **HVA 257 Low-Pressure Steam Heating 4 credits**

Examines low-pressure steam systems including boilers, piping, heat convectors. Repair and maintenance of these systems is covered as well as theory behind their operation. Boiler feed water and condensate systems are also discussed.

*Prerequisites: HVA 105, HVA 110, HVA 162, HVA 206, HVA 247 or permission of the instructor.*

### **HVA 261 A/C Systems Service and Repair 4 credits**

Emphasizes the service of HVAC systems. You 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.

*Prerequisites: OSH 127, HWE 113, HVA 102, HVA 105, HVA 113, HVA 132, or permission from instructor.*

### **HVA 263 Chillers 4 credits**

Introduces you to chillers and their operating parameters.

*Prerequisites: OSH 127, HWE 113, HVA 102, HVA 105, HVA 113, HVA 132.*

### **HVA 264 Evaporative Cooling Systems Water Treatment 4 credits**

Covers aspects of commercial and residential evaporative cooling systems. Areas examined include maintenance to these systems, water treatment, sizing, pumps and piping.

*Prerequisites: OSH 127, HWE 113, HVA 102, HVA 105, HVA 113, HVA 132, or permission from the instructor.*

### **HVA 267 Radiant Heating Systems 4 credits**

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, you will be able to design, install, document, maintain and trouble-shoot all conventional residential warm water, radiant panel heating systems.

*Prerequisites: HVA 111 or PLU 101, HVA 110, 105, 162, 247 or permission of the instructor.*

### **HVA 268 Advanced Hydronic Controls 4 credits**

Takes the operation of hydronic heating systems and allows you to apply the knowledge of advanced hydronic controls to them. You must have a solid field background or education in hydronic heating, electricity and heating controls prior to enrollment.

*Prerequisites: HVA 110, 111 or PLU 101, HVA 162, 247, 267 or permission of the instructor.*

### **HVA 269 Indoor Air Qualities and Ventilation 4 credits**

Informs experienced HVAC contractors and service technicians of problems associated with indoor air quality and methods for improvement of the indoor environment. The Mechanical Code and other national standards are covered as well.

### **HVA 275 Special Topics 0.5-6 credits**

Provides you with a vehicle to pursue in depth exploration of special topics of interest.

### **HVA 280 Internship 0.5-6 credits**

Gives you an opportunity to apply your course studies in a specific area. *Prerequisite: Permission of the instructor.*

### **HVA 285 Independent Study 0.5-6 credits**

Students will work with the instructor on a specific area with specific objectives and a predetermined project completion date. *Prerequisite: Permission of instructor.*

## **HWE 255 Certified Personal Trainer Preparatory Course**

### **3 credits**

Provides you with theoretical knowledge and practical skills in preparation for the American Council on Exercise (ACE) national certification exam in personal training. Topics include guidelines for instructing safe, effective, and purposeful exercise; essentials of the client-trainer relationship; conducting health and fitness assessments; and designing and implementing appropriate exercise programs.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

## **IND – Interior Design Courses**

[www.rccc.edu/ind](http://www.rccc.edu/ind)

### **IND 100 Interior Design Fundamentals**

#### **4 credits**

Introduces design elements, principles and theory. Application techniques, emphasizing design relationships and composition will be explored. Basic skills and techniques of both visual and oral presentations will be introduced.

### **IND 111 Drafting for Interiors**

#### **4 credits**

Introduces the basic drafting tools and techniques, graphic references and symbols, use of pencil and technical pen. Student learns to draft floor plans and interior elevations. Course also covers basic interior dimensioning and lettering as well as isometric drawing construction for interior components.

### **IND 112 Graphics Communication**

#### **4 credits**

Teaches methods of communicating interior design plans, elements and ideas in 3-D, through perspective drawing construction and quick sketch techniques, and practice rendering and illustration skills.

### **IND 231 Sustainable Design**

#### **3 credits**

Creates an awareness and understanding of ecological issues while emphasizing the use of environmentally friendly materials and resources that do not compromise the effectiveness of the design. This course also investigates the practice of design to reduce the effects on the environment using renewable materials in the design building for both residential and commercial property. Its emphases are to learn to conserve resources and to reduce the negative impact on the environment.

## **IMA – Industrial Maintenance Technology Courses**

[www.rccc.edu/isod](http://www.rccc.edu/isod)

### **IMA 100 Introduction to Industrial Maintenance**

#### **3 credits**

Provides you with an overall perspective and foundation for the industrial maintenance field. You will be taught the fundamentals of machine operations commonly used in the manufacturing industry. Topics such as general maintenance procedures, consumable supplies, fasteners, and machine operating specifications will be covered. In addition, high emphasis will be placed upon the understanding of machine blueprints which detail all the systems which are part of a functioning machine. You will also be exposed to parts and specification manuals utilized in the repair of industrial machinery. Finally, you will begin to learn the logical process utilized in the diagnosis of broken, worn, and defective.

### **IMA 120 Pumps, Seals, Rotating Equipment**

#### **3 credits**

Explains the theory and operation of various types of pumps and compressors in common use in the process and energy supply industries. Mechanical power transmission systems including direct coupling and v-belt drives will be studied. The principles involved in the operation of centrifugal and positive displacement pumps and compressors will be discussed, along with the function of various components in pumps and compressors, disassembly and reassembly of pumps, compressors and mechanical drives, and troubleshooting pumps and compressors.

### **IMA 140 Industrial Pipe and Piping Systems**

#### **3 credits**

Explains the use of piping standards and specifications, the identification and use of various materials, and material take-offs common to the process and energy supply industry. The installation and repair of industrial pipe systems commonly used in the conveying of gases and fluids will be covered. The course includes manually and automatically operated valves, regulators and other associated components. Students will work with steel, copper, and PVC pipe.

### **IMA 150 Industrial Problem Solving Methods**

#### **2 credits**

Introduces you to individual and team problem solving techniques and methodologies. Techniques for handling complex, multi-faceted system failures are presented. You must demonstrate use of the techniques at both the individual and team level.

### **IMA 160 Basic Fluid Power**

#### **3 credits**

Provides an understanding of the fundamentals of fluid power, hydraulic transmission of force and energy, operation at the suction side of the pump, petroleum based hydraulic fluids, fire resistant hydraulic fluids, flow rates and velocity, properties of hydraulic fluids, and the function and construction of basic elements of a hydraulic or fluid power system. The course will cover hydraulic symbols and prints used in industry.

### **IMA 210 Vibration Principles I**

#### **3 credits**

Introduces the principles and basic techniques of industrial machinery vibration analysis. Successful students will be able to calculate vibration frequency from time domain data; convert vibration units of measure and signal detection; read and interpret basic FFT spectra; recognize various vibration sensors, mounting methods and instrumentation; and compare overall or single value vibration measurements against pre-established alert settings and perform basic FFT signature analysis.  
*Prerequisite: permission of instructor.*

### **IMA 211 Vibration Principles II**

#### **3 credits**

IMA 211 is a continuation of IMA 210 and successful students will be able to select the appropriate machinery vibration measurement technique; maintain a database of results and trends; establish and implement general overall level alarms; set up instruments for the basic resolution of amplitude, frequency and time; perform basic vibration analysis of machinery and components, such as shafts, bearings, gears, fans, pumps and motors, using spectrum analysis. In addition you will be able to classify, interpret and evaluate the test results in accordance with applicable specifications and standards; understand basic single plane balancing concepts; be aware of some causes and effects of bad measurement data; perform basic bump tests to determine natural frequencies and recommend minor corrective actions  
*Prerequisite: IMA 210 or permission of instructor.*

### **IMA 250 Industrial Machine Lubrication**

#### **3 credits**

Provides an understanding of the foundational principles and important considerations involved in properly lubricating industrial machines, including key components such as maintenance strategies, principles of surface protection, lubricant construction; lubricant selection for a variety of components, including rolling element bearings, plain bearings, gear drives, reciprocating engines, hydraulic systems, air compression systems, chains, cables and wire ropes; lubricant condition control; and lubricant storage and handling.

## **ITA – Italian Courses**

[www.rccc.edu/languages](http://www.rccc.edu/languages)

### **ITA 101 Conversational Italian I**

#### **3 credits**

Provides the first course in a sequence for beginning students who wish to understand and speak Italian. The material includes basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

### **ITA 102 Conversational Italian II**

#### **3 credits**

Provides the second course in a sequence for students who wish to understand and speak Italian. The material continues to cover basic conversational patterns, expressions, and grammar.  
*Prerequisite: ITA 101 or permission of instructor.*

### **ITA 111 Italian Language I**

#### **5 credits**

Develops students' interpretive, interpersonal, and presentational communicative abilities in the language. Integrates these skills in the cultural contexts in which the language is used. Offers a foundation in the analysis of culture.

### **ITA 112 Italian Language II**

#### **5 credits**

Expands students' interpretive, interpersonal, and presentational communicative abilities in the language across the disciplines. Integrates these skills with the study of the cultures in which the language is used. Offers a foundation in the analysis of culture and develops intercultural communicative strategies.  
*Prerequisite: ITA 111 or instructor permission.*

### **ITA 211 Italian Language III: GT - AH4**

#### **3 credits**

Continues Italian Language I and II in the development of increased functional proficiency in listening, speaking, reading and writing the Italian language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.  
*Prerequisite: ITA 112 or permission of instructor.*

### **ITA 212 Italian Language IV: GT - AH4**

#### **3 credits**

Continues Italian Language I, II and III in the development of increased functional proficiency in listening, speaking, reading and writing the Italian language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.  
*Prerequisite: ITA 211 or permission of instructor.*

## **JOU – Journalism Courses**

[www.rccc.edu/multimedia](http://www.rccc.edu/multimedia)

Journalism classes reside under both the JOU and MGD prefixes, and classes are held in the Multimedia Graphic Design Department.

*Prerequisites: 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 e-mail 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. Students without these skills are required to take MGD 101 Introduction to Computer Graphics either concurrently or prior to taking other courses in the MGD/PHO/JOU department. If MGD 101 Introduction to Computer Graphics is not a requirement for your degree plan, it can be used as an elective*

### **JOU 102 Introduction to Editing**

#### **3 credits**

Focuses on the process of editing articles for publication in newspapers, newsletters, magazines and the Internet. The Associated Press style is emphasized.

### **JOU 105 Introduction to Mass Media: GT-SS3**

#### **3 credits**

Places the mass media in a historical and cultural perspective, considering the validity, integrity, and influence of the media in a democracy.  
*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **JOU 106 Fundamentals of Reporting**

#### **3 credits**

Introduces news writing, reporting and interviewing with an emphasis on clarity, accuracy, completeness, timeliness and fairness.

### **JOU 111 Principles of Advertising**

#### **3 credits**

Employs design concepts, principles and practices for advertising management for the mass media.  
*Recommended Prerequisites: MGD 111, MGD 112, MGD 114 and MGD 104.*

### **JOU 114 TV Production**

#### **3 credits**

*See MGD 104.*

### **JOU 121 Photojournalism**

#### **3 credits**

An introductory, course covering photojournalistic techniques, processing and printing. This course includes an investigation of word/pictures relationships in creating photo essays for publications.

### **JOU 206 Intermediate News Writing and Editing**

#### **3 credits**

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.  
*Recommended Prerequisites: JOU 102 and JOU 106.*

### **JOU 215 Publications Production and Design**

#### **3 credits**

A Capstone class which students should take in their final semester prior to graduation. Students will participate in the planning, writing, design, and production processes of a non-newspaper publication.

### **JOU 225 Internet Media**

#### **3 credits**

Explores techniques and approaches to the latest delivery methods for internet-based journalism. Students explore digital media concepts such as blogs, microblogs audio and video podcasting, e-zines and social networking. 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 additional relevant skills necessary for the citizen journalist are introduced. Students create all components for the online dissemination of news, documentary and infotainment. *Recommended Prerequisites: MGD 101, MGD 104, MGD 111, MGD 112, MGD 114 and MGD 141.*

### **JOU 241 Magazine Article Writing**

#### **3 credits**

Studies trade, consumer and technical markets; manuscript development with emphasis on nonfiction; submission techniques; and trends affecting the marketing of manuscripts. *Recommended prerequisites: JOU 102, JOU 106 and JOU 206.*

## **JPN – Japanese Courses**

[www.rccc.edu/languages](http://www.rccc.edu/languages)

### **JPN 101 Conversational Japanese I**

#### **3 credits**

Introduces beginning students to conversational Japanese and focuses on understanding and speaking Japanese. It covers basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

### **JPN 102 Conversational Japanese II**

#### **3 credits**

Continues the sequence for beginning students who wish to understand and speak Japanese. It covers basic conversational patterns, expressions, and grammar. *Prerequisite: JPN 101 or instructor permission.*

### **JPN 111 Japanese Language I**

#### **5 credits**

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 112 Japanese Language II**

#### **5 credits**

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: JPN 111 or permission of instructor.*

### **JPN 211 Japanese Language III: GT-AH4**

#### **3 credits**

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: JPN 112 or permission of instructor.*

### **JPN 212 Japanese Language IV: GT-AH4**

#### **3 Credits**

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: JPN 211 or permission of instructor.*

## **LEA – Law Enforcement Academy Courses**

### **LEA 101 Basic Police Academy I**

#### **6 credits**

Conforms to P.O.S.T. standards and state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a peace officer. Emphasis will be on simulating actual situations utilizing a lecture and laboratory mode of learning. *Prerequisite: Permission of academy director.*

### **LEA 102 Basic Police Academy II**

#### **12 credits**

Conforms to P.O.S.T. standards and state certification requirements as well as the basic skills and knowledge to perform the entry level duties of a peace officer. Emphasis will be on simulating actual situations utilizing a lecture and laboratory mode of learning. *Prerequisite: Permission of academy director.*

### **LEA 103 Basic Law Enforcement Academy III**

#### **2 credits**

Enhances the standards established by the 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 P.O.S.T. curriculum to create a unique learning experience. *Prerequisite: Permission of academy director.*

### **LEA 104 Basic Law Enforcement Academy IV**

#### **1 credit**

Enhances the standards established by the 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 P.O.S.T. curriculum to create a unique learning experience. *Prerequisite: Permission of academy director.*

### **LEA 105 Basic Law**

#### **8 credits**

Conforms to P.O.S.T. standards and state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a peace officer. Emphasis will be on United States Constitution, arrest, search and seizure, interrogation and confessions, rules of evidence, Colorado Criminal Code, Colorado Traffic Code, Colorado Children's Code, Liquor Code and controlled substances. *Prerequisite: Permission of academy director.*

### **LEA 106 Arrest Control Techniques**

#### **3 credits**

Covers the skills, knowledge and abilities necessary to effectively maintain control of a suspect when making an arrest. The course emphasizes the continuum of force and de-escalation of force. *Prerequisite: Permission of academy director.*

### **LEA 107 Law Enforcement Driving**

#### **3 credits**

Covers the skills, knowledge and abilities required for operation of a law enforcement vehicle, emphasizes defensive driving, and enables you to demonstrate skills by driving a vehicle under simulated conditions. *Prerequisite: Permission of academy director.*

**LEA 108 Firearms****3 credits**

Discusses the skills, knowledge and abilities necessary to safely use police firearms. You will demonstrate skills by firing weapons on a firing range. You will demonstrate basic safety techniques and will explain the firearms role within the continuum of force.

*Prerequisite: Permission of academy director.*

**LEA 109 Culture and Conflict Resolution****2 credits**

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: POST certification*

**LEA 116 Civil Liability****3 credits**

Covers the origin and jurisdiction of civil action, procedure and responsibility addressing the liability of criminal justice practitioners.

*Prerequisite: POST certification*

**LEA 118 Report Writing****3 credits**

Identifies the areas of concern in regards to proper documentation of police related activities. It focuses on report writing skills, proper structuring of interviews and chronological documentation of events. The course incorporates proper sentence structuring, the use of correct terminology and accuracy in written reports.

*Prerequisite: POST certification*

**LEA 126 Patrol Procedures****3 credits**

Focuses on an in-depth study of the basic knowledge and skills required of a peace officer to safely and effectively accomplish the patrol procedure.

*Prerequisite: POST certification*

**LEA 130 Administration of Justice for the Reserve Officer****1 credit**

Explains 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 Reserve Peace Officer.

*Prerequisite: POST certification*

**LEA 131 Basic Law for the Reserve Officer****2 credits**

Includes the U.S. Constitution, rules of evidence, Colorado criminal code, victims rights, and legal liability.

*Prerequisite: POST certification*

**LEA 160 Post Refresher Academy****6 credits**

Allows refresher training for individuals who have held POST certificate in the past or who hold a POST certificate from a state that has a reciprocity agreement with the Colorado POST organization.

This course of instruction is designed by Colorado POST. The course of instruction covers administration of justice, basic law, patrol procedures, use of force, law enforcement driving and a firearms training program.

*Prerequisite: POST certification*

**LEA 167 Fingerprinting****3 credits**

An in-depth instruction of the interpretation, classifications, and presentation in court of the Henry System of classification of fingerprint patterns. Instruction includes the discussion of lifting and preserving fingerprints from crime scenes. The processing of a crime scene using basically powders and a magna brush. You will be proficient in the Henry System and use of all kits and allied equipment in high level at the completion of the course.

*Prerequisite: POST certification*

**LEA 175 Standard Field Sobriety Testing****1 credit**

This course will train officers to become more skillful at detection of DUI offenses, make more arrests, and obtain more convictions.

*Prerequisite: POST certification.*

**LEA 218 Drug Investigative Strategies****3 credits**

Focuses on laws dealing with gambling, prostitution, sex crimes, and narcotics. It emphasizes special techniques employed in the detection, suppression, and apprehension of violators. It includes effects of drugs and narcotics, identification of narcotics, and terminology.

*Prerequisite: POST certification*

**LEA 219 Police Intelligence****2 credits**

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: POST certification*

**LEA 221 Community Problem Solving****3 credits**

Explores community oriented policing and problem solving strategies. Emphasizes 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 rights, ethics, crime prevention, gangs, ethnic intimidation and child abuse.

*Prerequisite: POST certification*

**LEA 222 Law Enforcement Instructor Development Program****3 credits**

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 POST approved course.

*Prerequisite: POST certification*

**LEA 223 Firearms Instructor Course****1 credit**

Focuses on understanding and demonstration of safe handling and proper utilization of firearms. Learns safe and proper teaching 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: POST certification*

**LEA 224 Pressure Point Control Tactics Instructor (ACT)****1 credit**

Prepares and certifies law enforcement personnel and PPCT instructors. Once certified, they are able to teach a program of Arrest Control Tactics.

*Prerequisite: POST certification*

### **LEA 226 Field Training Officer Development**

#### **2 credits**

Covers 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: POST certification*

### **LEA 227 L.E. Supervisory Training Program**

#### **2 credits**

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 supervisor concept of the role, and subordinates expectations. This is a POST approved course.

*Prerequisite: POST certification*

### **LEA 240 Criminal Investigations**

#### **3 credits**

Introduces investigation methods and procedures from preliminary through the follow-up stages.

*Prerequisite: POST certification*

### **LEA 241 Security of Specialized Facilities**

#### **2 credits**

Covers 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: POST certification*

### **LEA 242 Pressure Point Control Tactics (PPCT) Recertification Course (ACT)**

#### **1 credit**

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 instructor. Once completed the officer will be endorsed by PPCT for one year.

*Prerequisite: PPCT certification*

### **LEA 243 County Sheriff Operations**

#### **1 credit**

Covers 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: POST certification*

### **LEA 244 Detention Skills Refresher**

#### **2 credits**

Covers 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 20-2-106 and 107.

*Prerequisite: POST certification*

### **LEA 246 Traffic Investigation**

#### **3 credits**

Provides an overview of the skills and concepts necessary to complete an accurate investigation of a traffic collision. The course emphasizes traffic management concepts, selective traffic enforcement, and safety issues.

*Prerequisite: POST certification*

### **LEA 247 Street Survival Techniques**

#### **2 credits**

Provides an in-depth study of the basic knowledge and skills required of a peace officer to safely and effectively accomplish the patrol function.

*Prerequisite: POST certification*

### **LEA 260 Police Photography**

#### **3 credits**

Focuses on current methods and techniques of police photography. Includes the use, nomenclature, and operation of a 35mm and 4x4 cameras at simulated crime scenes and traffic accidents. Incorporates the development, printing, and enlargement of photos.

*Prerequisite: POST certification*

about novels will enhance perceptive reading skills and heighten awareness of the human condition.

*Prerequisite: A grade of C or above in ENG 090 or equivalent assessment score.*

### **LIT 201 World Literature to 1600: GT-AH2**

#### **3 credits**

Examines significant writings in world literature from the ancients through the Renaissance. The course emphasizes careful readings and understanding of the works and their cultural backgrounds.

*Prerequisite: A grade of C or above in ENG 090 or equivalent assessment score.*

### **LIT 202 World Literature after 1600: GT-AH2**

#### **3 credits**

Examines significant writings in world literature from the seventeenth century to the present. The course emphasizes careful reading and understanding of the works and their cultural backgrounds.

*Prerequisite: A grade of C or above in ENG 090 or equivalent assessment score.*

### **LIT 205 Ethnic Literature: GT-AH2**

#### **3 credits**

Focuses on significant texts by ethnic Americans, including African-American, Native American, Latino/a, and Asian American. The course emphasizes careful reading and understanding of the cultural and literary elements of the works.

*Prerequisite: A grade of C or above in ENG 090 or equivalent assessment score.*

### **LIT 211 American Literature to Civil War: GT-AH2**

#### **3 credits**

Provides an overview of American literature from the Native American through the nineteenth-century Romantics and explores ideas, historical and social contexts, themes, and literary characteristics of works in various genres by major writers.

*Prerequisite: A grade of C or above in ENG 090 or equivalent assessment score.*

### **LIT 212 American Literature after Civil War: GT-AH2**

#### **3 credits**

Provides an overview of American literature from the mid-nineteenth century to the present and explores ideas, historical and social contexts, themes, and literary characteristics of works in various genres by major writers.

*Prerequisite: A grade of C or above in ENG 090 or equivalent assessment score.*

## **LIT – Literature Courses**

[www.rccc.edu/english](http://www.rccc.edu/english)

### **LIT 115 Introduction to Literature I: GT-AH2**

#### **3 credits**

Introduces fiction, poetry, and drama. The course emphasizes active and responsive reading and writing.

*Prerequisites: A grade of C or above in ENG 090 or equivalent assessment score.*

### **LIT 127 Study of the Novel**

#### **3 credits**

Focuses on careful reading and interpretation of selected novels representing types and periods of literature. Examines formal as well as thematic elements of longer fiction.

