

# COMMUNITY COLLEGE OF DENVER

## Addendum to the 2015-2016 Online and Printed Catalogs

### Additions/Changes In Yellow

This addendum is an integral part of the college's 2015-2016 Academic Catalog; the purpose of this document is to amend current information or include additional information. The information published herein is effective for the 2015-2016 school year. If any of these changes impact a student's ability to graduate, please contact the dean for the area in question.

## FERPA Update

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### CCCS ANNUAL NOTIFICATION TEMPLATE

#### Family Education Rights and Privacy

##### *CCD Notification of Rights Under FERPA*

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. FERPA rights are afforded to the students at the time of admission. These rights include:

- 1) **The right to inspect and review the student's education records within 45 days of the day CCD receives a request for access.** A student should submit to the Office of Admissions, Records and Registration, a written request that identifies the record(s) the student wishes to inspect. The Registrar will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the Registrar, they shall advise the student of the correct official to whom the request should be addressed.
- 2) **The right to request the amendment of the student's education records that the student believes are inaccurate, misleading, or otherwise in violation of the student's privacy rights.**

A student who wishes to ask CCD to amend a record should write the Registrar who will notify the college official responsible for the record, clearly identify the part of the record the student wants changed, and specify why it should be changed. If the College decides not to amend the record as requested, the College will notify the student in writing of the decision and the student's right to a hearing re-garding the request for amendment using the Student Grievance Procedure SP 4-31. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

- 3) **The right to provide written consent before CCD discloses personally identifiable information from the student's education records, except to the extent that FERPA authorizes disclosure without consent.** One exception which permits disclosure without consent is disclosure to College officials with legitimate educational interests. A College official is a person employed by the College in an administrative, supervisory, academic or research or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the College has contracted as its agent to provide a service instead of using college employees or officials (such as an attorney, auditor, or collection agent); a person serving on the College Board; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. CCD has designated the National Student Clearinghouse as a College official. A College official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for the College. Upon request, the College discloses education records, without a student's consent, to officials of another school, in which a student seeks or intends to enroll, or after enrollment.

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

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

As of January 3, 2012, the U.S. Department of Education's FERPA regulations expand the circumstances under which your education records and personally identifiable information (PII) contained in such records—including your Social Security Number, grades, or other private information—may be accessed without your consent. First, the U.S. Comptroller General, the U.S. Attorney General, the U.S. Secretary of Education, or state and local education authorities ("Federal and State Authorities") may allow access to your records and PII without your consent to any third party designated by a Federal or State Authority to evaluate a federal- or state-supported education program. The evaluation may relate to any program that is "principally engaged in the provision of education," such as early childhood education and job training, as well as any program that is administered by an education agency or institution. Second, Federal and State Authorities may allow access to your education records and PII without your consent to researchers performing certain types of studies, in certain cases even when we object to or do not request such research. Federal and State Authorities must obtain certain use-restriction and data security promises from the entities that they

authorize to receive your PII, but the Authorities need not maintain direct control over such entities. In addition, in connection with Statewide Longitudinal Data Systems, State Authorities may collect, compile, permanently retain, and share without your consent PII from your education records, and they may track your participation in education and other programs by linking such PII to other personal information about you that they obtain from other Federal or State data sources, including workforce development, unemployment insurance, child welfare, juvenile justice, military service, and migrant student records systems.

The Colorado Community College System considers the following to be directory information and CCD staff may disclose this information, without prior consent, to anyone inquiring in person, by phone, or in writing: Student name; Major field of study; Dates of student attendance; Degrees / certificates and awards student has earned; Most recent educational institution attended by the student; enrollment status (full time, part time, etc.), Participation in officially recognized activities and sports; and if participating in an officially recognized activity or sport, height, weight, and high school attended.

Addresses (including mail and e-mail) are considered PII and are not released as Directory Information except for the following:

- Graduation lists released to news media, which may include the student’s city of residence.
- Other listings to the news media and college personnel for special awards, honors, and events.

Notification to Phi Theta Kappa Honor Society and other academic honor societies for students who are eligible to be considered for membership

Additionally, name, address, phone number, date and place of birth, level of education, most recently attended college, field of study, and degree(s) received of students may be released to military recruiters upon request in accordance with the Solomon Amendment. All other information contained in student records is considered private and not open to the public without the student’s written consent. Students who do not want their directory/public information released to third parties or students who do not want to be listed in the College online e-Directory should complete a form to suppress directory information available online or at the Office of Admissions, Records and Registration by the first day of the semester.