Critical thinking, discussion, and writing

**LIT 221 British Literature to 1770: GT-AH2**

**3 credits**

Provides an overview of British literature from the Anglo-Saxon period through the seventeenth century. The course explores ideas, historical and social contexts, themes, and literary characteristics of works in various genres by major writers. *Prerequisite: A grade of C or above in ENG 090 or equivalent assessment score.*

**LIT 222 British Literature since 1770: GT-AH2**

**3 credits**

Provides an overview of British literature from the eighteenth century to the present. The course explores ideas, historical and social contexts, themes, and literary characteristics of works in various genres by major writers. *Prerequisite: A grade of C or above in ENG 090 or equivalent assessment score.*

**LIT 225 Introduction to Shakespeare: GT-AH2**

**3 credits**

Explores a selection of works by William Shakespeare. The course focuses on careful reading and interpretation of the plays and poems, includes pertinent information about Elizabethan England, and examines formal as well as thematic elements of the selected works. *Prerequisite: A grade of C or above in ENG 090 or equivalent assessment score.*

**LIT 232 Gothic Literature**

**3 credits**

Provides an overview of Gothic literature from the 1750s to the present. The course emphasizes careful reading, analysis, interpretation, and understanding of the works and their cultural and historical backgrounds. Critical thinking, discussion, and writing about significant works of Gothic literature will be used as tools to develop discriminating reading skills for lifetime enjoyment of the genre. *Prerequisite: A grade of C or above in ENG 090 or equivalent assessment score.*

**LIT 235 Science Fiction**

**3 credits**

Examines the techniques and issues of science fiction through close readings of a variety of writers in the genre. *Prerequisite: A grade of C or above in ENG 090 or equivalent assessment score.*

**LIT 246 Literature of Women**

**3 credits**

Examines the techniques and themes in literature by and about women by examining women's issues form various genres.

*Prerequisite: A grade of C or above in ENG 090 or equivalent assessment score.*

**LIT 255 Children's Literature**

**3 credits**

Evaluates the criteria for selecting appropriate literature for children through exploration of genres, age levels, and values taught through literature and the literary and artistic quality of various texts.

*Prerequisite: A grade of C or above in ENG 090 or equivalent assessment score.*

**LIT 257 Literature and Film**

**3 credits**

Examines the relationship between literature and motion pictures, emphasizing the technique and interpretive function of filmmakers.

*Prerequisite: A grade of C or above in ENG 090 or equivalent assessment score.*

**LIT 268 Celtic Literature: GT-AH2**

**3 credits**

Exposes the student to Irish literature. The course examines significant writings in Irish literature from the ancients through the twenty-first century. The course emphasizes the careful reading and understanding of the works of poetry, fiction, and drama, as well as their cultural backgrounds.

*Prerequisite: A grade of C or above in ENG 090 or equivalent assessment score.*

**LIT 285 Independent Study**

**0.25-6 credits**

Explores particular authors, topics, genres, and themes in depth, such as Ibsen, Faulkner, or Twain, or, for example, great fiction of the nineteenth century.

*Prerequisites: A grade of C or above in ENG 090 or equivalent assessment score.*

**MAC – Machining Courses**

**MAC 101 Introduction to Machine Shop**

**3 credits**

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 102 Blueprint Reading**

**3 credits**

Teaches you to read blueprints and interpret symbols, notes, dimensions, and tolerances.

**MAC 105 Introduction to Machining Technology**

**4 credits**

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 Handbook will be strictly required and particular competencies may require performance evaluations.

**MAC 110 Introduction to Engine Lathe**

**3 credits**

Introduces basic lathe applications which 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. You 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. You also will be required to produce specified parts to a tolerance of +/- .004 in. and perform competencies set by manufacturing standards.

**MAC 111 Intermediate Engine Lathe**

**3 credits**

Teaches you 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 112 Advanced Engine Lathe**

**3 credits**

Prepares you to form radius, single-point isometric threads, turn spherical radius, use a radius gauge, and work within .0005 inches tolerance externally.

### **MAC 120 Introduction to Milling Machine**

#### **3 credits**

Teaches you 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 121 Intermediate Milling Machine**

#### **3 credits**

Prepares you 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 122 Advanced Milling Machine Operations**

#### **3 credits**

Prepares you 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 123 Horizontal Mill Set Up & Operations Description**

#### **3 credits**

Prepares you to identify the major parts and accessories for the horizontal mill, select cutters, mill slots, slab mill, square a workpiece, and work within a tolerance of plus or minus .002 inches.

### **MAC 130 Conventional Lathe Operations**

#### **4 credits**

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. You 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 141 Advanced Machining Operations**

#### **4 credits**

Teaches you the use of various conventional machine tools used in a machine shop environment. You will learn 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. You will be required to produce parts manufactured by local manufacturing companies with the consideration of ISO quality standards.

### **MAC 201 Introduction to CNC Turning Operations**

#### **3 credits**

Covers computer numerical control (CNC) lathe operations, control functions, the letter address system, the program format, and machine setup. G & M codes, control functions, the letter address system, and math issues related to CNC are included. This class is NOT offered on an open-entry, open-exit basis.

### **MAC 202 CNC Turning Operations II**

#### **3 credits**

Prepares you to write basic computer numerical control (CNC) lathe part programs. G & M codes, math-related to CNC, setups, speeds and feeds, straight turning, spherical turning, threading, chamfering, tapering, drilling, tapping, boring, and grooving will be covered. Cutter compensations, sub-programming techniques, repetitive cycles, and both absolute and incremental will be incorporated into programs. You will proof and edit the programs to make them valid. This class is NOT offered on an open-entry, open-exit basis.

### **MAC 205 Introduction to CNC Milling Operations**

#### **3 credits**

Provides transitional information between conventional machining applications and the typical applications found in computer numerical control machining. Topics may consist of numerical control systems, the Cartesian coordinate system, high efficiency tooling applications, objectives of numerical control, calculating speed and feed rates, defining and calculating tool motion, fixturing requirements, basic program structure, programming codes, and basic conversational programming. Operation of NC machines will be required.

### **MAC 206 CNC Milling Operations II**

#### **3 credits**

Covers the principle operations of both vertical and horizontal CNC milling machines via lecture instruction methods, multi-media instruction methods, and manufacturing hands-on methods. You will be exposed to the basic CNC machining center, principle operations, manual controls, programming methods, tool-offsets, G54-G59 work offsets, cutter radius compensation, and tool selection methods. General operator skills and basic setup skills will be stressed.

### **MAC 221 Surface Grinder Setups and Operations**

#### **3 credits**

Teaches you 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 223 Tool & Cutter Grinder**

#### **3 credits**

Prepares you to identify the major parts and accessories of the tool and cutter to grind, sharpen two flute end mills, four flute end mills, slab mills and form cutters, and work with a plus or minus .001 tolerance.

### **MAC 245 CAD/CAM 3D**

#### **3 credits**

Covers both the production and surfacing of three-dimensional geometry in a self-paced setting. Topics 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 250 Advanced Inspection Techniques**

#### **3 credits**

Addresses the principles of dimensional metrology. You will learn how to use common measuring instruments relating to state-of-the-art manufacturing environments. You also will learn the importance of Quality Control, TQM, and SPC processes as they relate to manufacturing environments. Use of a coordinate measuring machine will be addressed.

### **MAC 252 Practical Metallurgy**

#### **3 credits**

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 258 Interpreting Engineering Drawings**

#### **3 credits**

Teaches you to interpret machine shop drawings starting with the simple and progressing to the more complex. All types of dimensioning, symbols, notes, and tolerances are interpreted.

## MAN – Management Courses

[www.rccc.edu/business](http://www.rccc.edu/business)

### **MAN 116 Principles of Supervision** **3 credits**

Introduces the principles and techniques of supervising and motivating personnel. The course is designed for students who are interested in supervising others or for those currently in supervision. Course content focuses on the human interaction in supervision.

*Prerequisite: BUS 115 suggested.*

### **MAN 117 Time Management** **1 credit**

Provides you with the conceptual knowledge and tools to make better use of your time in the management function.

### **MAN 125 Team Building** **1 credit**

Introduces the concept of working as a team member. Activities and assignments will emphasize the ability to negotiate, work together, build consensus, and make quality decisions.

### **MAN 200 Human Resource Management I** **3 credits**

Provides a broad overview of the contemporary issues, theories, and principles used to effectively manage human resources. Topics include recruiting, hiring, compensation and benefits, training and development, employee relations, and legal issues.

*Prerequisite: BUS 115 suggested.*

### **MAN 212 Negotiation and Conflict Resolution** **3 credits**

Presents proper techniques in negotiation and conflict resolution. Key practices that determine successful negotiation are explored. The course covers principles of conflict resolution, including business policies, accepted business practices, contracts, purchases, labor union contracts, pay raises, and starting salaries.

*Prerequisite: BUS 115 suggested.*

### **MAN 215 Organizational Behavior** **3 credits**

Examines the behaviors of groups and individual members of organizations and how behavior can be influenced. Emphasis is placed on the tools managers use to achieve organizational effectiveness.

*Prerequisite: BUS 115 suggested.*

### **MAN 224 Leadership** **3 credits**

Focuses on the leadership skills necessary to bring about change in an organization. You will learn to develop and communicate a shared vision, to empower employees, to manage conflict, to negotiate, and to develop organizations so that all are working toward common goals.

*Prerequisite: BUS 115 suggested.*

### **MAN 225 Managerial Finance** **3 credits**

Examines the concepts and techniques used to analyze financial accounting information for managerial planning, decision-making, and control. The focus of the course is on decision making relating to the areas of budgets, forecasts, cost volume production, ROI, and financial statements.

*Prerequisites: BUS 115, ACC 121, ACC 122.*

### **MAN 226 Principles of Management** **3 credits**

Surveys the principles of management. Emphasis is placed on the primary functions of planning, organizing, leading, and controlling with a balance between the behavioral and operational approaches.

*Prerequisite: BUS 115 suggested.*

### **MAN 230 Corporate Responsibility** **3 credits**

Examines the concept of corporate responsibility and the extent to which an organization's resources should be used to identify and respond to social problems. Included in the course will be topics of corporate and social responsibility, and the concept of servant leadership, and how this applies to business and management principles.

*Prerequisite: BUS 115 suggested*

### **MAN 240 Strategic Management**

3 credits

Presents the development of business policy and the integration of skills learned in prior business study, including strategy formulation, implementation, and evaluation. Focus is on the coordination of marketing, production, finance, accounting, and ethics and social responsibility to achieve competitive advantage.

*Prerequisite: BUS 115 suggested.*

### **MAN 241 Project Management in Organizations**

**3 credits**

Introduces students to the planning, implementation, and control activities of project management, including project and performance evaluation, quality control and work flow analysis. Emphasis will be on the initiating, planning, executing, controlling and closing activities of project management

### **MAN 275 Special Topics**

**1-3 credits**

Provides 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.

### **MAN 285 Independent Study**

**1-3 credits**

Meets the individual needs of students who will engage in intensive study or research under the direction of a qualified instructor.

*Prerequisite: Permission of instructor.*

### **MAN 287 Cooperative Education/Internship**

**1-3 credits**

Provides you with the opportunity to supplement course work with practical work experience related to your educational program and occupational objectives. You will be placed at approved workstations which are related to your program of study. You will work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/coordinator.

*Prerequisite: Permission of instructor.*

## MAR – Marketing Courses

[www.rccc.edu/business](http://www.rccc.edu/business)

### **MAR 111 Principles of Sales** **3 credits**

Enables you to understand and develop ethical sales techniques and covers the role of selling in the marketing process. Areas of emphasis include behavioral considerations in the buying and selling process and sales techniques.

*Prerequisite: BUS 115 suggested.*

### **MAR 117 Principles of Retailing** **3 credits**

Emphasizes the study of the basic principles and techniques of merchandising, operations, layout, store organization, site location, and customer service with an emphasis on retailing operations.

*Prerequisite: BUS 115 suggested.*

**MAR 216 Principles of Marketing**  
**3 credits**

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: BUS 115 suggested.*

**MAR 220 Principles of Advertising**  
**3 credits**

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: BUS 115 suggested.*

**MAR 240 International Marketing**  
**3 credits**

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: BUS 115 suggested.*

**MAR 275 Special Topics**  
**1-3 credits**

Provides you 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 information.

**MAR 280 Internship**  
**1-3 credits**

Provides you with the opportunity to supplement course work with practical work experience related to your educational program. You will work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.  
*Prerequisite: Permission of instructor.*

**MAR 285 Independent Study**  
**1-3 credits**

Meets the individual needs of students. You will engage in intensive study or research under the direction of a qualified instructor.  
*Prerequisite: Permission of instructor.*

**MAT – Mathematics Courses**

[www.rccc.edu/math](http://www.rccc.edu/math)

**MAT 060 Pre-Algebra**  
**3 credits**

Further the study of fractions and mixed numbers. Also included are vocabulary, operations, and applications of ratio, proportion, percent, area, perimeter, US and metric measures, integers, an introduction to algebraic expressions, and the solution of basic first-degree equations.  
*Prerequisite: Appropriate math assessment score.*

**MAT 090 Introductory Algebra**  
**4 credits**

Includes first-degree equations, inequalities, formulas, polynomials, algebraic fractions, factoring polynomials, solving quadratic equations by factoring, and applications. Coordinate geometry, graphing linear equations and inequalities, and systems of linear equations may be included.  
*Prerequisite: MAT 060 (grade C or higher) or appropriate math assessment score.*

**MAT 099 Intermediate Algebra**  
**4 credits**

Emphasizes problem-solving with further study of equations, slope, inequalities, systems of equations, polynomials, quadratic equations, rational expressions, rational exponents, radical expressions, graphing, and applications.  
*Prerequisite: MAT 090 (grade C or higher) or appropriate math assessment score.*

**MAT 107 Career Math**  
**3 credits**

Covers material designed for career technical students or general studies students who need to study particular mathematical topics that may include arithmetic review, calculator usage, algebra, geometry, trigonometry, graphs, and finance. These are presented on an introductory level, and the emphasis is on applications.  
*Prerequisite: MAT 060 (grade C or higher) or appropriate math assessment score.*

**MAT 108 Technical Math**  
**4 credits**

Covers material designed for career technical or general studies students who need to study particular mathematical topics. Topics may include measurement, algebra, geometry, trigonometry, graphs, and/or finance. These are presented on an introductory level and the emphasis is on applications. A scientific calculator is required for this course.  
*Prerequisite: MAT 090 (grade C or higher) or appropriate math assessment score.*

**MAT 120 Mathematics for the Liberal Arts: GT-MA1****4 credits**

Develops mathematical and problem-solving skills. Appropriate technological skills are included. Content is selected to highlight connections between mathematics and the society in which we live. Topics include set theory and/or logic, mathematical modeling, probability and statistical methods, and consumer mathematics. Additional content will include one topic in geometry, numeration systems, decision theory, or management science.  
*Prerequisite: MAT 090 (grade A or B) or MAT 099 (grade C or higher) or appropriate math assessment score.*

**MAT 121 College Algebra: GT-MA1**  
**4 credits**

Includes a brief review of intermediate algebra, equations and inequalities, functions and their graphs, exponential and logarithmic functions, and linear systems. Additional topics can include nonlinear systems, conic sections, introduction to sequences and series, permutations and combinations, the binomial theorem, and theory of equations. A graphing calculator is required for this course. You cannot receive credit for both MAT 166 and MAT 121. Contact the math department chair with questions about these credits.  
*Prerequisite: MAT 099 (grade C or higher) or appropriate math assessment score.*

**MAT 122 College Trigonometry: GT-MA1**  
**3 credits**

Covers topics including trigonometric functions (with graphs and inverse functions), identities and equations, solutions of triangles, complex numbers, and other topics as time permits. This is a traditional prerequisite course to the calculus sequence. A graphing calculator is required for this course. You cannot receive credit for both MAT 166 & MAT 122. Contact the math department chair with questions about this.  
*Prerequisite: MAT 121 (grade C or higher).*

**MAT 123 Finite Mathematics: GT-MA1**  
**4 credits**

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. A graphing calculator is required for this course.  
*Prerequisite: MAT 099 (grade C or higher) or appropriate math assessment score.*

**MAT 125 Survey of Calculus:****GT-MA1****4 credits**

Includes derivatives, integrals, and their applications, with attention restricted to algebraic, exponential, and logarithmic functions for business, life science and/or social science majors. A graphing calculator is required for this course.

*Prerequisite:* MAT 121 or MAT 123 (grade C or higher).

**MAT 135 Introduction to Statistics:****GT-MA1****3 credits**

Includes data presentation and summarization, introduction to probability concepts and distributions, statistical inference, estimation, hypothesis testing, and comparison of populations, correlation and regression. A graphing calculator is required for this course. You cannot receive credit for both MAT 135 and BUS 226.

*Prerequisite:* MAT 099 (grade C or higher) or appropriate math assessment score.

**MAT 155 Integrated Math I****3 credits**

Covers topics including natural numbers, integers, rational numbers, relations, functions, and equations. This course is the first of a two course sequence particularly pertinent to prospective arithmetic teachers, presenting arithmetic and algebra from a modern approach.

*Prerequisite:* MAT 099 (grade C or higher) or appropriate math assessment score.

**MAT 156 Integrated Math II****3 credits**

Continues MAT 155. The course includes the study of the fundamentals of probability, statistics, and informal Euclidean geometry suitable for K-8 curriculum, employing laboratory techniques where applicable.

*Prerequisite:* MAT 099 (grade C or higher).

**MAT 166 Pre-Calculus****5 credits**

A fast paced review of college algebra and college trigonometry intended for those planning to take calculus. Topics include algebraic manipulations, properties of algebraic and trigonometric functions and their graphs, trig identities and equations, conic sections, polar coordinates and parametric equations. A graphing calculator is required for this course. You cannot receive credit for both MAT 166 and MAT 121/122. Contact the math department chair with questions about this.

*Prerequisite:* MAT 121 (grade C or higher) or by permission of Math Department Chair.

**MAT 175 Special Topics****1-4 credits**

Provides you with a vehicle to pursue in depth exploration of special topics of interest.

*Prerequisite:* Permission of instructor.

**MAT 185 Independent Study****1-4 credits**

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 201 Calculus I: GT-MA1****5 credits**

Introduces single variable calculus and analytic geometry. Topics for this course include limits, continuity, derivatives, and applications of derivatives as well as indefinite and definite integrals and some applications. A graphing calculator is required for this course.

*Prerequisites:* MAT 121 and MAT 122 (grade C or higher) or Mat 166 (grade C or higher).

**MAT 202 Calculus II: GT-MA1****5 credits**

A continuation of single variable calculus, which will include techniques of integration, polar coordinates, analytic geometry, improper integrals, and infinite sequences and series. A graphing calculator is required for this course.

*Prerequisite:* MAT 201 (grade C or higher).

**MAT 204 Calculus III with Engineering Applications: GT-MA1****5 credits**

Includes all the topics of a traditional Calculus III course with an additional emphasis on word problems and problem solving. This is the third course in the three-course calculus sequence. This course will additionally contain a thorough examination of multiple integration. This will include double and triple integrals, line integrals, Stokes' and Green's Theorems, and their applications. A graphing calculator is required for this course.

*Prerequisite:* MAT 202 (grade C or higher).

**MAT 261 Differential Equations with Engineering Applications: GT-MA1****4 credits**

Introduces ordinary differential equations. The content of this course includes all the topics of a traditional Introduction of ODE's course with an additional emphasis on applications and problem solving. A graphing calculator is required for this course.

*Prerequisite:* MAT 204 (grade C or higher).

**MAT 275 Special Topics****1-4 credits**

Provides you with a vehicle to pursue in depth exploration of special topics of interest.

*Prerequisite:* Permission of instructor.

**MAT 285 Independent Study****1-3 credits**

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.

**MET – Meteorology Courses****MET 150 General Meteorology: GT-SC1****4 credits**

Provides an introduction to general meteorology and atmospheric sciences. It includes the composition and structure of the atmosphere and characteristics that affect the atmosphere, such as temperature, pressure and moisture. Additionally, the development of weather systems, such as storm systems, hurricanes, weather fronts and cloud development will also be examined. Finally, concepts of climatology will be stressed.

*Prerequisite:* ENG 090 and MAT 090 (grade C or higher) or equivalent assessment scores.

**MET 151 Introduction to Climatology****3 credits**

To introduce the physical mechanisms responsible for the spatial and temporal variability in Earth's climate, and the human-climate relationship. This course is designed to help students gain a scientific understanding of the physical aspects of Earth's climate system, climate system dynamics and the factors that influence climate change. The course explores the global balance of energy and transfer of radiation in the atmosphere, major climatic controls, climatic classifications and comparisons of major climatic types and an overview of current climate issues such as global warming and El Niño.

## MGD – Multimedia Graphic Design Courses

[www.rrcc.edu/multimedia](http://www.rrcc.edu/multimedia)

*Prerequisites: 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 e-mail 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. Students without these skills are required to take MGD 101 Introduction to Computer Graphics either concurrently or prior to taking other courses in the MGD/PHO department. If MGD 101 Introduction to Computer Graphics is not a requirement for your degree plan, it can be used as an elective.*

### **MGD 101 Introduction to Computer Graphics** **3 credits**

Introduces computer systems developed for graphics. You will learn hardware and software components used in multimedia production and explore basic computer operations, file management, scanning techniques, archiving capabilities, and utilization of the multimedia department server and Internet connection.

### **MGD 102 Introduction to Multimedia** **3 credits**

Introduces the equipment and software used in multimedia production and the multimedia professions focus on current technology and equipment, such as scanners, printers, digital cameras, and computers. You will gain hands-on skills using today's technology for input and output in multimedia and design projects. Overview of software for multimedia will be explored.

*Recommended Prerequisite: MGD 101 and basic computer skills.*

### **MGD 103 Production Design** **3 credits**

Explores the use of tools, computer graphic techniques, and design principles to produce professional quality designs. Topics include printing basics, typography, and digital color systems. You will use creative thinking to solve communication and design problems for the output process.

*Recommended Prerequisites: MGD 101 or MGD 102 and basic computer skills.*

### **MGD 104 Videography** **3 credits**

Introduces to the principles and techniques of video production, including camera operation, basic script writing, lighting, basic sound, and basic digital editing. Examination of pre-production, production, and post-production processes, as well as aesthetics, are included.

*Recommended Prerequisites: MGD 101 or MGD 102 and basic computer skills.*

### **MGD 111 Adobe Photoshop I** **3 credits**

Concentrates on the high-end capabilities of Adobe's industry standard photo-editing software as an illustration, design, and photo retouching tool. You will explore a wide range of selection and manipulation techniques applied to photos, graphics, and videos. Design concepts also are explored in this class.

*Recommended Prerequisite: MGD 101 or MGD 102 and basic computer skills.*

### **MGD 112 Adobe Illustrator I** **3 credits**

Acquaints you with the industry standard vector drawing program. You will learn to use vector-based tools to create digital artwork used in Web design, print media, and digital screen design. Design concepts also are explored in this class.

*Recommended Prerequisites: MGD 101 or MGD 102 and basic computer skills.*

### **MGD 114 Adobe InDesign** **3 credits**

Introduces you to InDesign, an industry standard page layout program which integrates seamlessly with other Adobe Creative Suite programs. InDesign delivers creative freedom and productivity to page layout and production. Class discussions and independent projects supplement hands-on classroom work.

*Recommended Prerequisites: MGD 111 and MGD 112 and basic computer skills.*

### **MGD 116 Typography** **3 credits**

Introduces the history and concepts of typography as applied to graphic communications. Explores appropriate use of typography in a variety of design applications, emphasizing the basic design principles of typographic compositions and typesetting. Covers type recognition and typographic terms.

### **MGD 118 Digital Color Theory** **3 credits**

Covers color theory as it relates to multimedia. The psychology of color is taught as well as effective design using color. You will learn to correct color photographs and create color separations. Color scanning technology is also covered.

*Recommended Prerequisites: MGD 111 and MGD 112 and basic computer skills.*

### **MGD 121 Corel Painter for Digital Media** **3 credits**

Introduces to the digital illustration and paint software application Corel Painter. Color and relationships, repeat patterns, and fine art digitization are among the topics covered in the course as you explore the creation of visual fine art using computers. Assigned projects cover a wide range of visual approaches. Painter provides an extra competitive edge for you.

*Recommended Prerequisites: MGD 101 or MGD 111 and basic computer skills.*

### **MGD 141 Web Design I: Adobe Dreamweaver** **3 credits**

Introduces website planning, design and creation using industry-standards-based website development tools. Screen-based color theory, Web aesthetics, use of graphics editors and intuitive interface design are explored.

*Recommended Prerequisites: MGD 111 and/or MGD 112 and Basic computer skills.*

### **MGD 143 Motion Graphic Design I: Adobe Flash** **3 credits**

Uses the industry standard software for the creation of 2D animation and dynamic interactive media for Web and multimedia applications. You will create objects and symbols and assemble motion and animation tweens.

*Recommended Prerequisites: MGD 111 (Photoshop I) and MGD 112 (Illustrator I) and basic computer skills.*

### **MGD 163 Sound Design I: Apple Logic Pro** **3 credits**

Explores the use of sound in multimedia production and audio storytelling. You will examine principles of recording and how sound enhances interactive productions and improves computer presentations. You also will learn to use the computer as a full audio editing studio. This software is available only for the Mac Platform.

*Recommended Prerequisites: MGD 101 and basic computer skills.*

**MGD 164 Digital Video Editing I: Apple Final Cut Studio Pro**  
**3 credits**

Introduces digital, non-linear video editing. You 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. This software is available only for the Mac Platform.

*Recommended Prerequisites: MGD 101 and/or MGD 104 and basic computer skills.*

**MGD 165 Adobe After Effects I**  
**3 credits**

Provides fundamental techniques for creating digital motion graphics, 2D animation, animated logos, video graphics, etc. This class covers relevant tools and techniques as well as industry standards, delivery methods, and output formats.

*Recommended Prerequisites: MGD 111 and/or MGD 104 and basic computer skills.*

**MGD 167 Game Design I: Torque Gaming Engine**  
**3 credits**

Introduces game design beginning with conceptual development and functionality through production of a virtual world prototype. You will examine character registration, in betweens, inking, and clean up used for creating real-time game environments. Storytelling and visual metaphor development are emphasized.

**MGD 202 Point of Purchase and Packaging Design**  
**3 credits**

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 also will be developed. Work layout stages and mock-ups will use various methods of cutting, folding, and assembly to explore the design concepts and their visual effects.

*Recommended Prerequisites MGD 111 and MGD 112 and basic computer skills.*

**MGD 204 Videography II**  
**3 credits**

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.

**MGD 211 Adobe Photoshop II**  
**3 credits**

Develops and reinforces image composition techniques learned in Adobe Photoshop I. Fundamentals are continuously reinforced as new design techniques are introduced.

*Recommended Prerequisite: MGD 111 or permission of instructor.*

**MGD 212 Adobe Illustrator II**  
**3 credits**

Continues the development of digital drawing and design skills through practice and use of state-of-the-art illustration software acquired in MGD 112 Adobe Illustrator I.

*Recommended Prerequisite: MGD 112 or permission of instructor.*

**MGD 213 Electronic Prepress**  
**3 credits**

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.

*Recommended Prerequisites: MGD 111, MGD 112, MGD 114, and/or MGD 113 or permission of instructor.*

**MGD 216 Adobe Acrobat Professional**  
**3 credits**

Concentrates on the high-end capabilities of Adobe Acrobat Professional software as a document conversion, presentation, form generation, secure document delivery, and press production tool. Students explore a wide range of techniques that can be applied to the Web, graphics, interactive and presentation multimedia, commenting workflows, and print media. Adobe Acrobat Professional allows students to bridge the paper-to-digital divide—simply, powerfully, and securely.

**MGD 263 Sound Design II: Apple Logic Pro**  
**3 credits**

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. You will explore synchronization techniques of audio with moving pictures, graphics, and animation. This software is available only for the Mac platform.

*Recommended Prerequisite: MGD 163 or permission of instructor.*

**MGD 264 Digital Video Editing II: Apple Final Cut Studio Pro**  
**3 credits**

Introduces complex and advanced techniques in digital video editing. Editing techniques such as masking, filtering, blue/green screening, track mattes, and image mattes are examined. You will produce a movie project in this class and discuss practical ways to distribute projects to various audiences.

*Recommended Prerequisite: MGD 164 or permission of instructor.*

**MGD 265 Adobe After Effects II**  
**3 credits**

Focuses on advanced skills and techniques in creating digital motion graphics. Relevant tools and techniques, industry standards, specialized techniques, and additional tools and resources are covered in this class.

*Recommended Prerequisite: MGD 165 or permission of instructor.*

**MGD 268 Business for Creatives**  
**3 credits**

Business for Creatives in: Graphic Design, Photography, Animation, Web Design, and Multimedia presents a guide to freelance work and a study of business practices and procedures and models unique to creative occupations (graphic design, Web design, animation, fine arts). Discussion includes determining charges, business forms, business planning, tax structure, licenses and registration, self-promotion (resume, website, portfolio, business identity package). Course may include visits by professionals in the field and discussion of career opportunities in a quickly changing career field.

**MGD 280 Internships**  
**1-3 credits**

Provides an opportunity to experience on-the-job shadowing and interacting with experts in a field of interest. You will intern at local professional businesses to prepare for the transition from student to professional.

*Prerequisite: Permission of MGD/PHO Department Advisor.*

**MGD 285 Independent Study**  
**1-3 credits**

Provides the opportunity to independently learn new technology skills not offered in the classroom. Qualified instructors provide one-on-one outcome objectives and review and oversee student progress.

*Prerequisite: permission of instructor.*

**MGD 289 Capstone**  
**1-3 credits**

A demonstrated culmination of learning within a given program of study.

## MIL – Milwright Courses

### MIL 106 Millwright Lubrication 1.5 credits

Introduces the foundational principles and important considerations involved in properly lubricating industrial machines, including key components such as: maintenance strategies; principles of surface protection; lubricant construction; lubricant selection for a variety of components, including: rolling element bearings, plain bearings, gear drives, reciprocating engines, hydraulic systems, air compression systems, chains, cables and wire ropes; lubricant condition control; lubricant storage and handling.

### MIL 107 Installing Belts Chain Drives and Bearings 4 credits

Covers the sizes, uses, and installation procedures of six types of drive belts and two types of chain drives. Methods to remove and troubleshoot, and install bearings will be explained.

## MOT – Medical Office Technology Courses

[www.rccc.edu/health/medasst.html](http://www.rccc.edu/health/medasst.html)

### MOT 110 Medical Office Administration 4 credits

Introduces the administrative duties specifically used in medical offices.  
*Prerequisite:* A grade of C or higher in ENG 121 or appropriate SAT, ACT, or Accuplacer score.  
*Corequisite:* MOT 120.

### MOT 120 Medical Office Financial Management 3 credits

Covers the practical uses of accounts and records with emphasis on accounting principles and analysis for use in a medical office.

### MOT 130 Insurance Billing and Coding 3 credits

Introduces outpatient coding with an ultimate goal to present a clear picture of medical procedures and services performed (CPT codes), correlating the diagnosis, symptom, complaint or condition (ICD-9 codes), thus establishing the medical necessity required for third party reimbursement.  
*Pre or co-requisite:* HPR 178

### MOT 131 Adv Insurance Billing/Coding 3 credits

Prepares the student to code correctly, and optimize reimbursements for a full range of medical service by expanding coverage of diagnostic and therapeutic procedures, official coding guidelines, APG's, APC's, DRG's, Medicare fraud and abuse.

*Prerequisites:* MOT 130 or permission of Instructor.

### MOT 136 Introduction to Clinical Skills 2 credits

Provides hands on experience with the basic clinical skills required for assisting with patient care. The course delivers the theory behind each skill presented as well as proper technique for performing each skill. It includes knowledge and/or performance of blood borne pathogens/OSHA regulations, medical asepsis, procedural gloving, patient gowning, positioning and measurement of vital signs.

*Pre or corequisites:* HPR 178.

### MOT 138 Medical Assisting Laboratory Skills 4 credits

Introduces students to basic routine laboratory skills and techniques for collection, handling, and examination of laboratory specimens often encountered in the ambulatory care setting. The course emphasizes hands-on experience.  
*Prerequisites:* HPR 178.

### MOT 140 Medical Assisting Clinical Skills 4 credits

Provides hands on experience with the clinical skills required for assisting with patient care. The course delivers the theory behind each skill presented as well as proper technique for performing each skill.

*Prerequisites:* BIO 106 or BIO 201 and BIO 202, HPR 178, MAT 060 or higher, MOT 136.

### MOT 150 Pharmacology for Medical Assistants 3 credits

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.

*Prerequisites:* BIO 106 or BIO 201 and BIO 202, HPR 178, MAT 060 or higher.

### MOT 181 Administrative Internship 2 credits

Provides supervised placement in contracted facility for guided experience in application of knowledge and skill acquired in the classroom. Positions are non-paid due to CAAHEP requirement.  
*Prerequisite:* Successful completion of M.O. program requirements with a C or higher in all core classes. Student must have completed the background check and permission of program coordinator to begin internship.

### MOT 182 Clinical Internship 3 credits

Provides supervised placement in contracted facility for guided experience in applications of knowledge and skills acquired in the classroom. Positions are non-paid due to CAAHEP requirement.  
*Prerequisite:* Successful completion of M.A. program requirements with a grade of C or higher in all core classes. Students must have a completed background check, all immunizations, a CPR card and permission of program coordinator to begin internship.

### MOT 183 Medical Assistant Internship 5 credits

Provides supervised placement in a 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 due to CAAHEP requirement.  
*Prerequisite:* successful completion of M.A. program requirements with a grade of C or higher in all core classes. Students must have a completed background check, all immunizations, a CPR card and permission of program coordinator to begin internship.

### MOT 184 Billing Specialist Internship 3 credits

Provides supervised placement in contracted facility for guided experience in application of knowledge and skill acquired in the classroom. Positions are non-paid due to CAAHEP requirement.  
*Prerequisite:* Successful completion of Medical Billing program requirements with a C or higher in all core classes. Student must have completed the background check and permission of program coordinator to begin internship.

## MUS – Music Courses

[www.rrcc.edu/music](http://www.rrcc.edu/music)

### **MUS 100 Introduction to Music Theory I**

#### **3 credits**

Designed to help the beginning music student, or the student with a limited background in music theory, to study the basic elements of music, including notation, rhythm, scales, key signatures, intervals and chords.

### **MUS 101 Introduction to Music Theory II**

#### **3 credits**

Presents music fundamentals, diatonic four-part harmony, analysis and keyboard harmony for non-music majors.

*Prerequisite: MUS 100 or permission of the instructor.*

### **MUS 105 Introduction to Computer Music Applications**

#### **3 credits**

Explores the elements of electronic music and demonstrates some of the most popular music software for the Macintosh and IBM computers, including music notation and music sequencing programs. Achieving a fundamental working knowledge of setup and recording procedures on a personal computer is stressed. Equipment is provided and beginner's knowledge on either the Macintosh or IBM computer is helpful, but not essential.

### **MUS 106 Songwriting**

#### **3 credits**

Examines the various processes and styles of songwriting and offers techniques and ideas for creating songs ranging from functional to original. Students will explore the common factors in all styles of songwriting, and use them to bring out creative song ideas whether the student has written songs before or has just always wanted to see if one could. A basic knowledge of music reading for any instrument and elementary music theory is recommended, but not required.

### **MUS 110 Music Theory I**

#### **3 credits**

Presents music fundamentals, diatonic four-part harmony, analysis, ear training, and keyboard harmony. This course is appropriate for music majors transferring to a four-year program.

*Prerequisite: MUS 100 or permission of the instructor.*

*Corequisite: MUS 112 Ear Training/Sight-Singing I Lab.*

### **MUS 111 Music Theory II**

#### **3 credits**

Presents chromatic four-part harmony, analysis, ear training, and keyboard harmony. This course is appropriate for music majors transferring to a four-year program.

*Prerequisite: MUS 110 or permission of the instructor.*

*Corequisite: MUS 113 Ear*

*Training/Sight-Singing II Lab.*

### **MUS 112 Ear**

#### **Training/Sight-Singing I Lab**

#### **1 credit**

Presents exercises in sight-singing with melodic and rhythmic dictation.

*Prerequisite: Follow sequence of MUS 100 or MUS 101, or equivalent proficiency.*

*Corequisite: MUS 110 - Theory I.*

### **MUS 113 Ear**

#### **Training/Sight-Singing II Lab**

#### **1 credit**

Presents exercises in sight-singing with melodic and rhythmic dictation.

*Prerequisite: MUS 112, or equivalent proficiency.*

*Corequisite: MUS 111 - Theory II.*

### **MUS 120 Music Appreciation:**

#### **GT-AH1**

#### **3 credits**

Covers the basic materials of music, musical forms, media, genres and musical periods. This course emphasizes the development of tools for intelligent listening and appreciation.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **MUS 121 Music History Medieval thru Classical Period: GT-AH1**

#### **3 credits**

Studies the various periods of music history with regard to the composers, aesthetics, forms, and genres of each period. Music History I considers music from the Middle Ages through the Classical period.

### **MUS 122 Music History Early Romantic Period to the Present: GT-AH1**

#### **3 credits**

Studies the various periods of music history with regard to the composers, aesthetics, forms, and genres of each period. Music History II considers music from the early Romantic period to the present.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **MUS 123 Survey of World Music:**

#### **GT-AH1**

#### **3 credits**

Provides an overview of non-Western music from around the world. This course provides basic listening skills and the historical/cultural context for a variety of world music styles to enable an understanding and appreciation of non-Western musical expression.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **MUS 124 American Music Survey**

#### **3 credits**

Surveys American music as a panorama of distinct yet parallel streams of popular, folk, sacred, and classical music that reflect the uniquely diverse character of the United States. It emphasizes the development of tools for intelligent listening and appreciation. Major topics will include comparing and contrasting American musical styles across regions and time, and examining the characteristics of music that has arisen from the history and musical traditions of the many immigrants to America's shores.

### **MUS 125 History of Jazz: GT-AH1**

#### **3 credits**

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.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **MUS 126 History of Rock and Pop**

#### **3 credits**

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.

### **MUS 141 Private Instruction I**

#### **1-2 credits**

Offers private instruction consisting of a half-hour lesson (1 credit) or an hour lesson (2 credits, primarily for future music majors) each week. Participation in a student performance is required at least once each term. First year, first term.

*Prerequisite: Permission (not audition) of the department. An additional fee is required.*

*Corequisite: MUS 178 Performance Seminar.*

**MUS 142 Private Instruction II**  
**1-2 credits**

Offers private instruction consisting of a half-hour lesson (1 credit) or an hour lesson (2 credits, primarily for future music majors) each week. Participation in a student performance is required at least once each term. First year, second term.

*Prerequisite: MUS 141 in same instrument. Permission (not audition) of the department. An additional fee is required.*

*Corequisite: MUS 178 Performance Seminar.*

**MUS 143 Private Instruction III**  
**1-2 credits**

Offers private instruction consisting of a half-hour lesson (1 credit) or an hour lesson (2 credits, primarily for future music majors) each week. Participation in a student performance is required at least once each term. First year, third term.

*Prerequisite: MUS 142 in same instrument. Permission (not audition) of the department. An additional fee is required.*

*Corequisite: MUS 178 Performance Seminar.*

**MUS 151 Ensemble I**  
**1 credit**

Rehearses and performs various types of musical literature. First year, first term.

*Prerequisite: Permission of instructor.*

**MUS 152 Ensemble II**  
**1 credit**

Rehearses and performs various types of musical literature. First year, second term.

*Prerequisite: Permission of instructor.*

**MUS 153 Ensemble III**  
**1 credit**

Rehearses and performs various types of musical literature. First year, third term.

*Prerequisite: Permission of instructor.*

**MUS 161 Computer Music Applications I**  
**3 credits**

Introduces students to the Digital Audio Workstation, current practices with MIDI instruments, MIDI sequencing, MIDI editing, music notation programs.

**MUS 175 Special Topics**  
**1-6 credits**

Covers specific topics in music. This course is offered as needed for credit appropriate to the topic. Each offering includes a description of the topic(s).

*Prerequisite: Permission of instructor.*

**MUS 178 Performance Seminar**  
**1 credit**

Provides performance opportunities in voice and/or instruments before an audience; exposure to a variety of music literature for various instruments; observation of other performers; professional critiques to help develop the student's own evaluative abilities; and discussion of performance concerns common to all musicians.

*Corequisite: MUS 141, MUS 142, and/or MUS 143.*

**MUS 184 Internship**  
**1-3 credits**

Provides you with the opportunity to supplement course work with practical work experience related to your educational program. You will 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 241 Private Instruction I**  
**1-2 credits**

Offers private instruction consisting of a half-hour lesson (1 credit) or an hour lesson (2 credits, primarily for future music majors) each week. Participation in a student performance is required at least once each term. Second year, first term.

*Prerequisite: MUS 142 or MUS 143 in same instrument. Permission (not audition) of the department. An additional fee is required.*

*Corequisite: MUS 278 Performance Seminar*

**MUS 242 Private Instruction II**  
**1-2 credits**

Offers private instruction consisting of a half-hour lesson (1 credit) or an hour lesson (2 credits, primarily for future music majors) each week. Participation in a student performance is required at least once each term. Second year, second term.

*Prerequisite: MUS 241 in same instrument. Permission (not audition) of the department. An additional fee is required.*

*Corequisite: MUS 278 Performance Seminar.*

**MUS 243 Private Instruction III**  
**1-2 credits**

Offers private instruction consisting of a half-hour lesson (1 credit) or an hour lesson (2 credits, primarily for future music majors) each week. Participation in a student performance is required at least once each term. Second year, third term.

*Prerequisite: MUS 242 in same instrument. Permission (not audition) of the department. An additional fee is required.*

*Corequisite: MUS 278 Performance Seminar*

**MUS 244 Continuing Private Instruction**  
**1-2 credits**

Offers private instruction consisting of a half-hour lesson (1 credit) or an hour lesson (2 credits, primarily for future music majors) each week. Participation in a student performance is required at least once each term. Second year, third term.

*Prerequisite: MUS 242 or MUS 243 in same instrument. Permission (not audition) of the department. An additional fee is required.*

*Corequisite: MUS 278 Performance Seminar.*

**MUS 251 Ensemble I**  
**1 credit**

Rehearses and performs various types of musical literature. Second year, first term.

*Prerequisite: Permission of instructor.*

**MUS 252 Ensemble II**  
**1 credit**

Rehearses and performs various types of musical literature. Second year, second term.

*Prerequisite: Permission of instructor.*

**MUS 253 Ensemble III**  
**1 credit**

Rehearses and performs various types of musical literature. Second year, third term.

*Prerequisite: Permission of instructor.*

**MUS 261 Advanced Music Audio Production**  
**3 credits**

Designed to build upon earlier courses to give a well-structured and advanced knowledge of the various aspects of recording and production with music in a live and studio setting. This includes a working knowledge of microphones, audio mixing boards-analog and digital, recorders, analog and digital, mixing, sound, equalization and the fundamentals of acoustics in studio design.

### **MUS 275 Special Topics**

#### **1-3 credits**

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.*

### **MUS 278 Performance Seminar**

#### **1 credit**

Provides performance opportunities in voice and/or instruments before an audience; exposure to a variety of music literature for various instruments; observation of other performers; professional critiques to help develop the student's own evaluative abilities; and discussion of performance concerns common to all musicians.

*Corequisite: MUS 241, MUS 242, MUS 243, and/or MUS 244.*

### **MUS 284 Internship**

#### **1-3 credits**

Provides you with the opportunity to supplement course work with practical work experience related to your educational program. You will work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

*Prerequisite: Permission of instructor.*

## **NAT – Nail Technician Courses**

[www.rccc.edu/warrentech](http://www.rccc.edu/warrentech)

### **NAT 110 Introduction to Manicures and Pedicures**

#### **3 credits**

Provides a basic introduction in 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 111 Intermediate Manicures and Pedicures**

#### **2 credits**

Presents 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 aspect of manicures, pedicures and nail art is taught.

### **NAT 210 Advanced Manicures and Pedicures**

#### **2 credits**

Presents theory and practical application dealing with different types of manicures, pedicures massage techniques and nail art. Theory and practical application of procedures, products, nail shapes and maintenance of the 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.

### **NAT 211 Application of Artificial Nails**

#### **5 credits**

Provides advanced theory and practical application of nail wraps, tip overlays, acrylics and product knowledge to ready the student for employment. Theory and practical application of removal techniques for artificial nails is covered. 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 artificial nails is covered.

### **NAT 230 Nail Tech Prep-State Board**

#### **4 credits**

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.

## **NRE – Natural Resources Courses**

### **NRE 251 General Oceanography: GT-SC1**

#### **4 credits**

Provides a comprehensive introduction to modern geological and chemical oceanography. Material includes earth history, plate tectonics, geophysics, geochemistry, marine sediments, the hydrosphere, physical properties of salt water, major and minor components of seawater, and ocean-atmosphere interactions. This course includes laboratory experience.

*Prerequisite: ENG 090 and MAT 090 (grade C or higher) or equivalent assessment scores.*

## **NUA – Nurse Aide Courses**

[www.rccc.edu/health](http://www.rccc.edu/health)

### **NUA 101 Certified Nurse Aide Health Care Skills**

#### **4 credits**

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: HPR 102, A grade of C or higher in ENG 090 or appropriate SAT, ACT, or ACCUPLACER score.*

*Corequisite: NUA 170.*

### **NUA 105 Home Health Aide Theory**

#### **2 credits**

Introduces the student to the expanding field of Home Health Nursing. The student will discover the uniqueness of Home Health Care and the vital role that the nursing assistant plays as part of the home care team. The student will learn how to assist home care patients with activities of daily living and maintain a safe, clean, and comfortable environment. The student will also learn the differences and challenges of caring for patient in their natural home environment versus institutional settings.

*Prerequisite: NUA 101 and NUA 170, HPR 102 A grade of C or higher in ENG 121, or appropriate SAT, ACT, or ACCUPLACER score.*

## **NUA 170 Nurse Assistant Clinical Experience**

### **1 credit**

Applies the knowledge gained from NUA 101 to patient care.

*Prerequisite: HPR 102.*

*Corequisite: NUA 101 Certified Nurse Aide Health Care Skills.*

## **NUA 171 Advanced Nurse Aide Clinical (Pending Approval)**

### **0.5 credits**

Prepares the student to move toward more independent functioning within the nurse aide scope of practice, in applying knowledge and skills gained in NUA 101 and NUA 170. The student will learn skills that enhance communication, cultural competency, end of life care, critical thinking and organizational skills.