- 4) The right to file a complaint with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office  
 U.S. Department of Education  
 400 Maryland Avenue, SW  
 Washington, DC 20202-5901

## STUDENT GRIEVANCE PROCEDURE

CCD’s new Title IX/EO Coordinator is Daniel Kast- (303) 352-5018; Daniel.kast@ccd.edu.

## New Programs

### ASSOCIATE OF ARTS DEGREE – ART HISTORY DESIGNATION

<b>General Education Course Requirements:</b> .....	<b>31-33</b>
<b>Communication</b> .....	<b>6</b>
ENG 121 English Composition I:.....	GT-CO1 ..... 3
ENG 122 English Composition II: .....	GT-CO2 ..... 3
OR	
ENG 122 English Composition II: .....	GT-CO2 ..... (3)
AND	
a GT-CO3 course .....	GT-CO3
<b>Mathematics</b> .....	<b>3-4</b>
One guaranteed transfer Mathematics course (GT-MA1)	
<b>Arts &amp; Humanities</b> .....	<b>6</b>
Two guaranteed transfer Arts & Humanities courses	
Except the courses listed in the Additional Required Courses section below	
(GT-AH1, GT-AH2, GT-AH3, GT-AH4)	
<b>History</b> .....	<b>3</b>
One guaranteed transfer History course (GT-HI1)	
<b>Social &amp; Behavioral Sciences</b> .....	<b>6</b>
Two guaranteed transfer Social & Behavioral Sciences courses (GT-SS1, GT-SS2, GT-SS3)	
<b>Natural &amp; Physical Sciences</b> .....	<b>7-8</b>
Two guaranteed transfer Natural & Physical Sciences courses	
One course must have the required laboratory (GT-SC1) (GT-SC2, GT-SC1)	

<b>Additional Required Courses</b> .....	<b>18</b>
ART 111 Art History: Ancient to Medieval:.....	GT-AH1 ..... 3
ART 112 Art History: Renaissance to Modern: .....	GT-AH1 ..... 3
ART 121 Drawing I.....	3
ART 131 Visual Concepts 2-D Design.....	3
ART 132 Visual Concepts 3-D Design.....	3
ART 207 Art History: 1900 to Present:.....	GT-AH1 ..... 3
<b>Electives</b> .....	<b>9-11</b>

*Note: Not all courses listed below are available at CCD.*

ACC 121, 122	
ANT – all courses	
ARA – all courses 111 and higher	
ART – all courses	
ASL – all course 121 and higher	
AST – all courses	
BIO – all courses	
BUS 115, 216, 217, 226	
CHE – all courses	
CHI – all courses 111 and higher	
CIS 118	
COM – all courses	
CRJ 110	
DAN & PED - all courses (up to 4 credits total)	
ECE 101, 102, 205, 238, 241	
ECO – all courses	
EDU 221	
ENG – all courses 121 and higher	
ENV 101	
FRE – all courses 111 and higher	
GEO – all courses	
GER – all courses 111 and higher	
GEY – all courses	
HIS – all courses	
HUM – all courses	
HWE 100	
ITA – all courses 111 and higher	
JOU – all courses	
JPN – all courses 111 and higher	
LIT – all courses	
MAT – all courses 120 and higher	
MGD – all courses	
MUS – all courses	
PHI – all courses	
PHY – all courses	
POS – all courses	
PSY – all courses	
SCI 155, 156	
SOC – all courses	
SPA – all courses 111 and higher	
THE – all courses	
WST – all courses	
<b>Total</b> .....	<b>60</b>

*\*Students planning to transfer to CSU-FC will be required to complete a 200-level foreign language for completion of the BA in Art-Art History. Students will be expected to be prepared upon completion of the associate's degree to take an intermediate foreign language or be able to pass the CSU-FC Foreign Language placement exam at the sophomore level. It may not be possible to complete the BA in Art-Art History concentration in two years without this prior foreign language competency.*

**Note: Course substitutions are not permitted for any Statewide Transfer Degree program.**

If, because course substitutions are not permitted, a student is not able to complete this Statewide Transfer Degree plan, the student should see a Program Advisor for guidance.