*Prerequisite: HPR 102, NUA 101 and NUA 170*

*Corequisites: HPR 240, HPR 115, HPR 156, HHP 213*

## **NUA 180 Home Health Aide Internship**

### **0.5 credits**

Prepares the nurse aide for entry-level into the home health care setting.

*Prerequisite: HPR 102, NUA 101 and NUA 170*

*Corequisite: NUA 105*

## **NUR – Nursing Courses**

[www.rccc.edu/health](http://www.rccc.edu/health)

## **NUR 290 Registered Nurse Refresher**

### **10 credits**

Presents material that is designed for all RNs, who preferably have been out less than 15 years, 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.

*Prerequisite: HPR 102 and ENG 090 (grade C or higher) or equivalent assessment scores.*

*Corequisites: NUR 291 and HPR 210.*

## **NUR 291 Registered Nurse Clinical Experience**

### **2 credits**

Applies the knowledge gained from NUR 290 in a clinical setting. Students will demonstrate skill attainment gained in NUR 290.

*Prerequisite: HPR 102 and ENG 090 (grade C or higher) or equivalent assessment scores.*

*Corequisite: NUR 290.*

## **OSH – Occupational Safety Technician Courses**

## **OSH 127 10-HR Construction Industry Standards**

### **1 credit**

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 authorized by the Occupational Safety and Health Administration.

## **OUT - Outdoor Education Courses**

## **OUT 101 Mountaineering**

### **3 credits**

Provides you with a combination of skills and practical experience in the fundamentals of mountaineering. Emphasis is placed on 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 103 Colorado Fourteeners**

### **2 credits**

Presents an historical look into the naming and climbing of Colorado's 14,000-foot peaks. The course includes information on the current routes to ascend the peaks.

## **OUT 105 Land and Water Navigation**

### **1 credit**

Enables the student to become proficient in backcountry land and water navigation. Efficient wilderness travel abilities will be developed through understanding and proper use of paper and digital topographic maps, paper and digital marine charts, various types of magnetic compasses, GPS, and other associated navigational tools.

## **OUT 106 Map and Compass for the Outdoors Person**

### **3 credits**

Covers the reading of highway, forest service, and topographical maps which include symbols, legends, border information, and contour lines. The course includes the use of magnetic compasses in an outdoor environment and functions that plot a course on maps. Supplemental navigation skills are included.

## **OUT 107 Orienteering and Route Finding**

### **2 credits**

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 will also be addressed. Field trips may include student participation in a scheduled Orienteering meet.

## **OUT 108 Wilderness Survival Skills**

### **3 credits**

Emphasizes the physiological, psychological, and practical principles of survival. Survival equipment, wilderness improvising techniques, and wilderness dangers are included.

## **OUT 109 Winter Wilderness Survival Skills**

### **2 credits**

Emphasizes winter survival techniques in the nival environment at or near timberline. Winter ecology, basic snow science, and avalanche safety and rescue will also be presented in a backcountry setting. This course includes field days and an overnight in a snow cave.

## **OUT 112 Mountain Orientation**

### **2 credits**

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 113 Desert Orientation**

### **2 credits**

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 114 Canyon Orientation**  
**2 credits**

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 115 Snow Orientation**  
**2 credits**

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 116 River Orientation**  
**2 credits**

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 117 Ocean Orientation**  
**2 credits**

Ocean Orientation is designed to teach and practice the skills necessary to safely travel in the ocean environment, while protecting the delicate desert and marine eco-systems from undue harm.

**OUT 119 Flyfishing I**  
**1 credit**

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. This course includes several field trips to local flyfishing areas.

**OUT 120 Flyfishing II**  
**1 credit**

Introduces students to the higher level skill set required for a successful fly fishing guided experience. Topics will include lake and river dynamics and finding the fish, fly tying, as well as the effects of weather on fishing experiences will be discussed. Various methods of getting the client to the fish will be discussed including wading and floating moving water as well as a variety of both hard and inflatable boats. Emphasis will be placed on the presentation of the fly, successfully striking the fish, and catch and release techniques. Other topics directly related to the business of fly fishing such as risk management,

etiquette, permitting and type of related careers will be discussed.

**OUT 124 Bicycle Touring**  
**1 credit**

Introduces bicycle touring over a variety of terrains and distances. Selection and maintenance of equipment, pre-tour conditioning, safety, and dietary factors will be covered.

**OUT 126 Mountain Biking**  
**1 credit**

Designed to introduce basic mountain biking skills and techniques. The primary emphasis is to gain an understanding of the basic principles of mountain biking. You will develop skills and techniques for all riding situations and review bicycle anatomy and basic maintenance and repairs.

**OUT 129 Ice Climbing I**  
**1 credit**

Introduces technical (roped) ice climbing, including equipment selection and safety, knots, belaying and climbing, rappelling and climbing safety.

**OUT 130 Ice Climbing II**  
**1 credit**

This course 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.

**OUT 131 Rock Climbing I**  
**2 credits**

Designed to introduce basic rock climbing and to improve dexterity, problem-solving skills, and the physical work capacity of an individual. The primary emphasis will be to gain an understanding of the general principles of climbing, how equipment works and how it is used, basic climbing skills and techniques, and safety and climbing etiquette and terminology.

**OUT 132 Rock Climbing II**  
**2 credits**

Designed to introduce lead climbing skills and techniques, problem-solving skills, and physical fitness. Emphasis is placed on 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: PED 150 or permission of instructor.*

**OUT 134 Wilderness Ethics**  
**3 credits**

Emphasizes the motivation, aesthetics, and ethics of wilderness. Viewpoints to be examined include Native American, Western, historic, and those of modern environmental writers.

**OUT 135 Risk Management for Outdoor Professionals**  
**1 credit**

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 136 Leave No Trace Trainer Cert.**  
**2 credits**

Introduces the student to the concepts of Leave No Trace and prepares students to teach Leave No Trace curriculum in a variety of settings-schools, camps, parks, wilderness and front country areas. Anyone attending this training will be considered a Leave No Trace Trainer at the national level with the Leave No Trace Center for Outdoor Ethics. Becoming a Leave No Trace Trainer enables each student to successfully conduct awareness workshops to their clients, friends, family and scouting badge workshops. 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. This class is a great outdoor resume enhancer.

**OUT 137 Kayaking**  
**1 credit**

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 139 Whitewater Rafting Guide**  
**2 credits**

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.

**OUT 140 Swift Water Rescue Tech I**  
**1 credit**

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 141 Intermediate Canoeing**  
**1 credit**

Emphasizes intermediate paddling technique and river reading skills for both tandem and solo boating. You will learn safety procedures and equipment hazard evaluation and how to minimize your impact on river and lake environments.

**OUT 143 Backpacking**  
**2 credits**

Provides skills related to wilderness travel and outdoor adventure. This course will emphasize knowledge of backpacking skills, survival techniques, proper physical conditioning, route finding, equipment selection, and will encourage an understanding and respect for the environment. The course will involve lecture and discussion sessions followed by a weekend trip in the mountains.

**OUT 144 Backcountry Cooking**  
**1 credit**

Covers menu planning, nutritional requirements for wilderness camping, and meal preparations. This course includes cooking a backcountry meal.

**OUT 145 Introduction to Winter Sports**  
**1 credit**

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. The primary emphasis is on gaining the knowledge and techniques necessary for winter sports on beginner to intermediate groomed or backcountry terrain. Multiple field trips to ski areas or other outdoor venues are required.

**OUT 146 Nordic Skiing**  
**1 credit**

Provides you with the fundamental skills of Nordic skiing. The emphasis is on skiing technique, conditioning, safety, and equipment. The course has classroom and activity sessions. Conditioning in the fitness center and trips to local ski areas are part of this course.

**OUT 147 Telemark Skiing I**  
**1 credit**

The skills of telemark, or backcountry nordic skiing techniques used on beginning to intermediate terrain, safe and efficient backcountry ski travel, leadership, and judgment development will be emphasized.

**OUT 148 Telemark Skiing II**  
**1 credit**

This course provides instruction in intermediate telemark skiing techniques. Topics include ski travel on intermediate terrain. Safe and efficient backcountry telemark skills, judgment, leadership, communication, group handling, and telemark ski technique will be emphasized.

**OUT 149 Alpine Skiing I**  
**1 credit**

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 150 Alpine Skiing II**  
**1 credit**

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 151 Snowshoeing**  
**1 credit**

Emphasizes the basic skills, equipment, clothing and techniques of snowshoeing. The course includes the objective dangers involved with winter recreation.

**OUT 152 Snowboarding I**  
**1 credit**

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 153 Snowboarding II**  
**1 credit**

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.

**OUT 156 Survival Plants in the Summer I**  
**2 credits**

Introduces the student to the summer season genus and species recognition of wild useful plants (edible, medicinal, poisonous and tool-craft) in all life zone categories (alpine subalpine, montane, foothill and desert) of Colorado. Other topics covered will be summertime identification challenges, macro and micro environments, and dangerous lookalikes, and soils, latitudinal and elevational effects. Note: The Survival Plant series of classes can be taken in any order because each course academia is seasonal specific not nomenclature specific.

**OUT 157 Survival Plants in the Fall I**  
**2 credits**

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.

**OUT 158 Survival Plants in the Spring I****2 credits**

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.

**OUT 161 Survival Plants:****Summer II****3 credits**

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.

**OUT 162 Survival Plants: Fall II****3 credits**

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.

**OUT 163 Survival Plants: Spring II****3 credits**

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.

**OUT 166 High Angle Rescue****2 credits**

An intensive rigging course that addresses rescue in vertical terrain. The course will review safety systems, anchor systems, and lowering/up-haul systems. Scenario based instruction will cover technical lowers and up-hauls of the injured climber, guidelines, pickoffs, third man medical and other practical high-angle rescue techniques.

**OUT 167 Basic Search and Rescue****3 credits**

Covers the fundamentals required for search and rescue in a wilderness environment. The course includes tracking techniques and field trips.

**OUT 168 Avalanche Awareness****Level I****1 credit**

Emphasizes the latest information available about the study of avalanches, snow science, rescue equipment, and rescue techniques. The course provides you with the knowledge and skills necessary to help instill good judgment and sound decision-making in day-to-day travel in the winter environment. This course fulfills the National Ski Patrol's Basic (Level 1) Avalanche course requirements.

**OUT 169 Avalanche Awareness****Level II****2 credits**

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.

**OUT 175 Special Topics****1-4 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**OUT 176 Special Topics****1-4 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**OUT 177 Special Topics****1-4 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**OUT 200 Sailing****1 credit**

Designed for the beginning sailor taught by American Sailing Association certified instructors and meets the safety requirements of the U.S. Coast Guard. The class is divided into two parts: theory classes and sailing sessions. Classes will cover terminology, safety regulations, knots, sailing theory, and navigation. Sailing sessions will cover rigging, getting underway, safety rules, tacking, gibing, bearing away, boat handling in different weather conditions, overboard rescue, returning to the dock, and anchoring. Course costs include all boating equipment, textbooks, handouts, class materials, and the use of a 21' day sailor.

**OUT 201 Scuba Diving****1 credit**

Provides basic instruction in scuba diving. This course provides the knowledge and skills related to swimming and snorkeling, diving equipment, communications, the environment, safety, dive tables, and other pertinent information you need for safe scuba diving. This course prepares you for open-water (PADI) certification.

**OUT 216 Challenge Course****Facilitation****2 credits**

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 237 Paddle Sports****2 credits**

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 rafts. You 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. The course includes a multi-day river expedition.

**OUT 275 Special Topics****1-4 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**OUT 276 Special Topics****1-4 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

## **OUT 277 Special Topics**

### **1-4 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

## **OUT 289 Capstone**

## **PAP – Physician Assistant Program Courses**

[www.rccc.edu/pa](http://www.rccc.edu/pa)

### **PAP 201 Professional Seminar I 0.5 credit**

Provides the physician assistant student with an Introduction to the profession. Topics include ethics, professional behavior, legal aspects of practice, medical decision making, evaluation of medical literature, and Issues important to the profession.

### **PAP 202 Professional Seminar II 1 credit**

Provides the physician assistant student with an Introduction to the profession. Topics include ethics, professional behavior, legal aspects of practice, medical decision making, evaluation of medical literature, and Issues important to the profession. This course is a continuation of PAP 201.

### **PAP 203 Professional Seminar III 0.5 credit**

Provides the physician assistant student with an Introduction to the profession. Topics include ethics, professional behavior, legal aspects of practice, medical decision making, evaluation of medical literature, and Issues important to the profession. This course is a continuation of PAP 202.

### **PAP 204 Problem-Based Learning I 1 credit**

Requires students to identify the signs and symptoms of common disorders, to further evaluate those disorders through small group research and learning, and to prepare a treatment plan to preserve health or mitigate suffering. Students present the selected case studies in small groups either orally or in a written format. This course also presents evidence-based health care as it relates to clinical outcomes. Faculty facilitators act as coaches to direct the problem-based learning in the small groups.

### **PAP 205 Problem-Based Learning II 1 credit**

Requires students to identify the signs and symptoms of common disorders, to further evaluate those disorders through small group research and learning, and to prepare a treatment plan to preserve health or mitigate suffering. Students present the selected case studies in small groups either orally or in a written format. This course also presents evidence-based health care as it relates to clinical outcomes. Faculty facilitators act as coaches to direct the problem-based learning in the small groups. This course is a continuation of PAP 204.

### **PAP 206 Problem-Based Learning III 1 credit**

Requires students to identify the signs and symptoms of common disorders, to further evaluate those disorders through small group research and learning, and to prepare a treatment plan to preserve health or mitigate suffering. Students present the selected case studies in small groups either orally or in a written format. This course also presents evidence-based health care as it relates to clinical outcomes. Faculty facilitators act as coaches to direct the problem-based learning in the small groups. This course is a continuation of PAP 205.

### **PAP 207 Clinical Medicine I 4 credits**

Provides a beginning understanding of how clinicians approach the diagnosis and treatment of specific disease states in conjunction with Basic Science curriculum. Students learn to identify the signs and symptoms of common disorders, to further evaluate those disorders through appropriate testing, and to prepare a treatment plan that includes appropriate use of pharmacotherapeutics, referral sources, rehabilitation, and patient education. Includes otorhinolaryngology, ophthalmology, endocrinology, genitourinary and dermatology from a primary care perspective across the lifespan.

### **PAP 208 Clinical Medicine II 4 credits**

Provides a beginning understanding of how clinicians approach the diagnosis and treatment of specific disease states in conjunction with Basic Science curriculum. Students learn to identify the signs and symptoms of common disorders, to further evaluate those disorders through appropriate testing, and to prepare a treatment plan that includes appropriate use of pharmacotherapeutics, referral sources, rehabilitation, and patient education. Includes pulmonology, cardiology, gastroenterology, nephrology, orthopedics, neurology, women's health, and dermatology from a primary care perspective across the lifespan. This course is a continuation of PAP 207.

### **PAP 209 Clinical Medicine III 3 credits**

Students learn to identify the signs and symptoms of common disorders, to further evaluate those disorders through appropriate testing, and to prepare a treatment plan that includes appropriate use of pharmacotherapeutics, referral sources, rehabilitation, and patient education. Includes wellness, hematology/oncology, infectious disease, obstetrics and EKGs. This course is a continuation of PAP 208 with additional presentations and small group experiences that examine common patient conditions.

### **PAP 210 History and Physical Examination I 2 credits**

Teaches the techniques required to perform the complete physical examination of patients of all ages. Practice sessions and mock patients are used to develop the practical skills necessary to perform these tasks. Includes general evaluation and examination of the skin, ears, nose, throat, eyes, genitourinary, and lungs.

### **PAP 211 History and Physical Examination II 2 credits**

Teaches the techniques required to perform the complete physical examination of patients of all ages. Practice sessions and mock patients are used to develop the practical skills necessary to perform these tasks. This course is a continuation of PAP 210. Includes examination of heart, abdomen, and musculoskeletal and neurological systems.

**PAP 212 History and Physical Examination III****2 credits**

Reinforces the techniques required to perform the complete physical examination of patients of all ages. Practice sessions and mock patients are used to develop the practical skills necessary to perform these tasks. Also teaches basic diagnostic and therapeutic clinical skills and procedures most commonly used in a primary care setting. Covers preparation of the patient, anatomical considerations, patient consent, potential complications, and clarification of therapeutic and diagnostic value of clinical procedures. This course is a continuation of PAP 211.

**PAP 214 Behavioral Health****1 credit**

Explores the relationship between physical illness and psychosocial issues in the medical setting. Examines interviewing and communication styles unique to behavioral medicine. The presentation and recognition of major psychiatric disorders, mood and anxiety disorders, and substance abuse are addressed. Covers the appropriate role of psychotherapeutic agents, including anxiolytics, antidepressants, mood stabilizers and neuroleptics.

**PAP 220 Human Anatomy & Development****3 credits**

Presents functional and applied anatomy as it relates to common clinical findings. Provides the student with a solid understanding of the structure of the human body, with emphasis on normal vs. abnormal findings. Covers the musculoskeletal, nervous, cardiovascular, urinary, respiratory, digestive, and reproductive systems.

**PAP 221 Biochemistry****3 credits**

Introduces the major topics in modern biochemistry, cell biology, and human genetics through the study of the chemistry of proteins, carbohydrates, lipids, and nucleic acids, and covers how these components function and are involved in basic metabolic processes, such as cellular respiration, lipid metabolism, protein synthesis, and DNA replication. The basic conceptual background is provided to allow the PA student to understand disease mechanisms, clinical lab tests, and drug effects.

**PAP 222 Physiology****3 credits**

Provides the student with an improved understanding of human physiology as it relates to clinical medicine. Through lectures and examinations, students study the functional organization of the human body, membrane physiology, nerve and muscle tissue function, the cardiovascular system, the lymphatic system, the immune system, respiration, digestion, renal function, metabolism and temperature regulation, endocrinology and human reproduction.

**PAP 223 Pathophysiology****2 credits**

Requires students to focus on the clinical pathophysiology of human illness through the examination of the cellular and organ-based aspects of disease. Emphasis is placed on how the disease process begins, progresses and ends. Presentations in PAP 221 (Clinical Medicine) track with the material in this course, allowing students to correlate the pathophysiology of specific diseases with the medical and surgical management of those conditions.

**PAP 224 Pharmacology I****1 credit**

Introduces the study of therapeutic pharmacology with an emphasis on pharmacokinetics and pharmacodynamics. The physiology that underlies drug contraindications, interactions, and adverse effects is reviewed.

**PAP 225 Pharmacology II****2 credits**

Enables the student to apply the principles of pharmacology to the prevention and treatment of specific human disorders. Special emphasis is placed on the safe and appropriate use of medications. This course is a continuation of PAP 224.

**PAP 226 Pharmacology III****2 credits**

Applies the principles of pharmacology to the prevention and treatment of specific human disorders. Special emphasis is placed on the safe and appropriate use of the medications used for the diseases covered in the physician assistant program curriculum during the third didactic semester. This course is a continuation of PAP 225.

**PAP 231 Professional Seminar IV****0.5 credits**

Prepares the senior physician assistant student for entry to the profession. Topics include advanced medical ethical issues, professional behavior, legal aspects of practice, medical decision making, evaluation of medical literature, and current controversies in medicine.

**PAP 232 Professional Seminar V****0.5 credits**

Prepares the senior physician assistant student for entry to the profession. Topics include advanced medical ethical issues, professional behavior, legal aspects of practice, medical decision making, evaluation of medical literature, and current controversies in medicine. This course is a continuation of PAP 231.

**PAP 233 Professional Seminar VI****0.5 credits**

Prepares the senior physician assistant student for entry to the profession. Topics include advanced medical ethical issues, professional behavior, legal aspects of practice, medical decision making, evaluation of medical literature, and current controversies in medicine. This course is a continuation of PAP 232.

**PAP 234 Problem-Based Learning IV****0.5 credits**

Requires senior physician assistant students to present actual clinical cases they have seen during clinical clerkships. Students must analyze and evaluate clinical cases, and prepare case presentations in a grand rounds type format. Senior students will act as mentors to junior students in the small group setting. This course also presents evidence-based health care as it relates to clinical outcomes.

**PAP 235 Problem-Based Learning V****0.5 credits**

Requires senior physician assistant students to present actual clinical cases they have seen during clinical clerkships. Students must analyze and evaluate clinical cases, and prepare case presentations in a grand rounds type format. Senior students will act as mentors to junior students in the small group setting. This course also presents evidence-based health care as it relates to clinical outcomes. This course is a continuation of PAP 234.

**PAP 236 Problem-Based Learning VI**

**0.5 credits**

Requires senior physician assistant students to present actual clinical cases they have seen during clinical clerkships. Students must analyze and evaluate clinical cases, and prepare case presentations in a grand rounds type format. Senior students will act as mentors to junior students in the small group setting. This course also presents evidence-based health care as it relates to clinical outcomes. This course is a continuation of PAP 235.

**PAP 240 Family Medicine Clerkship I**

**3 credits**

Prepares the physician assistant student to assess and manage patients within the setting of the Family Medicine practice. The student provides care to patients under the direct supervision of a practicing clinician (preceptor). Clerkships are one month long.

**PAP 241 Family Medicine Clerkship II**

**3 credits**

Prepares the physician assistant student to assess and manage patients within the setting of the Family Medicine practice. The student provides care to patients under the direct supervision of a practicing clinician (preceptor). Clerkships are one month long. This is a continuation of PAP 240.

**PAP 242 Internal Medicine Clerkship I**

**3 credits**

Prepares the physician assistant student to assess and manage patients within the setting of Internal Medicine. The student provides care to patients under the direct supervision of a practicing clinician (preceptor). Clerkships are one month long.

**PAP 243 Internal Medicine Clerkship II**

**3 credits**

Prepares the physician assistant student to assess and manage patients within the setting of Internal Medicine. The student provides care to patients under the direct supervision of a practicing clinician (preceptor). Clerkships are one month long. This is a continuation of PAP 242.

**PAP 244 Women's Health Clerkship**

**3 credits**

Prepares the physician assistant student to assess and manage patients within the setting of Women's Health. The student provides care to patients under the direct supervision of a practicing clinician (preceptor). Clerkships are one month long.

**PAP 245 Emergency Medicine Clerkship**

**3 credits**

Prepares the physician assistant student to assess and manage patients within the setting of Emergency Medicine. The student provides care to patients under the direct supervision of a practicing clinician (preceptor). Clerkships are one month long.

**PAP 246 Surgery Clerkship**

**3 credits**

Prepares the physician assistant student to assess and manage patients within the setting of Surgery. The student provides care to patients under the direct supervision of a practicing clinician (preceptor). Clerkships are one month long.

**PAP 247 Pediatrics Clerkship**

**3 credits**

Prepares the physician assistant student to assess and manage patients in a pediatric setting. The student provides care to patients under the direct supervision of a practicing clinician (preceptor). Clerkships are one month long.

**PAP 248 Psychiatry Clerkship**

**3 credits**

Prepares the physician assistant student to assess and manage patients within the setting the in-patient or out-patient behavioral health practice. The student provides care to patients under the direct supervision of a practicing clinician (preceptor). Clerkships are one month long.

**PAP 249 Geriatrics Clerkship**

**3 credits**

Prepares the physician assistant student to assess and manage geriatrics patients. The student provides care to patients under the direct supervision of a practicing clinician (preceptor). Clerkships are one month long.

**PAP 250 Elective Clerkship I**

**3 credits**

Prepares the physician assistant student to assess and manage patients within the setting of their choice. The student provides care to patients under the direct supervision of a practicing clinician (preceptor). Clerkships are one month long.

**PAP 251 Elective Clerkship II**

**3 credits**

Prepares the physician assistant student to assess and manage patients within the setting of their choice. The student provides care to patients under the direct supervision of a practicing clinician (preceptor). Clerkships are one month long.

**PAP 275 Special Topics**

**Variable credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**PED – Physical Education Courses**

[www.rcc.edu/outdoor](http://www.rcc.edu/outdoor)

**PED 101 Conditioning Lab**

**1 credit**

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 102 Weight Training I**

**1 credit**

Offers basic instruction and practice in weight training. You will use weight training equipment in accordance with your abilities and goals. Emphasis is placed upon weight training equipment orientation, correct lifting techniques, and basic program design for men and women.

**PED 103 Weight Training II**

**2 credits**

Offers guided instruction and independent practice in weight training for men and women. You will practice various weight-training techniques in accordance with your abilities. Emphasis is placed upon physiological considerations, equipment orientation, correct lifting techniques, program design, and nutrition.

**PED 106 Fire Academy Fitness**  
**2.5 credits**

Focuses on educating the fire science student in the exercise, nutritional and stress management principles needed to effectively meet the demands of firefighting. The course includes an Individual fitness evaluation, computerized analysis of results and a prescribed exercise program.

**PED 110 Fitness Center Activity I**  
**1 credit**

Designed for individuals interested in improving total fitness via an aerobic circuit training program. The course will include an individual fitness evaluation, computerized analysis of results, and a prescribed exercise program. All the basic components of fitness, including flexibility, muscular strength, muscular endurance, cardiovascular fitness, and body composition, will be addressed. Weight machines, stationary bicycles, and computerized cardiovascular equipment will be used to elicit improvements in fitness.

**PED 111 Fitness Center Activity II**  
**1 credit**

An advanced course designed for individuals interested in reaching a higher level of total fitness via an aerobic circuit training program. The course will include an individual fitness evaluation, computerized analysis of results, and a prescribed exercise program. All the basic components of fitness, including flexibility, muscular strength, muscular endurance, cardiovascular fitness, and body composition, will be addressed. Weight machines, stationary bicycles, and computerized cardiovascular equipment will be used to elicit improvements in fitness.

*Prerequisite: PED 110.*

**PED 129 Zumba**  
**1 credit**

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 co 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 140 Body Sculpting and Toning**  
**1 credit**

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 143 Yoga I**  
**1 credit**

Offers guided instruction in yoga. You will practice yoga according to your individual fitness levels and abilities. Emphasis is placed on enhancing general health and well-being through the performance of yoga strength, flexibility, balance, and relaxation techniques and exercises.

**PED 144 Yoga II**  
**1 credit**

Increases awareness of yoga and its physical and mental benefits. The concepts of basic yoga are carried into additional areas.  
*Prerequisite: PED 143 or permission of instructor.*

**PED 161 Tai Chi I**  
**1 credit**

Designed to introduce 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 162 Tai Chi II**  
**1 credit**

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, and balance and coordination will be integral parts of the Tai-Chi training. In addition, psychosocial skills such as meditation, relaxation, and self-efficacy will be addressed.

**PED 163 Martial Arts I**  
**1 credit**

Designed to introduce basic martial arts techniques and forms designed to improve the physical and mental capacity of an individual. The primary emphasis is to gain an understanding of the basic philosophies and concepts around the martial arts and the approach to ethics and provides a clear-cut guide for developing a powerful sense of character and will.

**PED 165 Self Defense**  
**1 credit**

Introduces the basic skills and techniques of the art of self defense.

**PED 202 Golf I**  
**1 credit**

Introduces a basic course in golf designed for those who have had little or no formal instruction or for those with some experience who are interested in improving some aspect of their game. Includes driving range, putting green, and on-course play.

**PED 204 Fencing I**  
**1 credit**

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 205 Fencing II**  
**1 credit**

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.

**PED 208 Tennis I**  
**1 credit**

Designed to introduce and improve the skill level in tennis. The primary emphasis is teaching you the elements of tennis: rules of the game, ground strokes, serving, the various shots, and singles and doubles play and strategies.

**PED 230 Volleyball I**  
**1 credit**

Designed to introduce and improve student skill level in volleyball. The primary emphasis is on teaching you the elements of volleyball: rules, offensive and defensive play, passing, serving, setting, attacking, team play, and game strategies.

## **PED 280 Internship**

### **1-6 credits**

Gives you a realistic work experience in the field. Work will be supervised by professionals currently employed in the outdoor education industry. These preceptors will ensure that you participate in relevant field work and that you perform to the standards expected of employees of the organizations in which the internship occurs.

## **PED 285 Independent Study**

### **1 credit**

Meets the individual needs of students. You will engage in intensive study or research under the direction of a qualified instructor.

## **PER – Physical Education and Recreation Courses**

[www.rrcc.edu/outdoor](http://www.rrcc.edu/outdoor)

## **PER 151 Lifeguard Training**

### **2 credits**

Provides you with the necessary minimum knowledge and skills training to qualify as a non-surf lifeguard. It prepares lifeguard candidates to recognize emergencies, respond quickly and effectively to emergencies, and to prevent drowning and other incidents. The course also teaches other skills needed to be a professional lifeguard.

## **PER 175 Special Topics**

### **1-6 credits**

Provides you with a vehicle to pursue in depth exploration of special topics of interest.

## **PER 256 Mountaineering Teaching Concepts**

### **3 credits**

Covers planning and methods required to teach mountaineering skills. You will give lectures and conduct field trips.

## **PER 264 Officiating High School Baseball**

### **1 credit**

Provides training and instruction in high school baseball umpiring. The class will take students through the ten rules of baseball, as well as provide training in the on-field mechanics of calling safes and outs, proper field positioning for all baseball situations, and working the plate calling balls and strikes, and handling situations which may arise during the discharge of umpiring duties. The successful student will be tested and will be eligible to be credentialed as a registered Colorado high school baseball umpire through the Colorado High School

Baseball Umpires Association and be eligible to begin working high school games throughout the state of Colorado. This course features classroom instruction combined with a 12-hour block of simulated, intensive mechanics training followed by two to three on-field live scrimmages. All students will be supervised and guided by instructors who are registered and trained high school baseball umpires. Appropriate CHSBUA materials and handouts will be provided in class.

## **PER 265 Officiating High School Football**

### **1 credit**

Provides you with an opportunity to develop the skills and awareness of the duties of field officials during high school football contests including official playing rules, game management, general philosophy of conducting a high school football contest, and safety management of the players, coaches, and spectators during the contest. The course includes required on-field participation during selected high school football games.

## **PER 275 Special Topics**

### **1-12 credits**

Provides you with a vehicle to pursue in-depth exploration of special topics of interest.

## **PHI – Philosophy Courses**

[www.rrcc.edu/philosophy](http://www.rrcc.edu/philosophy)

## **PHI 111 Introduction to Philosophy: GT-AH3**

### **3 credits**

Introduces significant human questions and emphasizes understanding the meaning and methods of philosophy. It includes human condition, knowledge, freedom, history, ethics, the future, and religion.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

## **PHI 112 Ethics: GT-AH3**

### **3 credits**

Examines human life, experience, and thought in order to discover and develop the principles and values for pursuing a more fulfilled existence. Theories designed to justify ethical judgments are applied to a selection of contemporary personal and social issues.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

## **PHI 113 Logic: GT-AH3**

### **3 credits**

Studies effective thinking using language-oriented logic. The course provides tools and develops skills for creative and critical thinking and emphasizes the development of decision-making and problem-solving.  
*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

## **PHI 114 Comparative Religions: GT-AH3**

### **3 credits**

Introduces you to the similarities and differences among concepts predominant in the major world religions, comparing sociological, philosophical, and phenomenological similarities between major world faiths. It is designed to transfer to any four-year college philosophy, religious studies or humanities department.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

## **PHI 115 World Religions—West**

### **3 credits**

Introduces you to the common and different concepts predominant in the major world religions. It includes sociological, political, psychological, and philosophical aspects of a variety of belief systems. It focuses on the concept of religion as a cultural system, and a way that people make sense of a complex world. Particular emphasis is placed on how myths, legends, and folk tales reveal religious concerns.

## **PHI 116 World Religions—East**

### **3 credits**

Emphasizes the diversity and richness of Eastern Religions within a cross-cultural context. Concepts such as fate, reincarnation, enlightenment and morality are analyzed.

## **PHI 117 Psychology of Religion**

### **3 credits**

Emphasizes the application of psychological principles and theories to religious phenomena, including religious practices, beliefs, and rituals. As an introduction to the field, this course begins with 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 120 Applied Ethics****3 credits**

An umbrella course which covers different applications of ethics in contemporary society and disciplines, including Business Ethics, Biomedical ethics, Genetic ethics, issues of dental ethics, and other valid applications.

**PHI 123 Native American Religion****3 credits**

Designed to introduce you to the primary beliefs and practices found in the Native North American tribes, and to trace the development of these religious systems from their oral beginnings through to modern religious revivals.

**PHI 124 Introduction to Islam****3 credits**

Introduces the Islamic religious tradition and considers its significance in the modern world. The course investigates the history of Islam, Islamic beliefs and practices, Islamic sects, Sufism, and contemporary issues of Islamic extremism, women in Islam, and Islam in the West.

**PHI 140 Religion in American Culture****3 credits**

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 went unchallenged as the pre-eminent organizing principles of our post-modern era, where religion competes with a multiplicity of other belief systems in a complex societal matrix. This course will focus on the sundry ways in which religion and American culture interface.

**PHI 141 Old Testament****3 credits**

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 142 New Testament****3 credits**

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 201 Social and Political Philosophy****3 credits**

Addresses a single topic among those relevant to social and political philosophy such as political rights, political freedom, social obligations, or democracy.

**PHI 202 Religion and Film****3 credits**

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 will be paid to the challenges modernity and post modernity poses to traditional religion.

**PHI 203 Introduction to Buddhism****3 credits**

Introduces you 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.

**PHI 204 Introduction to Hinduism****3 credits**

Provides you 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.

**PHI 214 Philosophy of Religion:****GT-AH3****3 credits**

Focuses on the critical examination of the fundamental concepts, ideas, and implications of religion. Specific topics will include: the nature of God, the varieties of religious experience, argument concerning God's existence, the Problem of Evil, faith and reason, religion and human destiny, and the connection between religion and ethics.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**PHI 218 Environmental Ethics:****GT-AH3****3 credits**

Critically analyzes theories of value of the natural world. Topics include the relation between scientific and moral principles; theories of the moral worth of persons, animals, plants and other natural objects; historical, religious and cultural influences on conceptions of nature; alternative accounts of human relationships and responsibilities to nature, including deep ecology and eco-feminism; and the connection between moral and political values and economic policies.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**PHI 275 Special Topics in****Philosophy****3 credits**

Provides you with a vehicle to pursue in depth exploration of special topics of interest.

**PHO – Photography Courses**

[www.rccc.edu/multimedia](http://www.rccc.edu/multimedia)

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.

**PHO 109 Photography Lab****1 credit**

Introduces operations, lab safety, and proper operation of darkroom equipment to beginning and advanced students. Introduces concepts necessary for the production of fine art silver gelatin prints. *Corequisite: Must be taken concurrently with PHO 120.*

## **PHO 120 Fundamentals of Photography**

### **3 credits**

Working with a combination of lectures, demonstrations, assignments, and critiques, students learn to see photographically through an exploration of the basic tools, techniques and aesthetics of photography, with an emphasis on the creative use of camera controls, exposure, an overview of film and digital processing, and an awareness of the critical issues in contemporary photography.

*Corequisite: Must be taken concurrently with PHO 109 and/or PHO 161.*

## **PHO 122 Photo-Image Capture II**

### **3 credits**

This course is a continuation of Photo Image Capture I and further develops camera operation skills and an understanding of digital imaging terminology. A more advanced control and application of camera techniques such as exposure, depth of field, optical effects, and zone focusing 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. Additional topics include: macro photography, the effects of image compression, the advantages and disadvantages of shooting JPEG vs. RAW, and use of fill flash.

## **PHO 143 Perception & Photography I**

### **3 credits**

Presents the fundamentals of visual perception and design and seeing in the photographic medium. Topics include the psychology of seeing, value exercises, conceptual and perceptual exercises, depth representation, figure/ground, organization, gestalt principles, quality of light, and the development of ideas.

## **PHO 155 Photography of the Human Form I**

### **3 credits**

Introduces students to the social, artistic legal and photographic aspects of figure studies in photography. 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. Professional ethics, and legal concerns, as well as group critiques are used throughout the course. Choice of camera, either digital or film, is left up to the student.

## **PHO 161 Digital Capture Processing I**

### **2 credits**

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.

*Prerequisites: Must be taken concurrently with PHO 120.*

## **PHO 162 Digital Capture Processing II**

### **3 credits**

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.

## **PHO 204 Commercial Studio Lighting**

### **3 credits**

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.

*Recommended Prerequisite: ART 139.*

## **PHO 232 Professional Portraiture**

### **3 credits**

Introduces the student to the types of portraits taken when operating a professional portrait studio. Included is information on different types of lighting and their uses as well some Photoshop techniques used to create professional portraits. Types of portraits covered are Babies, Children, Weddings, and Environmental Portraits. Digital or Manual SLR required.

*Prerequisite: ART 139.*

## **PHO 234 Large Format Photography and Lighting**

### **3 credits**

Instruction in the use of large format cameras and strobe lighting for product photography is the focus of this course. Topics include: types of large format cameras, view camera movements for depth of field and perspective control, lighting ratios, special lighting techniques, light modifiers, bellows factors, and the

specific methods of lighting different objects and surfaces such as glass and metal.

*Recommended Prerequisite: ART 139 or permission of instructor.*

## **PHO 235 Architectural Photography**

### **3 credits**

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.

## **PHO 236 Product Photography**

### **3 credits**

A continuation of View Camera and Lighting Techniques, emphasizing studio product illustration using color transparency film and digital capture. Advance techniques in lighting and further development of proficiency with the view camera and advanced aspects of commercial illustration photography. The focus is on design requirements, exploration of various subject matter and printing reproduction requirements.

*Recommended Prerequisite: ART 139 or permission of instructor.*

## **PHO 240 Field Techniques and Exploration**

### **1 credit**

Focuses on the exploration, personal inspiration and the development of an expressive style beyond the influence of the college local and its geographic confines. Lecture/demonstration topics will include film, exposure, care and use of equipment, light and composition as well as preparation for the field component of this course.

## **PHO 260 Event & Wedding Photography**

### **3 credits**

Designed for the intermediate/advanced photo student interested in learning professional techniques associated with venue photography. Topics covered include weddings, Barmitzvah/Basmitzvah, music concerts, sporting events, graduations, and similar occasions. You will gain hands-on knowledge and learn practical shooting skills. The course includes the business and planning aspects of ceremonial and event photography. Both film and/or digital SLR cameras with manual settings may be used for this class.

*Prerequisite: ART 139.*

**PHO 261 Photographic Self Publishing**  
**3 credits**

Introduces students to the concepts and processes used in producing published works in both print and digital media for promotional and client based applications. Student projects will explore concepts such as: choosing a subject, project proposal, research and story development, basic design principals and image sequencing. File preparation and delivery of properly color managed projects for an open loop printing system and digital media output are also covered.  
*Prerequisites: ART 139.*

**PHO 266 Professional Digital Workflow (Adobe Lightroom)**  
**3 credits**

Concentrates on developing a seamless professional workflow for digital photography, integrating all aspects of digital photography, including shooting Camera RAW in the field, conversion of files to digital negatives, color calibration, importing, sorting and developing images, to final print output. Students will understand the workflow associated with importing, processing, managing, and showcasing large volumes of digital photographs including the use of the Library module for importing and managing photos; the Develop module for fundamental photographic adjustments and processing of hundreds of photographs at a time; and using the Slideshow, Web, and Print modules to easily present photos onscreen, online, or in print.  
*Recommended Prerequisite: ART 139.*

## PHY – Physics Courses

[www.rccc.edu/physics](http://www.rccc.edu/physics)

**PHY 105 Conceptual Physics: GT-SC1**  
**4 credits**

Explores the physics of how things work, utilizing many activities and demonstrations. This course studies mechanics, heat, properties of matter, electricity and magnetism, light and modern physics. This course includes laboratory experience.  
*Prerequisite: ENG 090 and MAT 090 (grade C or higher) or equivalent assessment scores.*

**PHY 107 Energy Science and Technology: GT-SC1**  
**4 credits**

Provides an in-depth look at the science of energy and energy technologies, with a focus on renewable energy resources and clean technologies. The course will provide a background in the physics of energy, non-renewable energy methods, the problems of energy transfer and loss and the current state of technology. This course includes laboratory experience.  
*Prerequisite: ENG 090 and MAT 090 (grade C or higher) or equivalent assessment scores.*

**PHY 111 Physics: Algebra-Based I/lab: GT-SC1**  
**5 credits**

Topics include: kinematics, force, circular motion, energy, momentum, torque, rotational dynamics, simple harmonic motion, temperature, heat and thermodynamics. This is a general physics course that is recommended for all of the health sciences and all other interested students. Those entering engineering or one of the advanced sciences should register for PHY 211.  
*Prerequisites: ENG 090 and MAT 121 (grade C or higher) or equivalent assessment scores.*

**PHY 112 Physics: Algebra-Based II/lab: GT-SC1**  
**5 credits**

A continuation of the PHY 111 course. Topics covered in this class include: sound waves, electric fields, electric circuits, magnetic fields, optics, and modern physics.  
*Prerequisite: PHY 111.*

**PHY 211 Physics: Calculus-Based I/lab: GT-SC1**  
**5 credits**

Topics include: kinematics, force, gravity, energy, momentum, torque, rotational dynamics, fluids and waves. This first semester calculus-based physics course is recommended for students entering engineering or one of the advance sciences.  
*Prerequisites: MAT 201 and ENG 090 (grade C or higher) or equivalent assessment scores.*

**PHY 212 Physics: Calculus-Based II/lab: GT-SC1**  
**5 credits**

A continuation of the PHY 211 course. Some of the topics covered in this class include: electric fields, electric circuits, magnetic fields, electromagnetic induction, light, and optics.  
*Prerequisite: PHY 211.*

**PHY 213 Physics: Calculus-Based III**  
**3 credits**

Expands upon PHY 212 and explores advances that took place in physics during the twentieth century. Topics may include special and general relativity, quantum theory, atomic physics, solid state physics, nuclear physics, semiconductor physics and cosmology.  
*Prerequisite: PHY 212.*

**PHY 227 Energy for Engineers**  
**3 credits**

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.  
*Prerequisite: PHY 211.*

## PLU – Plumbing Courses

[www.rccc.edu/plumbing](http://www.rccc.edu/plumbing)

**PLU 100 Introduction to Plumbing**  
**4 credits**

Introduces the student to the plumbing trade, providing them with the opportunity to learn basic skills needed to work in the plumbing industry. The course includes work in the classroom and shop. Students will work with plastic, copper, steel and cast iron pipe. Students will be able to identify and apply common DWV, copper and threaded fittings. Job safety and introduction to isometric drawing are also included in this course.  
*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **PLU 101 Piping Skills**

#### **4 credits**

Teaches the installation of common piping materials in plumbing and HVAC/R systems. Pipe math, terminology, common piping materials and application, figuring offsets and common pipe joints are also covered. Shop projects including pipe support and hanging, center to center measurements and a variety of pipe joining methods are explored.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **PLU 104 Plumbing Service**

#### **4 credits**

Allows you to learn how to diagnose and repair common problems associated with plumbing components and systems.

Topics will include 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. Students will learn customer relations and communication skills.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **PLU 105 Basic Electricity**

#### **4 credits**

Covers fundamentals of electricity, measuring instruments and electrical safety practices. Examines Ohm's Law and its practical application. Students work with electric motors, basic electrical components and learn their application to the trade.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **PLU 108 Soldering and Brazing Skills**

#### **0.5 credits**

Allows you to learn proper soldering and brazing skills when joining copper tube and fittings. Topics include safety, proper soldering and brazing skills, how to assess joint quality and basic center-to-center measurement.

*Corequisites: OSH 127 and HWE 113 or proof of current certifications.*

### **PLU 130 Basic Drain, Waste and Vent**

#### **4 credits**

Gives the students the opportunity to learn how to design drain, waste and vent systems. Chapters 7 and 9 of the plumbing code will be discussed in the classroom and applied in the shop. Other topics include DWV materials, sizing systems, terminology, and practical application of code tables, traps and interceptors. Students will design DWV systems in the classroom and build the system in the shop, thereby developing their isometric drawing skills.

### **PLU 150 Code and Piping Calculations**

#### **2 credits**

Reviews and applies code and piping calculation. Topics include calculations for the following: pipe and cylindrical area and volume, pipe circumference, rectangular area and volume, offsets, water volume and weight grade, fall, and run. The knowledge gained by students completing this course can be applied to all plumbing systems, fuel gas appliance piping and critical calculations for other mechanical and piping systems.

### **PLU 202 International Residential Code – Plumbing**

#### **2 credits**

Covers the plumbing requirements of the IRC. Students will be given the opportunity to learn and apply the general requirements of this code. The course will review and apply the sizing requirements of part VII of this code

### **PLU 207 International Plumbing Code**

#### **4 credits**

Helps 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. This Code has been adopted by the State Of Colorado effective July 1, 2005.

### **PLU 208 International Fuel Gas Code**

#### **4 credits**

Reviews the general requirements of applicable chapters of the IFGC. Students are given the opportunity to learn system sizing which includes: fuel gas piping, gas appliance venting, and combustion air.

### **PLU 216 Colorado Plumbing Code Update**

#### **2 credits**

This course is designed for students who need to be updated on the Colorado Plumbing Code. The instructor will meet with you and schedule the necessary attendance.

*Prerequisites: PLU 207 or valid Colorado plumbing license.*

### **PLU 247 Hot Water Heating Systems**

#### **4 credits**

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 convactor sizing are also discussed.

*Prerequisites: OSH 127, HWE 113, PLU 101, HVA 110, HVA 162 or permission of the instructor.*

### **PLU 267 Radiant Heating Systems**

#### **4 credits**

Combination lab/lecture course and covers the theory of operation, installation and maintenance of warm water radiant heating systems. Different methods of zoning, controls, piping methods, piping types and system components are discussed. Students are able to design, install, document, maintain and trouble-shoot all conventional residential warm water, radiant panel heating systems.