**ASSOCIATE OF ARTS DEGREE – ENGLISH DESIGNATION (LITERATURE EMPHASIS)**

**General Education Course Requirements:** ..... **34**

**Communication** ..... **6**

ENG 121 English Composition I:..... GT-CO1 ..... 3

ENG 122 English Composition II: ..... GT-CO2 ..... 3

OR

ENG 122 English Composition II: ..... GT-CO2 ..... (3)

AND

a GT-CO3 course ..... GT-CO3

**Mathematics**..... **3**

One guaranteed transfer Mathematics course

MAT 120 (Mathematics for Liberal Arts) is recommended ..... GT-MA1

**Arts & Humanities**..... **9**

Three guaranteed transfer Arts & Humanities courses ..... GT-AH1, GT-AH3, GT-AH4

**History** ..... **3**

One guaranteed transfer History course ..... GT-HI1

**Social & Behavioral Sciences** ..... **6**

Two guaranteed transfer Social & Behavioral Sciences courses..... GT-SS1, GT-SS2, GT-SS3

Natural & Physical Sciences ..... 7

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

**Additional Required Courses** ..... **18**

COM 115 Public Speaking ..... 3

OR

COM 125 Interpersonal Communication ..... (3)

OR

COM 225 Organizational Communication ..... (3)

Five GT Pathways LIT courses ..... GT-AH2 ..... 15

*Note: Students are required to take a total of five LIT courses (15 credits), four of which must be at the 200-level. Please consult with your receiving institution regarding best choices for literature courses.*

**Electives** ..... **8**

Recommended Elective: ENG 221 Creative Writing I

*Note: Not all courses listed below are available at CCD.*

- ACC 121, 122
- ANT – all courses
- ARA – all courses 111 and higher
- ART – all courses
- ASL – all course 121 and higher
- AST – all courses
- BIO – all courses
- BUS 115, 216, 217, 226
- CHE – all courses
- CHI – all courses 111 and higher
- CIS 118
- COM – all courses
- CRJ 110
- DAN & PED - all courses (up to 4 credits total)
- ECE 101, 102, 205, 238, 241
- ECO – all courses
- EDU 221
- ENG – all courses 121 and higher
- ENV 101
- FRE – all courses 111 and higher
- GEO – all courses
- GER – all courses 111 and higher
- GEY – all courses

HIS – all courses	
HUM – all courses	
HWE 100	
ITA – all courses 111 and higher	
JOU – all courses	
JPN – all courses 111 and higher	
LIT – all courses	
MAT – all courses 120 and higher	
MGD – all courses	
MUS – all courses	
PHI – all courses	
PHY – all courses	
POS – all courses	
PSY – all courses	
SCI 155, 156	
SOC – all courses	
SPA – all courses 111 and higher	
THE – all courses	
WST – all courses	
<b>Total</b> .....	<b>60</b>

*Note: Course substitutions are not permitted for any Statewide Transfer Degree program.*

If, because course substitutions are not permitted, a student is not able to complete this Statewide Transfer Degree plan, the student should see a Program Advisor for guidance.

**ASSOCIATE OF ARTS DEGREE – MUSIC DESIGNATION**

<b>General Education Course Requirements:</b> .....	<b>31</b>	
<b>Communication</b> .....	<b>6</b>	
ENG 121 English Composition I:..... GT-CO1 .....	3	
ENG 122 English Composition II: .....	GT-CO2.....3	
OR		
ENG 122 English Composition II: .....	GT-CO2..... (3)	
AND		
a GT-CO3 course .....	GT-CO3	
<b>Mathematics</b> .....	<b>3</b>	
One guaranteed transfer Mathematics course .....	GT-MA1	
<b>Arts &amp; Humanities</b> .....	<b>6</b>	
MUS 121 Music History: Medieval through Classical: .....	GT-AH1 .....	3
MUS 122 Music History: Early Romantic Period to Present: .....	GT-AH1 .....	3
<b>History</b> .....	<b>3</b>	
One guaranteed transfer History course .....	GT-HI1	
<b>Social &amp; Behavioral Sciences</b> .....	<b>6</b>	
Two guaranteed transfer Social & Behavioral Sciences courses*.....	GT-SS1, GT-SS2, GT-SS3	
<b>Natural &amp; Physical Sciences</b> .....	<b>7</b>	
Two guaranteed transfer Natural & Physical Sciences courses. One of these courses must have the required laboratory (GT-SC1).....	GT-SC1, GT-SC2	
<b>Additional Required Courses</b> .....	<b>26</b>	
MUS 110 Music Theory I.....	3	
MUS 111 Music Theory II.....	3	
MUS 112 Ear Training/Sight Singing I Lab .....	1	
MUS 113 Ear Training/Sight Singing II Lab .....	1	
MUS 131 Music Class I: Piano .....	2	
MUS 141 Private Instruction.....	1	
MUS 142 Private Instruction.....	1	
MUS 151 Ensemble I.....	1	
MUS 152 Ensemble II.....	1	
MUS 210 Music Theory III .....	3	
MUS 211 Music Theory IV.....	3	
MUS 212 Advanced Ear Training/Sight Singing I Lab .....	1	
MUS 213 Advanced Ear Training/Sight Singing II Lab .....	1	

MUS 241	Private Instruction	1
MUS 242	Private Instruction	1
MUS 251	Ensemble I	1
MUS 252	Ensemble II	1
<b>Electives</b>		<b>3</b>
MUS –	all courses	
<b>Total</b>		<b>60</b>

\*CSU-Ft. Collins requires that one of these courses be PSY 101-General Psychology I.