*Prerequisites: OSH 127, HWE 113, PLU 101 or HVA 110, HVA 105, HVA 247, or permission of the instructor.*

### **PLU 275 Special Topics**

#### **1-6 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest

### **PLU 280 Technical Project**

#### **1-12 credits**

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 282 Internship**

#### **0.5-12 credits**

Gives students with prior course work in a specific area are eligible for internship. The internship will give you an opportunity to apply your course studies.

*Prerequisite: Permission of instructor.*

### **PLU 285 Independent Study**

#### **0.5-12 credits**

Allows the student to 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

[www.rccc.edu/political](http://www.rccc.edu/political)

*Prerequisite for all POS courses except POS 280: Students must have earned an ACT score of 18. If they do not have an 18, students must take ACCUPLACER and score 95 or higher on the Writing Skills portion of ACCUPLACER and 80 or higher on the Reading Skills portion.*

### **POS 105 Introduction to Political Science: GT-SS1**

**3 credits**

Surveys the discipline of political science, including political philosophy and ideology, democratic and non-democratic processes, and international relations.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **POS 111 American Government: GT-SS1**

**3 credits**

Includes the background of the U.S. Constitution; the philosophy of American government; general principles of the U.S. Constitution; federalism; civil liberties; public opinion and citizen participation; political parties; interest groups and the electoral process; and the structure and functions of the national government.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **POS 125 American State and Local Government: GT-SS1**

**3 credits**

A study of the structure and functions of state, county, and municipal governments including their relations with each other and with national government. Colorado government and politics are emphasized.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **POS 136 American Presidency: GT-SS1**

**3 credits**

Focuses on the office of the president as a branch of government. Examines the individuals who have occupied and shaped the presidency, and changes in the office itself.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **POS 205 International Relations: GT-SS1**

**3 credits**

Examines the relationships among modern nation states. Topics include diplomacy, nationalism, ideologies, power and influence, conflict and cooperation, the role of non-state actors, the international economy, and theoretical attempts to understand international behavior.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **POS 215 Current Political Issues 1-3 credits**

An in-depth analysis of critical issues in political science. Topics will be determined each term.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **POS 225 Comparative Government: GT-SS1**

**3 credits**

A comparison of the basic features of selected developed and developing countries. Topics include ideologies, political parties, interest groups, and government institutions.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **POS 275 Special Topics 3 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **POS 280 Internship 1-6 credits**

Provides you with the opportunity to supplement course work with practical work experience related to your educational program. You will work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

## PPT – Power Plant Technology Courses

### **PPT 215 Power Generation 3 credits**

Introduces the basic elements of electrical generator design, protection, and operation. Students are introduced to the theoretical aspects of reactive power in power systems by analyzing the inductive and capacitive components of the system, with an emphasis on megavar loading as it is affected by the excitation system. The generator's auxiliary systems and controls are introduced and the function and types of exciters commonly found in power plants are examined.

## PRA – Park Ranger Courses

[www.rccc.edu/park](http://www.rccc.edu/park)

### **PRA 102 Introduction to Park Ranger Technology 3 credits**

An introductory course covering the development of public lands in the U.S., the various agencies controlling these lands, multi-use doctrine, wilderness, public services provided in parks, and the various roles of the park ranger in different settings. Career planning and park ranger responsibilities will be discussed, such as law enforcement, natural resource management, protection, and interpretation, such as geologic, biologic, and historic or cultural resources. Visitor services, emergency response, management, and training are also covered.

### **PRA 175 Special Topics 1-6 credits**

Provides you with a vehicle to pursue in depth exploration of special topics of interest.

### **PRA 178 Park Ranger Skills Seminar 2 credits**

A skills seminar that presents necessary information regarding specialized training related to the park ranger field. Handling of livestock, fence design, building and repair, vehicle driving, park maintenance, budgeting and planning, and trail design, construction, and maintenance are some of the topics that can be covered. This is a hands-on course for development and application of skills.

### **PRA 203 Natural Resource Management**

#### **3 credits**

An introductory course covering the various scientific disciplines and complex issues associated with natural resource management. Ecosystem management, wildlife management, plant ecology, agricultural management, career planning, public land acquisition, visitor use, natural resource law enforcement, and public policy are introduced and discussed in detail.

*Prerequisite: PRA 102.*

### **PRA 205 Natural Resource Interpretation**

#### **3 credits**

A basic course in natural and cultural resource interpretation. The philosophy, techniques, and skills necessary to produce exciting and relevant resource interpretation projects are discussed and practiced. Interpretive plans are discussed in detail as well as various techniques used in the field of resource interpretation and public education. The history and development of environmental education and natural/cultural resource interpretation are discussed. Multi-use conflict resolution of public education and resource interpretation are emphasized.

### **PRA 218 Outdoor Leadership**

#### **3 credits**

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 230 Park Ranger Law Enforcement Training**

#### **3 credits**

An intensive academy for non-armed park rangers who work in local government parks and open space districts. The focus is on ranger safety, regulation enforcement, incident command, limitations of authority, visitor contact, communications, and situational control techniques. Topics will vary depending upon the class needs.

*Prerequisite: PRA 102 or recent seasonal park employment/permission of the instructor.*

### **PRA 255 Advanced Resource Interpretation**

#### **3 credits**

An advanced course in natural and cultural/historic resource interpretation. The course provides you 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 the types of skills offered are 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 resource interpretation for the physically or mentally challenged, sensory impaired, the elderly, and international visitors will be discussed. The sensitive handling of controversial/sensitive educational issues will also be discussed.

*Prerequisite: PRA 205.*

### **PRA 280 Park Ranger Internship**

#### **1-6 credits**

Gives you a realistic work experience in the field. All work will be supervised by park rangers currently employed by land management agencies at various levels of government. These preceptors will ensure that you participate in relevant field work and perform to the standards expected of employees of the agencies in which the internship occurs.

*Prerequisite: PRA 102.*

## **PRO – Process Technology Courses**

[www.rccc.edu/isod](http://www.rccc.edu/isod)

### **PRO 100 Introduction to Process Technology**

#### **4 credits**

Provides an overview or introduction into the field of Process Operations within the process industry. The course will introduce the roles and responsibilities of process technicians, the environment in which they work, and the equipment and systems in which they operate.

### **PRO 110 Safety, Health and Environment**

#### **3 credits**

Provides an introduction to the field of safety, health, & environmental concerns within the process industry. Within this course, you will be introduced to various types of plant hazards, safety and environmental systems and equipment, and the regulations under which processing plants are governed.

### **PRO 120 Process Technology I: Equipment**

#### **4 credits**

Provides an overview or introduction into the field of equipment within the process industry. This course will introduce many process industry-related equipment concepts including purpose, components, operation, and the Process Technician's role for operating and troubleshooting the equipment.

*Prerequisite: PRO 100 and PRO 110 or permission of instructor.*

### **PRO 125 Industrial Equipment**

#### **4 credits**

Familiarizes the student with nomenclature, maintenance, safety and operations in relation to the stationary equipment utilized in the oil and gas and other process industries. This course provides an overview or introduction into the field of equipment and maintenance within the process industry. The course also provides an overview or introduction into the field of stationary equipment utilized in many of the process industries. This course will introduce many process industry-related equipment concepts including purpose, components, operation, and the Process Technician's role for operating and troubleshooting the equipment.

### **PRO 130 Instrumentation**

#### **3 credits**

Provides an introduction to the field of Instrumentation and covers process variables and the various instruments used to sense, measure, transmit and control these variables. This course also introduces control loops and the elements that are found in different types of loops, such as controllers, regulators and final control elements. The course concludes with a study of instrumentation drawings and diagrams and a unit on troubleshooting instrumentation.

*Prerequisite: PRO 100 and PRO 110 or permission of instructor.*

### **PRO 131 Instrumentation II**

#### **3 credits**

Introduces the student to switches, relays and annunciator systems and moves on to discuss signal conversion and transmission. Controllers, control schemes and advanced control schemes are covered at a level appropriate for the process technician. The student then moves on to learn about digital control, programmable logic control and distributed control systems before ending the course with a discussion of instrumentation power supplies, emergency shutdown systems and instrumentation malfunctions.

**PRO 175 Special Topics****0.5 – 6 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

*Prerequisite: Permission of instructor.*

**PRO 185 Independent Study****0.5 – 6 credits**

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

*Prerequisite: Permission of instructor.*

**PRO 210 Process Technology II: Systems****4 credits**

Studies the interrelationship of process equipment and process systems: arranging process equipment into basic systems; describing the purpose and function of specific process systems; explaining how factors affecting process systems are controlled under normal conditions; and recognizing abnormal process conditions. In addition, it introduces the concept of system and plant economics.

*Prerequisite: PRO 120 and PRO 130 or permission of instructor.*

**PRO 220 Process Technology III: Operations****4 credits**

Provides an introduction to the field of operations within the process industry. Students will use existing knowledge of equipment, systems, and instrumentation to understand the operation of an entire unit. Students study concepts related to commissioning, normal startup, normal operations, normal shutdown, turnarounds, and abnormal situations, as well as the Process Technician's role in performing the tasks associated with these concepts within an operating unit.

*Prerequisite: PRO 120 and PRO 130 or permission of instructor.*

**PRO 230 Quality in Process Technology****3 credits**

Provides an introduction to the field of Quality within the Process Industry. This course will introduce many process industry-related quality concepts including operating consistency, continuous improvement, plant economics, team skills and statistical process control (SPC).

*Prerequisite: PRO 100 and PRO 110 or permission of instructor.*

**PRO 240 Industrial Troubleshooting****4 credits**

Provides instruction in the different types of troubleshooting techniques, procedures, and methods used to solve process problems. Topics include application of data collection and analysis, cause-effect relationships, and reasoning.

*Prerequisite: PRO 220 or permission of instructor.*

**PRO 275 Special Topics****0.5 – 6 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

*Prerequisite: Permission of instructor.*

**PRO 280 Internship****4 credits**

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.*

**PRO 285 Independent Study****0.5 – 6 credits**

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

*Prerequisite: Permission of instructor.*

**PSY – Psychology Courses****[www.rccc.edu/psychology](http://www.rccc.edu/psychology)**

*Prerequisite for all PSY courses: Students must have earned an ACT score of 18. If they do not have an 18, students must take ACCUPLACER and score 95 or higher on the Writing Skills portion of ACCUPLACER and 80 or higher on the Reading Skills portion.*

**PSY 101 General Psychology I: GT-SS3****3 credits**

Focuses on the scientific study of behavior including motivation, emotion, physiological psychology, stress and coping, research methods, consciousness, sensation, perception, learning and memory.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**PSY 102 General Psychology II: GT-SS3****3 credits**

Focuses on the scientific study of behavior including cognition, language, intelligence, psychological assessment, personality, abnormal psychology, therapy, sexuality, life span development, and social psychology.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**PSY 110 Career Development****3 credits**

Assists you in recognizing your career potential, and provides tools for making realistic decisions concerning educational and occupational objectives.

**PSY 116 Stress Management****3 credits**

Identifies the physiological, emotional and behavioral aspects of stress. Techniques of stress reduction and management are explored and applied, including nutrition, exercise, assertiveness, time management, and financial management. This course is not designed to transfer.

**PSY 117 Parenting****1 credit**

Focuses on effective techniques for parenting children, with emphasis on setting expectations, consideration of individual differences, satisfactory communication, and effective parent-child relationships.

**PSY 175 Special Topics****1-3 credits**

Provides you with a vehicle to pursue in-depth exploration of special topics of interest.

**PSY 180 Internship****1-3 credits**

Provides you with the opportunity to supplement course work with practical work experience related to your educational programs. You will work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

**PSY 200 Research Methodology****3 credits**

Introduces research methods and designs including correlational studies, experimental designs and quasi-experimental designs. Additional topics include evaluations of scientific research, data analysis, report writing and research ethics.

**PSY 204 Relationships: Challenges and Choices**

**1 credit**

Enables you to preserve and enhance couple relationships by understanding the role of gender differences, conflict patterns, communication skills, problem solving, and the meaning of commitment, fun, and friendship.

**PSY 205 Psychology of Gender: GT-SS3**

**3 credits**

Examines gender comparisons in work, dating, family life, and sexual behavior throughout the life span. What is the interplay between biology and environment when looking at these gender differences?

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**PSY 206 Psychology of Women**

**3 credits**

Discusses how women have traditionally been excluded from defining theory or contributing to the development of appropriate methodology in the area of psychology and women. This course also investigates differences and similarities between men and women and the impact of womanhood on social situations, particularly in the areas of employment, courtship, family life and sexuality. It also helps students appreciate the influence of women on human experience. Finally, the course facilitates the development of critical thinking skills through discussion, research projects, and exercises on current controversial topics related to women's issues that are designed to promote these skills.

**PSY 207 Introduction Forensic Psychology**

**3 credits**

Introduction to Forensic Psychology is a course in an overview of Forensic Psychology. As such it explores both current research and practice in five areas. These areas are police psychology, criminal psychology, victimology, correctional psychology and the interface of psychology and the courts. The course facilitates an understanding of the numerous careers related to forensic psychology, how to prepare for them and current research and practice in each of the five broad areas of forensic psychology.

**PSY 112 Psychology of Adjustment**

**3 credits**

Emphasizes personal growth and the development of interpersonal skills. Focus is on the practical application of psychological principles in achieving understanding of the self and identity, interpersonal communication, and close relationships.

**PSY 217 Human Sexuality: GT-SS3**

**3 credits**

Surveys the physiological, psychological, and psychosocial aspects of human sexuality. Some of the topics include anatomy, relationships, sexual identity, sexual health, and sex in the media.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**PSY 226 Social Psychology: GT-SS3**

**3 credits**

Covers the behavior of humans in social settings including attitudes, aggression, conformity, cooperation and competition, prejudice, and interpersonal attraction.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**PSY 227 Psychology of Death and Dying: GT-SS3**

**3 credits**

Examines the philosophies of life and death, emphasizing dying, death, mourning, and the consideration of one's own death.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**PSY 229 Introduction to Addictive Behavior**

**2 credits**

Focuses on addictive behavior and its effect on individuals, families, and society.

**PSY 231 Positive Psychology**

**3 credits**

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.

**PSY 235 Human Growth and Development: GT-SS3**

**3 credits**

An overview of human development from conception, childhood, adolescence, adulthood, through the end of life. Material emphasizes physical, cognitive, emotional, and psychosocial factors.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**PSY 238 Child Growth and Development: GT-SS3**

**3 credits**

Covers growth and development of the individual from conception through childhood, emphasizing physical, cognitive, emotional, and psychosocial factors.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**PSY 239 Adolescent & Adult Psychology**

**3 credits**

Examines growth and development of the individual from adolescence to death, emphasizing physical, cognitive, emotional and psychosocial factors.

**PSY 240 Health Psychology: GT-SS3**

**3 credits**

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.

**PSY 245 Educational Psychology**

**3 credits**

Focuses on the relationships between theory, research, and practice in the areas of learning, child development, motivation, and educational assessment.

**PSY 249 Abnormal Psychology: GT-SS3**

**3 credits**

Examines abnormal behavior and its classification, causes, treatment, and prevention. Focuses on how psychology views mental illness and how people experience various emotional and cognitive issues.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**PSY 250 Dynamics of Racism and Prejudice**

**3 credits**

Focuses on early race relations in the United States, the development of prejudicial attitudes, and the social impact and strategies for positive change.

**PSY 258 Introduction to Neuropsychology**

**3 credits**

Focuses on introduction to basic neuropsychological terms and concepts with emphasis on application of thinking and behavior in humans.

**PSY 265 Psychology of Personality: (GT-SS3 pending)**

**3 credits**

Examines the structure, function, and development of personality. It also investigates the major contemporary theories of personality and 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. The course enables you to gain an appreciation of the value of alternative theoretical approaches to this study of psychology.

**PSY 267 Stress Reduction/Biofeedback**

**3 credits**

Focuses on the biological and psychological basis of stress and the detrimental effects it may have on health. Emphasizes learning and applying stress reduction skills which are monitored with simple biofeedback instruments.

**REA – Reading Courses**

**REA 030 Basic Reading Skills**

**2 credits**

Focuses on strategies for word attack, vocabulary development, stages of reading, and basic reading comprehension.

*Prerequisite: Accuplacer Reading Skills (25-39).*

**REA 060 Foundations of Reading**

**3 credits**

Focuses on strategies for vocabulary development, improved reading comprehension, and enrichment.

*Prerequisite: A grade of C or above in REA 030 or equivalent assessment score.*

**REA 090 College Preparatory Reading**

**3 credits**

Focuses on strategies for improving comprehension, developing vocabulary, and increasing rate for reading college textbooks.

*Prerequisite: A grade of C or above in REA 060 or equivalent assessment score.*

**REC - Recreation Courses**

[www.rccc.edu/outdoor](http://www.rccc.edu/outdoor)

**REC 100 Introduction to Recreation**

**2 credits**

Studies the history, principles, philosophy, contemporary problems, and trends of recreation and their influence upon today's American society.

**REC 111 Outdoor Equipment and Facilities**

**2 credits**

Acquaints you with wilderness equipment, programs and facilities. The course includes field trips to local outdoor industry facilities.

**REC 200 Principles of Outdoor Recreation**

**3 credits**

Includes lectures and practical outdoor experiences relating to problems and trends in outdoor recreation.

**REC 211 Outdoor Leadership**

**2 credits**

An introduction to the development, acquisition, and application of outdoor leadership skills and knowledge. You are exposed 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. Emphasis is on minimal impact camping, wilderness ecology, judgment and decision-making, group dynamics and trip logistics. These skills will enhance your effectiveness as an outdoor leader.

**REE – Real Estate Courses**

[www.rccc.edu/business](http://www.rccc.edu/business)

**REE 119 15-Hour National USPAP Course**

**1 credit**

Satisfies the 16-hour continuing education requirement (standard) for licensed real estate appraisers including one hour of state appraisal rules and regulations.

*Corequisites: REE 120 and REE 121.*

**REE 120 Basic Appraisal Principles**

**2 credits**

Provides a basic understanding of the principles and concepts for the trainee level of appraisal also known as the registered appraiser. The course provides a basic understanding of real estate concepts and characteristics, legal considerations, the economic principles of value, and types of value. It includes an overview of Real Estate markets and analysis and the application of ethics in appraisal practice.

*Corequisites: REE 119 and REE 121.*

**REE 121 Basic Appraisal Procedures**

**2 credits**

Offers the second half of the Real Estate Appraisal Course. It provides basic valuation procedures and concepts for the trainee level of appraisal also known as the registered appraiser. The course provides a basic understanding of real estate property characteristics and description, and the appraisal process including the application and reconciliation of the approaches to value.

*Corequisites: REE 119 and REE 120.*

**REE 201 Real Estate Brokers I**

**6 credits**

Enables you, 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 Broker's license. This course includes Real Estate Law and Practice, Practical Applications, and Current Legal Issues.

*Corequisite: REE 202.*

*Prerequisite: A grade of C or higher in Reading 090 or appropriate SAT, ACT or Accuplacer score that indicates college reading ability, or permission of instructor.*

**REE 202 Real Estate Brokers II**

**6 credits**

Enables you, 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 Broker's license. This course includes Colorado Contracts and Regulations, Closings, and Recordkeeping and Trust Accounts.

*Corequisite: REE 201.*

*Prerequisite: A grade of C or higher in Reading 090 or appropriate SAT, ACT or Accuplacer score that indicates college reading ability, or permission of instructor.*

## **REE 275 Special Topics**

### **1-3 credits**

Provides you with a vehicle to explore special topics of interest in depth.

## **REE 280 Internship**

### **1-3 credits**

Provides you with the opportunity to supplement course work with practical work experience related to your educational program and occupational objectives. You will be placed at approved workstations related to your program of study. You will work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/coordinator.

*Prerequisite: Permission of instructor.*

## **REE 285 Independent Study**

### **1-3 credits**

Meets your individual needs through intensive study or research under the direction of a qualified instructor.

*Prerequisite: Permission of instructor.*

## **RTE – Radiologic Technology Courses**

### **[www.rccc.edu/radiology](http://www.rccc.edu/radiology)**

*You must be accepted into the Radiology Technology Program to take any RTE course other than RTE 101 or RTE 255.*

*Please visit the program website, [www.rccc.edu/radiology](http://www.rccc.edu/radiology), for information regarding the application and admission process.*

## **RTE 101 Introduction to Radiography**

### **2 credits**

Provides an introduction to 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.

## **RTE 111 Radiographic Patient Care**

### **2 credits**

Expands the information presented in RTE 101, and includes diversity, universal precautions, legal considerations and ethics. This course consists of lecture and laboratory experience in the patient care areas of asepsis, vital signs, venipuncture, medical emergencies, assistance with drug administration, patients with special needs, and death and dying.

## **RTE 121 Radiologic Procedures I**

### **3 credits**

Introduces fundamentals of radiographic positioning including use of radiographic equipment and safety, positioning, terminology, anatomy, pathology, and skills necessary to perform radiographic procedures of the chest, abdomen, upper extremity, gastrointestinal and urinary systems.

## **RTE 122 Radiologic Procedures II**

### **3 credits**

Introduces additional material covered in RTE 121 including the knowledge of anatomy, pathology, and skills necessary to perform radiographic procedures of the lower extremity, pelvis, spine, and bony thorax.

## **RTE 131 Radiographic Pathology & Image Evaluation I**

### **1.5 credits**

Provides a detailed discussion of pathological conditions of the skeletal, respiratory, digestive, urinary, and reproductive systems. Related medical terminology will be discussed, along with assessment of exposure adjustment for pathologic conditions and evaluation of radiographs for appropriate anatomy, positioning exposure and pathology.

## **RTE 132 Radiographic Pathology & Image Evaluation II**

### **1.5 credits**

Expands on the information in RTE 131 with a focus on pathology of the skull, vascular system, central nervous system, endocrine system. Related medical terminology will be discussed along with the continued assessment of image quality.

## **RTE 141 Radiographic Equipment/Imaging I**

### **3 credits**

Introduces the fundamental aspects of radiographic equipment including a basic review of physics fundamentals pertaining to x-ray production, the x-ray machine, image receptors, and control of scatter radiation.

## **RTE 142 Radiographic Equipment/Imaging II**

### **3 credits**

Expands information covered in RTE 141 and provides in-depth knowledge of radiographic exposure and the factors that effect radiographic film quality and assurance.

## **RTE 171 Clinical Preparation**

### **3 credits**

Prepares the beginning radiography student for clinical internship under the direct supervision of a registered radiologic technologist with a focus on introductory skills necessary for clinical internship to include patient care, instrumentation, procedure techniques and image evaluation.

## **RTE 181 Radiographic Internship I**

### **6 credits**

Introduces the clinical education experience at the clinical education center. You will apply knowledge learned in the classroom to the actual practice of radiography.

## **RTE 182 Radiographic Internship II**

### **6 credits**

Introduces additional concepts and more complex radiographic procedures than those learned in Radiographic Internship I.

## **RTE 183 Radiographic Internship III**

### **6 credits**

Reinforces the basic concepts of Radiographic Internship I and II.

## **RTE 221 Advanced Medical Imaging**

### **3 credits**

Introduces advanced imaging techniques including radiography of the cranium, facial bones and special radiographic procedures. These concepts are combined with the basic oral communication techniques necessary for the professional radiographer.

## **RTE 231 Radiation Biology/Protection**

### **2 credits**

Provides the basic knowledge and understanding of the biologic effects of ionizing radiation and radiation protection and safety.

## **RTE 240 Principles of CT Imaging**

### **3 credits**

Explores the history, physical principles and instrumentation involved in Computed Tomography (CT). CT image creation, processing and display will be examined from data acquisition through post-processing and archiving. Patient factors and other related elements affecting image quality will be explained, as well artifact production and reduction. Radiation protection practices and quality control will also be explored.

**RTE 250 Mammography****3 credits**

Introduces the fundamentals of mammography as required for ARRT mammography certification.

**RTE 255 Multiplanar Sectional Imaging****2 credits**

Offers a course designed to increase knowledge in multi-planar/multi-modality sectional anatomy for imaging professionals, radiologic technology students, and other interested health care professionals. Correlative studies of line drawings, cadaverous photographs, MRI, and CT images are thoroughly studied.

**RTE 256 Bone Densitometry****3 credits**

Offers an in-depth study of Bone Densitometry equipment, scanning, and interpretation that will prepare the student for the American Registry of Radiologic Technologist certification examination in Bone Densitometry.

**RTE 260 Magnetic Resonance Imaging****3 credits**

Provides an in-depth study of the physics and instrumentation, clinical applications, and quality control process involved in Magnetic Resonance Imaging (MRI).

**RTE 281 Radiographic Internship IV****6 credits**

Introduces you to the radiographic specialty areas of Pediatrics, Geriatrics, the out-patient clinic, as well as increasing proficiency in general radiography.

**RTE 282 Radiographic Internship V****6 credits**

Introduces you to the radiographic specialty areas of portable and trauma radiography as well as increasing proficiency in general radiography.

**RTE 284 Advanced Clinical****VARIABLE credit**

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 289 Capstone Course****3 credits**

Prepares the radiology technology student to effectively search for a job in radiography and sit for the American Registry of Radiologic Technologists examination.

**RUS – Russian Courses**

[www.rccc.edu/languages](http://www.rccc.edu/languages)

**RUS 101 Conversational Russian I****3 credits**

Introduces you to beginning conversational Russian and focuses on understanding and speaking Russian. This course covers basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

**RUS 102 Conversational Russian II****3 credits**

Continues the sequence for students who wish to understand and speak Russian. This course covers basic conversational patterns, expressions, and grammar.  
*Prerequisite: RUS 101 or permission of instructor.*

**RUS 111 Russian Language I****5 credits**

Begins a sequence dealing with the development of functional proficiency in listening, speaking, reading and writing the Russian language. Note: The order of the topics and methodology will vary according to individual texts and instructors.

**RUS 112 Russian Language II****5 credits**

Continues Russian I in the development of functional proficiency in listening, speaking, reading and writing the Russian language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.  
*Prerequisite: RUS 111 or permission of instructor.*

**RUS 211 Russian Language III: GT - AH4****3 credits**

Continues Russian Language I and II in the development of increased functional proficiency in listening, speaking, reading and writing the Russian language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.  
*Prerequisite: RUS 112 or permission of instructor.*

**RUS 212 Russian Language IV: GT-AH4****3 credits**

Continues Russian Language I, II and III in the development of increased functional proficiency in listening, speaking, reading and writing the Russian language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.  
*Prerequisite: RUS 211 or permission of instructor.*

**RUS 275 Special Topics****0.5-6 credits**

Provides you with a vehicle to pursue in depth exploration of special topics of interest.

**SBM – Small Business Management Courses**

[www.rccc.edu/business](http://www.rccc.edu/business)

**SBM 101 Starting a Small Business****1 credit**

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 103 Legal Aspects of a Small Business****1 credit**

Provides a brief overview of the legal issues involved in starting and managing a small business. The course focuses on business organization, contracts and agreements, and protecting the business.

**SBM 106 Recordkeeping for a Small Business****1 credit**

Provides an overview of recordkeeping for a small business. You will learn basic bookkeeping skills and recordkeeping requirements.

**SBM 108 Marketing for a Small Business****1 credit**

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 110 Managing a Small Business**

**1 credit**

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 112 Financing a Small Business**

**1 credit**

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 113 Writing a Business Plan**

**1 credit**

The final course in the small business certificate program. You will write a business plan from the material you have developed in the other courses.

*Recommended Prerequisites: SBM 101, 103, 106, 108, 110 and 112.*

### **SBM 175 Special Topics**

**1-3 credits**

Provides you with a vehicle to pursue in depth exploration of special topics of interest.

### **SBM 185 Independent Study**

**1 credit**

Meets the individual needs of students. You will engage in intensive study or research under the direction of a qualified instructor.

*Prerequisite: Permission of instructor.*

## **SCI – Science Courses**

[www.rccc.edu/science](http://www.rccc.edu/science)

### **SCI 105 Science in Society: GT-SC2**

**3 credits**

Examines issues relating to the way science affects society. Students will investigate issues in information technology, the environment, physics and astronomy, biology, medicine and the interaction of science with politics. The class will focus on gathering accurate scientific information and applying critical thinking skills and the scientific method to analyze how science plays both positive and negative roles in society. Emphasis will be on student research, inquiry and analysis of science related issues.

*Prerequisite: ENG 090 and MAT 090 (grade C or higher) or equivalent assessment scores.*

### **SCI 155 Integrated Science I: GT-SC1**

**4 credits**

Examines the nature of energy and matter, their interactions and changes. This course integrates the fundamental concepts and ideas about the nature of physics and chemistry with the natural world.

*Prerequisite: ENG 090 and MAT 099 (grade C or higher) or equivalent assessment scores.*

### **SCI 156 Integrated Science II: GT-SC1**

**4 credits**

Examines earth and biological systems, living and non-living environments, through the application and refinement of fundamental energy and matter concepts. Topics covered include the origins of the planet and the life upon it, interactions between climatology and life, how to interpret land forms and the implications for ecoregions, basic mineralogy, basic biological chemistry, cell structure and metabolism, and other areas of interface between biology and geology.

*Prerequisite: ENG 090 and MAT 099 (grade C or higher) or equivalent assessment scores.*

## **SOC – Sociology Courses**

[www.rccc.edu/sociology](http://www.rccc.edu/sociology)

*Prerequisite for all SOC courses: Students must have earned an ACT score of 18. If they do not have an 18, students must take ACCUPLACER and score 95 or higher on the Writing Skills portion of ACCUPLACER and 80 or higher on the Reading Skills portion.*

### **SOC 100 Principles of Practical Sociology**

**3 credits**

Examines the impact of social groups, the historical development of sociology, the way sociologists are taught to think, the interactions between humans and their social organizations, inequality and the meaning of culture, the effects of our social institutions, order and power in social organizations, the changing dynamics of human social life, and the study of family structures in our society

### **OC 101 Introduction to Sociology I: GT-SS3**

**3 credits**

Examines the basic concepts, theories and principles of sociology, as well as human culture, social groups, the role of society in the development of self, deviance, and the social issues of age, gender, class, race and ethnicity in contemporary society.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **SOC 102 Introduction to Sociology II: GT-SS3**

**3 credits**

A continuation of introduction to Sociology 101. This course is devoted to examining "social institutions" and their representative organizations from a macro-micro perspective. It critically explores issues of social change, demography, social movements, and conflicts and trends within political, economic, educational, religious, and familial structures.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **SOC 105 Socio-History US Race/Ethnicity**

**3 credits**

Explores the Socio-Historical context by which the US developed its diverse racial and ethnic make-up. Theories of Integration and Segregation will be explored across the eras. Changing US immigration, naturalization, prejudice and discrimination across the centuries will be addressed.

### **SOC 158 Men's Roles in Families and Society: An Introduction to Fatherhood**

**3 credits**

Examines men as fathers as well as their role in the wider culture. It seeks to enhance the personal, historical, professional and behavioral awareness of fathers and the professionals who serve them.

### **SOC 201 Introduction to Gerontology**

**3 credits**

Acquaints you with the major issues and concepts pertinent to the field of gerontology. The course introduces various theoretical perspectives on aging, the changing trends in life expectancy and other demographic considerations, and the interrelationship between elders and key social institutions. It provides an overview of physical, cognitive, and socioemotional factors associated with aging.

**SOC 203 Urban-Socio Anthropology**

**3 credits**

Examines how cities and city life are shaped by cultural, social, political, and economic forces operating at many different levels. Additionally, SOC 203 examines the history and theoretical roots of urban anthropology and sociology, ethnographic fieldwork in urban environment, and urban social organization in cross-cultural perspectives.

**SOC 205 Sociology of Family Dynamics: GT-SS3**

**3 credits**

Develops an understanding of marriage, family and kinship. The course examines the family as an institution and how social, cultural and personal factors influence family relations. The stability and diversity of the family will be explored, along with current trends and some alternative lifestyles.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**SOC 207 Environmental Sociology: GT-SS3**

**3 credits**

The examination of humans and the environment from an ecological perspective. SOC 207 focuses on industrial and economic growth versus sustainability, natural resources development and management, environmental values and social movements, and comparative perspectives on people's relationship to the environment. Review of the "Green" movement and other environmental movements and their impacts upon social dynamics, the environment, and the evolution of social movements.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**SOC 208 Restorative Justice I**

**3 credits**

Provides an introduction to the principles and practices of Restorative Justice, an increasingly popular approach to harm, crime and community. Examines the history and theory behind this paradigm, comparing and contrasting restorative and retributive approaches. Looks at applications in a number of settings, including schools and the criminal justice system. National and international examples will be discussed.

**SOC 210 Technology in Society**

**3 credits**

This course analyzes the relationship between technology and human society and culture; how technology has influenced the development of society and how social and cultural forces have influenced the development of technology. The course will examine both current and historical examples of key technologies and the ways their development and utilization have been contextualized by society and culture. In particular, the course will explore the implications of living in a modern society defined by increasing dependence on complex technologies and rapid technological change.

**SOC 212 Research in Social Sciences**

**3 credits**

Introduces social research methods with an emphasis on the scientific method and the role of empirical inquiry into sociology. This course will include the study of methodologies of data collection and analysis, the logic of research, the role of theory, measurement, sampling and research designs. Field research and the professional norms and ethics of social research will also be covered.

**SOC 215 Contemporary Social Problems**

**3 credits**

Critically explores current social issues that result in societal problems. This course adopts a social constructionist perspective to focus on such issues as civil liberties, gender discrimination, substance abuse, crime, poverty and social change.

**SOC 216 Sociology of Gender: GT-SS3**

**3 credits**

Gives you the theoretical and factual background necessary to understand the phenomenon of gender stratification in American and other cultures. You will be exposed to a history of gender stratification in human societies, theoretical explanations for this and insights into the consequences of gender differentiation in our world today.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**SOC 218 Sociology of Diversity: GT-SS3**

**3 credits**

Explores the variety of intergroup relations regarding race, nationality, ethnicity, gender, sexual orientation, and other diversity issues. Patterns of prejudice, discrimination and possible solutions to these issues will be addressed.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**SOC 220 Sociology of Religion: GT-SS3**

**3 credits**

Provides an introduction to the sociology of religion, including a comparative and critical examination of world religions, by focusing on sociological interpretation and explanation of the role of religion in human culture. The interaction between society and religion is thus examined as are a wide variety of religious beliefs and practices.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**SOC 222 Ageing in a Diverse Society**

**3 credits**

Examines the present and future roles of the aged in the family, the community, and the workplace. Economic, political, health, and retirement systems will be studied.

**SOC 223 Chicanos in a Changing Society**

**3 credits**

Explores the lives and roles of Chicanos and Chicanas (Americans of Mexican descent). It introduces students to the Chicano community, its historical, political and social development. It explores the ways in which Chicano communities interrelate with Anglo and multicultural societies as well as its future prospects.

**SOC 231 Sociology of Deviant Behavior: GT-SS3**

**3 credits**

Examines the nature, identification, and explanation of deviant categories. Theories, and philosophies as well as methods of treatment related to deviancy will also be considered. The course will study society's attempts to control, change, and institutionalize those acts, individuals or groups that a population may deem unacceptable.

*Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**SOC 237 Death and Dying: GT-SS3  
3 credits**

Provides an opportunity to familiarize you and professionals with the needs and issues surrounding dying and death. This course will provide sociological, psychological, religious, historical and anthropological perspectives for interpreting contemporary American customs dealing with dying, death and bereavement. We will examine the professions associated with death and dying, such as hospice, funeral and crematory institutions, and medical care. *Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

**SOC 240 U.S. Cults, Extremist Groups and Religious Movements  
3 credits**

Provides familiarization with sociological issues surrounding cults, extremist groups and new religious movements, including theory and dynamics of cults, gangs and hate groups. Emphasis is on the destructive elements of this collective behavior. This course provides sociological perspectives for interpreting American laws, norms and values while examining extremist groups. This includes the study of in-group behavior, social cohesion, emergence of generalized beliefs, and both normative and value-oriented movements.

**SOC 265 Violence and Culture  
3 credits**

Examines the concepts, relationships, organizations, and research as they relate to violence in multiple cultural settings. This course assists in developing an understanding of societal and institutional causes of violence; explores resources for intervention and treatment; and provides service learning applications in violence assessment, treatment, and victim assistance.

**SOC 275 Special Topics in Sociology  
3 credits**

Provides you with a vehicle to pursue in depth exploration of special topics of interest.

**SOC 280 Internship  
1-3 credits**

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 285 Independent Study  
3 credits**

Meets the individual needs of students. You will engage in intensive study or research under the direction of a qualified instructor.

**SOC 289 Capstone  
3 credits**

Studies and applies the theories and techniques of leadership and group processes. In addition, SOC 289 introduces leadership skills and experiences with applications in group and community settings.

**SOC 292 Service Learning  
1-3 credits**

Allows the student to provide a service to the community utilizing knowledge and skills acquired from a course in which the student is currently enrolled or has previously taken at the student's respective college.

**SPA – Spanish Courses**

[www.rccc.edu/languages](http://www.rccc.edu/languages)

**SPA 101 Conversational Spanish I  
3 credits**

Provides beginning students with 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 102 Conversational Spanish II  
3 credits**

Provides you with the skills necessary to understand and speak Spanish. The material continues to cover basic conversation patterns, expressions, and grammar. *Prerequisite: SPA 101 or permission of instructor.*

**SPA 109 Spanish for Travelers  
2 credits**

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 visitors to the destination country. Cultural diversity and global awareness are integral to this course of study. This course does not fulfill Humanities area requirements and is not intended for transfer.

**SPA 111 Spanish Language I  
5 credits**

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 112 Spanish Language II  
5 credits**

Expands students' interpretive, interpersonal, and presentational communicative abilities in the language across the disciplines. Integrates these skills with the study of the cultures in which the language is used. Offers a foundation in the analysis of culture and develops intercultural communicative strategies. *Prerequisite: SPA 111 or permission of instructor.*

**SPA 114 Fast-Track Spanish I and II  
5 credits**

Designed to bridge beginning SPA courses with intermediate SPA courses. It is designed for students who have studied two years of the target language in high school and possess linguistic and cultural knowledge that true beginners do not, but are not ready yet to move to the intermediate level because they need an in-depth review of essential structures.

**SPA 115 Spanish for the Professional I  
3 credits**

Designed as an introduction to working knowledge of the target language, cultural behaviors and values useful in various professional fields such as health care, law enforcement, bilingual education, business, and others.

**SPA 211 Spanish Language III:  
Gt-AH4  
3 credits**

Continues Spanish Language I and II in the development of increased functional proficiency in listening, speaking, reading and writing the Spanish language. Note: The order of the topics and the methodology will vary according to individual texts and instructors. *Prerequisite: SPA 112 or permission of instructor.*

**SPA 212 Spanish Language IV: AH4  
3 credits**

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.  
*Prerequisite: SPA 211 or permission of instructor.*

**SPA 215 Spanish for the  
Professional II  
3 credits**

Continues Spanish 115 in the development of a working knowledge of the target language, cultural behaviors and values useful in various professional fields such as health care, law enforcement, bilingual education, business, and others.

**SPA 275 Special Topics  
1- 6 credits**

Provides you with a vehicle to pursue in-depth exploration of special topics of interest.

**SPA 285 Independent Study  
1-6 credits**

Meets the individual needs of students. You will engage in intensive study or research under the direction of a qualified instructor.  
*Prerequisite: Permission of Instructor.*

**SVT – Sport Vehicle Technology  
Courses**

**SVT 101 SVT Orientation and  
Safety  
1 credits**

Designed as an orientation to the sport vehicle repair industry. Students receive an overview of job possibilities as well as learn various types of sport vehicle construction. Focuses on general sport vehicle repair and service shop safety procedures with an emphasis on personal and environmental safety issues. Students also learn the proper handling and disposal of hazardous materials. Names, uses and maintenance procedures for a variety of tools and equipment are addressed.

**SVT 102 SVT Rolling Chassis  
3 credits**

Designed to introduce students to the major "chassis" components of motorcycles. This class will provide training in the basic servicing of motorcycle frames, suspension, tire, wheel and brake systems. Diagnostic procedure, routine maintenance, minor repair, adjustment and special tools will be studied.

**SVT 103 SVT Electrical Theory  
2 credits**

Introduces automotive electricity and includes basic electrical theory, circuit designs, and wiring methods. Focuses on multi-meter usage and wiring diagrams.

**SVT 104 Two Stroke Engines  
2 credits**

Introduction to Basic Two-Stroke engine theory, operation and repair.

**SVT 105 Four Stroke Engines  
2 credits**

Introduction to Basic Four-Stroke engine theory, operation and repair.

**SVT 106 SVT Electrical Repair  
2 credits**

Designed to expose students to the thought process required to correctly diagnose Sport Vehicle Electrical Systems as well as provide hand-on training to allow for learning of proper repair techniques.

**SVT 107 SVT Drive Systems  
2 credits**

Designed to introduce students to Drive components used on modern Sport Vehicles, including Transmission Assemblies, clutch components, Chain and Belt Drive Systems.

**SVT 108 SVT Trade Practices  
1 credit**

Designed to introduce students to the world of business development and ownership as related to the Sport Vehicle Industry.

**SVT 109 SVT Snow/ATV/PWC  
2 credits**

Designed to train students in the various unique aspects of Snowmobile, Personal Watercraft and ATV repair and maintenances.

**SVT 143 Physics for Transportation  
3 credits**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**SVT 160 Basic Motorcycle Repair I  
1 credit**

Designed to expose current and prospective entry-level motorcycle technicians to basic motorcycle maintenance and repair. Focus will be placed on routine and preventative maintenance and producing. This class is the first in a series of classes (SVT160, SVT180 & SVT299) designed to produce a novice or apprentice-level mechanic. Topics covered in the class include basic safety, hand tool and shop procedure. One objective is to make the learner more familiar with mechanical concepts and more confident in their own ability. Course study may be tailored for each student's specific area of need or interest.

**SVT 165 Basic Motorcycle Repair II  
1 credit**

Designed to build upon concepts and practices learned in SVT160 and expose current and prospective motorcycle mechanics to basic motorcycle maintenance and repair. Focus will be placed on routine and preventative maintenance. Topics covered will study of motorcycle frame, suspension, tire and wheels. One objective is to make the learner more familiar with mechanical concepts and more confident in their own ability. Course study may be tailored for each student's specific area of need or interest.

**SVT 170 Basic Motorcycle Repair III  
6 credits**

Designed to build upon concepts and practices learned in previous classes and expose current and prospective motorcycle mechanics to basic motorcycle maintenance and repair. Focus will be placed on routine and preventative maintenance. Topics covered will include study of motorcycle brakes and steering systems. One objective is to make the learner more familiar with mechanical concepts and more confident in their own ability. Course study may be tailored for each student's specific area of need or interest.

## **SVT 175 Basic Motorcycle Repair IV**

### **6 credits**

Designed to build upon concepts and practices learned in previous classes and expose current and prospective motorcycle mechanics to basic motorcycle maintenance and repair. Focus will be placed on routine and preventative maintenance. Topics covered will include study of motorcycle electrical and electronic systems. One objective is to make the learner more familiar with mechanical concepts and more confident in their own ability. Course study may be tailored for each student's specific area of need or interest.

## **SVT 180 Basic Motorcycle Repair V**

### **6 credits**

Designed to build upon concepts and practices learned in previous classes and expose current and prospective motorcycle mechanics to basic motorcycle maintenance and repair. Focus will be placed on routine and preventative maintenance. Topics covered will include study of motorcycle engine diagnosis and repair as well as motorcycle fuel system operation, diagnosis and repair. One objective is to make the learner more familiar with mechanical concepts and more confident in their own ability. Course study may be tailored for each student's specific area of need or interest.

## **SVT 202 Adv SVT Electrical Syst.**

### **4 credits**

Advanced repair and troubleshooting of Sport Vehicle Electrical systems with an emphasis on Ignition and Charging system diagnosis and repair techniques.

## **TEC – Technical Courses**

### **TEC 205 Geometric Dimensioning and Tolerancing**

#### **3 credits**

Enables you to interpret geometric dimensioning and tolerancing (GDT) in machining or drafting. The course covers math formulas, tolerancing systems, modifiers, symbols, datums, and tolerances of form, profile, orientation, runout, and location. You will learn that the generation of a working drawing is a team effort among design, drafting, manufacturing, and quality control.

## **THE – Theatre Arts Courses**

[www.rccc.edu/theatre](http://www.rccc.edu/theatre)

### **THE 100 Technical Theatre Lab**

#### **1-3 credits**

Provides you with safety training for working with equipment used for technical theatre, as well as hands-on experience in one or all of the following areas: stage lighting, set construction, stage properties, costuming, and makeup.

### **THE 104 Basic Costume and Apparel Construction**

#### **3 credits**

Provides you with training in cutting and sewing techniques, as well as knowledge of fabric types, qualities, uses, and cleaning.

### **THE 105 Theatre Appreciation: GT-AH1**

#### **3 credits**

Includes discussions, workshops, and lectures designed to discover, analyze, and evaluate all aspects of the theatre experience: scripts, acting, directing, staging, history, criticism, and theory. *Prerequisite: ENG 090 (grade C or higher) or equivalent assessment scores.*

### **THE 107 Elements of Theatrical Craft and Design**

#### **3 credits**

Explores the theory and practice of technical theatre craft and design. Through lecture, discussion, and class projects, students learn about evolving forms and styles of architecture, scenery, and decoration, properties, costume/make-up, lighting, and sound.

### **THE 108 Theatre Script Analysis**

#### **3 credits**

Introduces students to methods of reading and analyzing literature for the stage. In addition, students apply staging and design concepts in visualizing and analyzing how a play looks, sounds, and feels when produced.

### **THE 109 Basics of Pattern Drafting**

#### **3 credits**

Provides you with basic techniques in pattern drafting. Techniques will include exploring computer design as well as traditional drafting methods. *Prerequisite: THE 104 or permission of instructor.*

### **THE 111 Acting I**

#### **3 credits**

Covers basic acting techniques and approaches including scene study, improvisation, and script analysis. The course includes practical application through classroom performance.