**Note:** Course substitutions are not permitted for any Statewide Transfer Degree program.

If, because course substitutions are not permitted, a student is not able to complete this Statewide Transfer Degree plan, the student should see a Program Advisor for guidance.

### ASSOCIATE OF ARTS DEGREE – STUDIO ART DESIGNATION

<b>General Education Course Requirements:</b>		<b>31</b>
<b>Communication</b>		<b>6</b>
ENG 121	English Composition I: GT-CO1	3
ENG 122	English Composition II: GT-CO2	3
	OR	
ENG 122	English Composition II: GT-CO2	(3)
	AND	
	a GT-CO3 course	GT-CO3
<b>Mathematics</b>		<b>3</b>
	One guaranteed transfer Mathematics course (GT-MA1)	
<b>Arts &amp; Humanities</b>		<b>6</b>
	Two guaranteed transfer Arts & Humanities courses (GT-AH2, GT-AH3, GT-AH4)	
<b>History</b>		<b>3</b>
	One guaranteed transfer History course (GT-H11)	
<b>Social &amp; Behavioral Sciences</b>		<b>6</b>
	Two guaranteed transfer Social & Behavioral Sciences courses (GT-SS1, GT-SS2, GT-SS3)	
<b>Natural &amp; Physical Sciences</b>		<b>7</b>
	Two guaranteed transfer Natural & Physical Sciences courses	
	One course must have the required laboratory (GT-SC1) (GT-SC2, GT-SC1)	
<b>Additional Required Courses</b>		<b>21</b>
ART 111	Art History: Ancient to Medieval: GT-AH1	3
ART 112	Art History: Renaissance to Modern: GT-AH1	3
ART 121	Drawing I	3
ART 128	Figure Drawing I	3
	OR	
ART 221	Drawing I	(3)
ART 131	Visual Concepts 2-D Design	3
ART 132	Visual Concepts 3-D Design	3
	Any three-credit STUDIO ART course	3

**Note:** If these credits are not required for the major at a receiving 4-year institution, they will be applied to the Bachelor's degree as elective credit towards graduation. Please check with the receiving institution to determine in which way these courses will be applied.

<b>Electives</b>		<b>8</b>
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**Note:** Not all courses listed below are available at CCD.

- ACC 121, 122
- ANT – all courses
- ARA – all courses 111 and higher
- ART – all courses
- ASL – all course 121 and higher
- AST – all courses
- BIO – all courses
- BUS 115, 216, 217, 226
- CHE – all courses
- CHI – all courses 111 and higher
- CIS 118

COM – all courses	
CRJ 110	
DAN & PED – all courses (up to 4 credits total)	
ECE 101, 102, 205, 238, 241	
ECO – all courses	
EDU 221	
ENG – all courses 121 and higher	
ENV 101	
FRE – all courses 111 and higher	
GEO – all courses	
GER – all courses 111 and higher	
GEY – all courses	
HIS – all courses	
HUM – all courses	
HWE 100	
ITA – all courses 111 and higher	
JOU – all courses	
JPN – all courses 111 and higher	
LIT – all courses	
MAT – all courses 120 and higher	
MGD – all courses	
MUS – all courses	
PHI – all courses	
PHY – all courses	
POS – all courses	
PSY – all courses	
SCI 155, 156	
SOC – all courses	
SPA – all courses 111 and higher	
THE – all courses	
WST – all courses	
<b>Total</b> .....	<b>60</b>

*\*Students planning to transfer to CSU-FC will be required to complete a 200-level foreign language for completion of the BA in Studio Art must complete two semesters of one foreign language for their electives OR be able to pass the CSU-FC Foreign Language placement exam at the sophomore level. It may not be possible to complete the BA in Studio Art in two years without this prior foreign language competency.*

**Note: Course substitutions are not permitted for any Statewide Transfer Degree program.**

If, because course substitutions are not permitted, a student is not able to complete this Statewide Transfer Degree plan, the student should see a Program Advisor for guidance.