### **THE 112 Acting II**

#### **3 credits**

Continues to explore basic acting techniques and approaches including scene study, improvisation, and intermediate script analysis. The course includes practical application through classroom performance.

*Prerequisite: THE 111 or permission of instructor.*

### **THE 115 – Stage Movement for Actors**

#### **3 credits**

Introduces the vocabulary of human movement, techniques of physical training, and anatomy and kinesiology for the actor. The course includes forms of basic dance and the coordination of movement with vocal delivery.

### **THE 116 Technical Theatre**

#### **3 credits**

Introduces hands-on methods of constructing and painting scenery and properties and operating stage lighting. You will also learn the proper procedures of using shop equipment and serving on stage crews.

### **THE 118 Acting Skills Trades/Business**

#### **3 credits**

Incorporates acting skills that are useful for everyday interactions and public presentations. You can improve your personality habits through acting exercises to become more effective in your daily relationships and communication skills and also in presenting yourself in public. This class is especially for those who don't want to be actors but who would like to learn how to be more comfortable on the "stage" of life.

### **THE 131 Theatre Production I**

#### **3 credits**

Allows you to put into practice theories of theatre production. Participation in set construction, scenic artistry, costuming, lighting, sound, acting, stage managing, and administration is available. *Prerequisite: ENG 060, REA 090, THE 111, THE 112, or permission of instructor.*

**THE 132 Theatre Production II**  
**3 credits**

Allows you to put into practice theories of theatre production. Participation in set construction, scenic artistry, costuming, lighting, sound, acting, stage managing, and administration is available.

*Prerequisites: ENG 060, REA 090, THE 111, THE 112, or permission of instructor.*

**THE 135 Stage Makeup I**  
**3 credits**

Covers makeup design and application techniques. Techniques include basic corrective, character, old age, and fantasy application.

**THE 136 Stage Makeup II**  
**3 credits**

Continues to explore theatrical makeup design and application techniques. In addition, prosthetics, hair design, and other more advanced applications will be explored.

*Prerequisite: THE 135 or permission of instructor.*

**THE 140 Stage Dialects**  
**1 credit**

Teaches you to develop skills in nine dialects and accents.

**THE 141 Improvisation I**  
**1 credit**

Helps you learn improvisation skills for performance and character development. Emphasis is placed on the "Second City" style of improvisation.

**THE 142 Improvisation II**  
**1 credit**

Helps you continue developing improvisation skills learned in THE 141. Exercises are more advanced and difficult. Level of instruction is appropriate for experienced and/or advanced actors.

*Prerequisite: THE 141, THE 111, or permission of instructor.*

**THE 143 Basic Acting Technique**  
**1 credit**

Offers scene work and acting exercises for people with little or no training or experience in the theatre. The Stanislavski System of character analysis and development is stressed.

**THE 144 Scene Study**  
**1 credit**

Emphasizes the Stanislavski approach. You will explore acting skills through advanced material, including avant garde and classical.

*Prerequisite: THE 143, THE 111, or permission of instructor.*

**THE 151 Stagecraft I**  
**3 credits**

Focuses upon fundamental theories and construction of flats, platforms, stair units, soft scenery, and other aspects of stagecraft.

*Prerequisite: THE 116 or permission of the instructor.*

**THE 152 Production Stage Management I**  
**3 credits**

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: THE 116 or permission of the instructor.*

**THE 175 Special Topics**  
**1-6 credits**

Explores current topics, issues, and activities related to one or more aspects of the named discipline.

**THE 200 Paint/ Draw/Render Modeling Techniques**  
**3 credits**

Introduces art techniques that are needed specifically in Theatrical Design.

Techniques will include painting, rendering of scenic, lighting, costume designs, and model construction techniques.

*Prerequisite: THE 104, THE 109, or permission of Instructor.*

**THE 202 Intermediate Costume Construction**  
**3 credits**

Provides additional training and experience in cutting and sewing methods for costumes, as presented in THE 104 Basic Costume and Apparel Construction. Students are introduced to elements of costume garment design, research and advanced construction techniques.

**THE 210 Singing for Actors**  
**3 credits**

Allows the student to explore and perform musical theatre songs. Students will use a pedagogical approach to evaluate your vocal structure and formulate a systematized series of vocal and whole body exercises to develop and enhance self-confidence and vocal instrument through in-class performance and variety show presentation.

**THE 211 Development of Theatre I**  
**3 credits**

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.

**THE 212 Development of Theatre II**  
**3 credits**

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.

*Prerequisite: THE 211 or permission of instructor.*

**THE 213 Intermediate Acting I**  
**3 credits**

Continues THE 112. Emphasis is on artistic concentration of voice and movement as applied to period acting styles.

**THE 214 Intermediate Acting II**  
**3 credits**

Emphasizes artistic concentration of voice and movement as applied to period acting styles. Character biographies are also required. This course is a continuation of THE 213.

**THE 215 Playwriting**  
**3 credits**

Gives you the opportunity to learn and practice playwriting techniques, thereby improving creative writing skills. Elements of dramatic structure dialogue, styles, and theatrical practices are emphasized.

**THE 216 Theatre Lighting and Design**  
**3 credits**

Focuses on the theory and practice of stage lighting. Topics include basic electrical theory, color theories, rigging and design of lighting for the performing arts.

*Prerequisite: THE 116 or permission of the instructor.*

**THE 220 Directing I**  
**3 credits**

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.

*Prerequisite: THE 111 or permission of instructor.*

**THE 221 Set Design****3 credits**

Emphasizes two-and three-dimensional drawings and designs and color theory. Basic methods of artistic analysis and coordinating with other creative personnel are included. You will construct 3-D models and a theatrical stage set.  
*Prerequisite: THE 116 or permission of instructor.*

**THE 222 Millinery & Costume Accessory****3 credits**

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 225 Sound Operation and Design****2 credits**

Teaches applied fundamental processes required to create a conceptual sound design for a stage play.

**THE 230 Directing II****3 credits**

Continues to explore basic technique for stage directing in contemporary theatre. Subjects to be covered are stage composition, script analysis, work with actors, and the collaborative role of the director. You will direct a one-act theatre piece for the final project.  
*Prerequisite: THE 220 or permission of the instructor.*

**THE 231 Theatre Production III****3 credits**

Allows you to continue to put into practice the theories of theatre production. Participation in set construction, scenic artistry, costuming, lighting, sound, acting, stage-managing, and administration are available.

**THE 232 Theatre Production IV****3 credits**

Allows you to put into practice theories of theatre production. Participation in set construction, scenic artistry, costuming, lighting, sound, acting, stage managing, and administration is available.  
*Prerequisites: THE 111, THE 112 or permission of the instructor.*

**THE 237 History of Costumes and Fashion****3 credits**

Provides an examination of the clothing and accessories used by humans around the world from Prehistoric to Modern times.

**THE 240 Theater Voice and Diction****3 credits**

Provides you with individual tutorials which define design and apply specific vocal techniques to abate singing and speech difficulties. Master class performances provide the opportunity to conjure the energy, charisma, and stage command necessary for presentations.

**THE 241 Stage Properties****3 credits**

Offers the fundamentals of set dressing/stage properties theory and practice, including plot design, period style, set props, hand props, production paperwork, and scene changes.  
*Prerequisite: THE 116 or permission of the instructor.*

**THE 245 Basic Costume Design and Construction****3 credits**

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. You will be introduced to pattern drafting.  
*Prerequisites: THE 104 and THE 109.*

**THE 248 Rehearsal and Performance III****3 credits**

Special attention will be given to characterization, stage movement, speech techniques, dramatic form and the rehearsal / production / performance process. The successful rehearsal and presentation of the current production to the public will be the focal point of their activities. Previous acting experience is helpful but not required.

**THE 255 Intermediate Playwriting****3 credits**

Continues to explore playwriting techniques developed in THE 215 for theatre and applies concepts of writing for movie, television, radio, and animation scripts, with emphasis on the dramatic process and form.

**THE 260 Employment Skills for Technical Theatre****1 credit**

Provides you the opportunity to assemble a technical theatre portfolio and résumé for classroom presentation and job applications.

**THE 275 Special Topics: Theatre****1-6 credits**

Explores current topics, issues, and activities related to one or more aspects of the named discipline.

**THE 280 Internship****1-6 credits**

Provides you with the opportunity to supplement course work with practical work experience related to your educational program. You will work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

**THE 285 Independent Study****1 credit**

Emphasizes structured and guided individualized study that is organized and tailored around the interests and needs of the individual student.

**WEL – Welding Courses****WEL 100 Safety for Welders****1 credit**

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 101 Allied Cutting Processes****4 credits**

Covers setting up equipment and performing cutting and gouging operations utilizing the oxyacetylene, air carbon arc, and plasma arc cutting processes. This course will also provide an introduction to blueprint reading.

**WEL 102 Oxyacetylene Joining Processes****4 credits**

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 103 Basic Shielded Metal Arc I****4 credits**

Covers performing safety inspections, making minor repairs, adjusting operating parameters, and operating SMAW equipment utilizing E-6010 and E-7018 electrodes. Layout procedures and practices will also be introduced.

**WEL 110 Advanced Shielded Metal Arc I****4 credits**

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 124 Introduction to Gas Tungsten Arc Welding****4 credits**

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 131 Introduction to Industrial Welding****4 credits**

Provides the student with a basic understanding of commonly used welding techniques and procedures encountered in the industrial setting. Students are introduced 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.

*Prerequisites: Permission of the instructor.*

**WEL 201 Gas Metal Arc Welding I****4 credits**

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 202 Gas Metal Arc Welding II****4 credits**

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 203 Flux Cored Arc Welding I****4 credits**

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 204 Flux Cored Arc Welding II****4 credits**

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 224 Advanced Gas Tungsten Arc Welding****4 credits**

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 250 Layout and Fabrication****4 credits**

Develops welding and associated skills in the use of drawings and blueprints in planning. Includes designing and layout projects.

**WQM – Water Quality Management Technology Courses**

[www.rccc.edu/wqm](http://www.rccc.edu/wqm)

All courses are approved for OCPO training units (TU's).

**WQM 100 Introduction to Water Quality Management****3 credits**

Introduces the water and wastewater treatment field and acquaints the prospective technicians with the applied science concepts that are used to operate, maintain and monitor water quality. Topics include hydrological cycle, water sources, hydraulics, ecosystems, pollution, water chemistry, water calculations, microbiological aspects of water and water quality control.

**WQM 105 Specific Calculations for Water Quality Management****4 credits**

Provides you with an in-depth study of the calculations associated with water and wastewater treatment. Topics include dimensional analysis, detention time, surface loading, filtration and backwash rates, settleable solids, volatile solids, mean cell residence times, settleability, disinfection, and chemical dosage as relating to trickling filters, ponds, RBC and activated sludge.

**WQM 109 Water Distribution Systems****3 credits**

Covers the purpose, selection and location of water storage facilities and the operation and maintenance of related equipment. Topics include storage facilities and capabilities, booster pumps, water mains and appurtenances, joints, pipe protection and installation, valves, fittings, and hydrants. Water quality standards, contaminants and degradation inspection and monitoring, system troubleshooting, are also covered.

**WQM 118 Wastewater Collection Systems****3 credits**

Covers the purpose, components and design of collection systems. Topics include safety procedures, inspection and testing, pipeline cleaning and maintenance, underground repair, lift stations and sewer rehabilitation. Additionally, students gain knowledge on industrial pre-treatment, design and flow patterns within a hydraulic flow system

**WQM 119 Basic Water Quality Analysis****4 credits**

Relates the results of laboratory control tests to the chemistry of water and wastewater treatment. You will gain the skills and techniques to operate within a laboratory. Topics include laboratory equipment and instrumentation identification, written reports and laboratory tests. Laboratory testing includes hardness, alkalinity, dissolved oxygen, fluoride, jar testing, inorganic chemicals, pH and disinfectant residuals.

**WQM 120 Water Quality Equipment Maintenance****4 credits**

Provides an in-depth understanding of mechanical and electrical equipment maintenance. Topics include correct use of power and hand tools, preventive and repair maintenance of pumps, motors, chlorinators, motor control units, and other treatment plant equipment and safety procedures.

**WQM 121 Environmental Sampling and Volume Measurement****3 credits**

Designed to provide you with the knowledge and skills to collect contaminant samples for laboratory analysis, to select and prepare appropriate sample containers; to keep accurate sampling records; to keep accurate sampling sites and do composite sampling. This course also provides sampling safety skills and sampling quality control and assurance methods.

**WQM 122 Instrumentation and Electrical Control****4 credits**

Provides an understanding of electrical theory, various types of electrical instrumentation equipment found in treatment facilities, operation, troubleshooting electrical problems and safety procedures.

**WQM 123 Water Reuse Systems****3 credits**

Discusses the new and developing area in the industry known as Reuse. Topics include, development, treatment techniques, operations, equipment, source and application uses for wastewater Reuse systems as well as future planning for long term use in the industry.

**WQM 124 Water Certification Review for Class C and D****3 credits**

Helps prepare you for the operators certification test in water at the C or D level. Topics include water principles, mathematics, hydraulics, water filtration, chemical treatment, source control, basic operations, Colorado Primary Drinking Water Regulations, housekeeping and laboratory analysis.

**WQM 125 Wastewater Certification Review for Class C and D****3 credits**

Helps you prepare for the operators certification test in wastewater at the C or D level. Topics include wastewater principles, mathematics, hydraulics, conventional treatment of wastewater, wastewater sedimentation, Colorado Water Quality Control Act, biological treatment of wastewater, effluent standards for wastewater, sludge handling and disposal, disinfection, pumps, safety, housekeeping, and laboratory analysis.

**WQM 126 Safety and Security Systems in the Water Quality Industry****3 credits**

Covers the safety aspects in the water and wastewater industry. Topics include development of safety policies and programs, job safety orientation, driving practices, CPR/first aid, confined spaces, hazardous communication, safety with energy electrical, mechanical, thermal and pressure, trenching, street work, laboratory, treatment equipment, construction vehicles/equipment and chlorine and other chemicals, security and safety standards.

**WQM 130 Water Chemistry****3 credits**

This course is an introduction level lecture course on water chemistry. Topics include, specific gravity, density and water properties, acids and bases, equivalent weights moles, molarity, normalities, valances, balancing chemical equations, chemical dosing, fluoridation, chemical and mechanical softening systems.

**WQM 131 Solids Waste Management****3 credits**

This course is designed to educate the student with solid waste created through the water and wastewater treatment process as well as "spoil" wastes generated from excavation of water distribution and wastewater collection lines. Topics include, disposal, record keeping, solids testing requirements, options of recycling, composting, practical product use from waste, soil types, blending options and soil corrosion issues related to toxic or acidic soils.

**WQM 140 Management and District Leadership****3 credits**

This is an elevated comprehensive management course that is relevant for all supervisors. Employee management, site management and district planning and direction are the core basics of the course. The course topics include, contracts, State Statutes, billing, revenue management, District/Company rules and regulations, working with other districts, budgeting, employee and employment issues, office management and Board Room etiquette, safety policies, management obligations and responsibilities and well a project and capital planning development are all discussed in detail with this thorough applied district management course.

**WQM 150 Troubleshooting****3 credits**

Provides you with troubleshooting practices and procedures for chemical adjustments, equipment failures; electrical, mechanical, pneumatic and hydraulic, source contamination, system control procedures and redundancies.

**WQM 160 Managing the Global Water Supply****3 credits**

Provides the student with the opportunity to study water resources in the industry. This course is designed to aid with future planning strategies with source water management practices including both ground water and surface water sources. Topics include, demand forecasting, water rights, alternative sources, storage, injection and hydraulic modeling, watershed management and integrated resource planning.

**WQM 165 Water Law****3 credits**

Introduces the student to legal requirements within the water and wastewater industries. Topics include groundwater water rights, non tributary water supplies, geothermal resources, water decrees and rights, water court operations, building and maintaining water utilities, absolute and conditional water rights and water ownership resumes. The student also is introduced to augmentation systems water right exchange processes.

**WQM 169 International Development****3 credits**

Exposes the student to typical water and wastewater development plans for international communities. This includes health studies, environmental impact studies, system design considerations, sustainability and funding programs. Topics also include basic design templates as well as development systems for operations and maintenance programs through research of available resources in remote communities.

**WQM 200 Hydraulics for Water Quality Management****4 credits**

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 flow, distribution system friction losses.

**WQM 206 Design Interpretations of Water Quality Systems****4 credits**

Provides an in-depth study and interpretation of blueprints, scale drawings, contour maps, profile drawings and symbols application to treatment facilities. The course also includes basics in HVAC, lighting, construction techniques, building materials and energy conservation.

**WQM 207 Operations and Control of Activated Sludge Systems**  
**3 credits**

Provides a basic engineering overview of the activated sludge process and develops all process control activities around the biology of the treatment system. Topics include: settle-o-meters, flow concentrations, and oxygen uptake, turbidity, microscopic examination of organisms, trend charting, process control strategies. Classroom activities are reinforced by field trips to various treatment facilities.

**WQM 212 Drinking Water Regulations**  
**4 credits**

Instructs you on application, interpretation and implementation of the Colorado Primary Drinking Water Regulations as they apply to all types and sizes of public water systems and their source water.

**WQM 216 Biological and Bacteriological Water Quality Analysis**  
**4 credits**

Studies microorganisms associated with all phases and concerns of water and wastewater treatment including bacteria, protozoa and algae. Topics include: microorganisms used in treatment, as indicators and the pathogens; regulations, health hazards and laboratory safety. Laboratory work involves media preparation, coliform testing, standard plate count, BOD, and biomonitoring.  
*Prerequisite: WQM 119*

**WQM 217 Disinfection Techniques in Water Quality Systems**  
**4 credits**

Provides an understanding of disinfection alternatives used in treatment systems such as chlorine, ozone, ultraviolet light and bromine chloride. Topics include chemistry, equipment/maintenance, startup/shutdown procedures, hazards, safety and troubleshooting.

**WQM 224 Water Treatment Certification Review for A and B**  
**3 credits**

Prepares the student for the water operations certification exam at the A and B level. Topics include water treatment principles, water filtration, chemical treatment, Colorado Primary Drinking Water Regulations, calculations, instrumentation, equipment operation and maintenance, utility management, laboratory analysis, and water quality control.

**WQM 225 Wastewater Treatment Certification Review for A and B**  
**3 credits**

Prepares the student for the wastewater operations certification at the A and B level. Topics include activated sludge, nutrient removal, digestion, solids handling, effluent removal, odor control, wastewater reclamation, discharge permit regulations and reporting, calculation, instrumentation, equipment operations and maintenance, laboratory analysis and utility management.

**WQM 230 Industrial Monitoring and Treatment**  
**3 credits**

Provides an understanding of industrial treatment. Various types of treatment systems are reviewed. Also included are safety, collection and preserving of samples, establishing an industrial monitoring program, operational strategies, interpretation of laboratory results, startup/ shutdown of systems, maintenance, plans and specification, various types of industrial wastes, and troubleshooting.

**WQM 280 Internship**  
**1-6 credits**

Contact the Water Quality Management Technology department for information about this course at 303.914.6325.

**WQM 285 Independent Study**  
**1-6 credits**

Contact the Water quality management Technology department for information about this course at 303.914.6325.

**WTG Wind Turbine Generation Courses**

**WTG 100 Introduction to Wind Industry**  
**3 credits**

Introduces students to the wind power generation industry. Topics covered will include physics of wind energy, various sizes and types of wind turbines, reading wind maps for finding the best wind locations. Students will also engage in discussions of the impact of the wind industry on social, environmental, economic, and political issues.

### **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.

### **AH1: Arts and Humanities**

### **AH2: Literature and Humanities**

### **AH3: Ways of Thinking**

### **AH4: Foreign Languages (must be Intermediate/200 level)**

### **Assessment:**

In a community college setting, your reading, writing, and mathematics skills are assessed so that you can begin your college career with the best chance of succeeding. RRCC administers the Accuplacer 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.

### **CO1: Introductory Writing Course**

### **CO2: Intermediate Writing Course**

### **CO3: Advanced Writing Course**

### **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.

Refer to [www.collegeboard.com/student/testing/clep/about.html](http://www.collegeboard.com/student/testing/clep/about.html) and <http://www.cccs.edu/Docs/EdServices/Credit-for-Prior-Learning-Handbook.pdf> for complete information and meet with an academic advisor.

### **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/cof](http://www.rrcc.edu/cof) and click on Sign up for COF and then Apply for a Stipend. 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 the Student Finance tab - Payment Options - Authorize COF.

### **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](http://www.cccs.edu)

### **Corequisite:**

A corequisite 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 corequisite is required, you will see an explanatory note in the current semester's schedule and oftentimes in the "Course Descriptions" section of the catalog.) Meet with an academic or faculty advisor before enrolling in classes to learn more about specific corequisites.

### **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 Arts
- Associate of Science
- Associate of General Studies – Specialist
- Associate of General Studies – Generalist
- Associate of Applied 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 four types: scholarships, grants, loans, and work-study agreements. To learn more about financial aid, visit [www.rrcc.edu/finaid](http://www.rrcc.edu/finaid), or stop by 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. RRCC offers a free practice test for the GED at the Lakewood and Arvada campuses.

### **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 Audit and Graduation Application:**

When you have successfully completed 42 credits, you are usually only 18 credits away from graduating with one of the associate degrees that RRCC offers. At this point it is important for you to initiate a graduation audit and to meet with a faculty or academic advisor so that he/she can assist you as you plan to complete the required courses for the degree you are seeking.

1. The graduation audit request form is available from the Student Records Office, or you can find it online at [www.rrcc.edu/auditrequest/form.html](http://www.rrcc.edu/auditrequest/form.html)
2. 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.rrcc.edu/admissions/gradap.html](http://www.rrcc.edu/admissions/gradap.html). Meet with an academic or faculty advisor so that he/she can assist you with the graduation application process.

### **GT: Statewide Guaranteed Transfer course.**

#### **gtPathways Curriculum:**

gtPATHWAYS 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 gtPATHWAYS are not based on course equivalencies but meet content and competency criteria. Go to <http://higher.ed.colorado.gov/Academics/Transfers/gtPathways/curriculum.html> for more information.

#### **HI1: History**

#### **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 Learning Commons is located next to RRCC's main entrance and includes the library and quiet study rooms upstairs and study and tutoring areas on the main floor. The Learning Commons offers RRCC students free walk-in tutoring in math, writing, reading, the sciences, accounting, Microsoft applications, and other subjects. Several computers are also available for student use.

**MA1: Mathematics****Office of Disability Services (ODS):**

This office coordinates services for RRCC students with documented disabilities so that they have an equal opportunity to pursue their educational goals. Call 303.914.6733 or 303.914.6737 (TTY).

**Open-Entry Community College:**

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, 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.

**SC1: A science with a required laboratory****SC2: A science without a required laboratory****SS1: Economic or Political Systems****SS2: Geography****SS3: Human Behavior, Culture, or Social Frameworks****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 and humanities, social and 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.

### State Board for Community Colleges and Occupational Education

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### RRCC President's Cabinet

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**A**

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