**ASSOCIATE OF ARTS DEGREE – THEATER DESIGNATION**

<b>General Education Course Requirements:</b> .....	<b>31</b>
<b>Communication</b> .....	<b>6</b>
ENG 121 English Composition I:..... GT-CO1 .....	3
ENG 122 English Composition II: .....	GT-CO2..... 3
OR	
ENG 122 English Composition II: .....	GT-CO2..... (3)
AND	
a GT-CO3 course .....	GT-CO3
<b>Mathematics</b> .....	<b>3</b>
One guaranteed transfer Mathematics course	
<b>Arts &amp; Humanities</b> .....	<b>6</b>
THE 105 Theatre Appreciation: .....	GT-AH1 ..... 3
THE 211 Development of Theatre I: Greek to Renaissance: .....	GT-AH1 ..... 3
<b>History</b> .....	<b>3</b>
One guaranteed transfer History course (GT-HI1)	
<b>Social &amp; Behavioral Sciences</b> .....	<b>6</b>
Two guaranteed transfer Social & Behavioral Sciences courses (GT-SS1, GT-SS2, GT-SS3)	

<b>Natural &amp; Physical Sciences</b> .....	<b>7</b>
Two guaranteed transfer Natural & Physical Sciences courses	
One of these courses must have the required laboratory (GT-SC1) (GT-SC1, GT-SC2)	
<b>Additional Required Courses</b> .....	<b>18</b>
THE 108 Theatre Script Analysis: .....	GT-AH1 ..... 3
THE 111 Acting I.....	3
THE 116 Technical Theatre.....	3
THE 212 Development of Theatre II: Restoration to Modern: .....	GT-AH1 ..... 3
THE 215 Playwriting: .....	GT-AH1 ..... 3
<i>Choose one course from the following:</i>	
THE 131 Theatre Production I .....	3
THE 132 Theatre Production II .....	(3)
THE 231 Theatre Production III .....	(3)
THE 232 Theatre Production IV.....	(3)
THE 212 Development of Theatre II: Restoration to Modern: .....	GT-AH1 ..... 3
THE 215 Playwriting: .....	GT-AH1 ..... 3
<b>Electives*</b> .....	<b>11</b>
<i>Note: Not all courses listed below are available at CCD.</i>	
ACC 121, 122	
ANT – all courses (see NOTE below)	
ARA – all courses 111 and higher	
ART – all courses	
ASL – all courses 121 and higher	
AST – all courses	
BIO – all courses	
BUS 115, 216, 217, 226	
CHE – all courses	
CHI – all courses 111 and higher	
CIS 118	
COM – all courses	
CRJ 110	
CSC 160, 161	
DAN & PED – all courses (up to 4 credits total)	
ECE 101, 102, 205, 238, 241	
ECO – all courses	
EDU 221	
ENG – all courses 121 and higher	
ENV 101	
FRE – all courses 111 and higher	
GEO – all courses	
GER – all courses 111 and higher	
GEY – all courses	
HIS – all courses	
HUM – all courses	
HWE 100	
ITA – all courses 111 and higher	
JOU – all courses	
JPN – all courses 111 and higher	
LIT – all courses	
MAT – all courses 120 and higher	
MGD – all courses	
MUS – all courses	
PHI – all courses	
PHY – all courses	
POS – all courses	
PSY – all courses 101 and higher	
SOC – all courses	
SPA – all courses 111 and higher	
THE – all courses	
WST – all courses	
<b>Total</b> .....	<b>60</b>

\*Students interested in attending MSU Denver or CSU-Fort Collins are advised to take COM 115- Public Speaking; students who plan to transfer to UCB or UCCS may not take elective courses with a THE prefix.



**Note: Course substitutions are not permitted for any Statewide Transfer Degree program.**

If, because course substitutions are not permitted, a student is not able to complete this Statewide Transfer Degree plan, the student should see a Program Advisor for guidance.

**ASSOCIATE OF SCIENCE DEGREE – BIOLOGY DESIGNATION**

<b>General Education Course Requirements:</b> .....	<b>36</b>
<b>Communication</b> .....	<b>6</b>
ENG 121 English Composition I:.....	GT-CO1 ..... 3
ENG 122 English Composition II: .....	GT-CO2 ..... 3
OR	
ENG 122 English Composition II: .....	GT-CO2 ..... (3)
AND	
a GT-CO3 course .....	GT-CO3
<b>Mathematics</b> .....	<b>5</b>
MAT 201 Calculus I:.....	GT-MA1
<b>Arts &amp; Humanities</b> .....	<b>6</b>
Two guaranteed transfer Arts & Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4)	
<b>History</b> .....	<b>3</b>
One guaranteed transfer History course .....	GT-HI1
<b>Social &amp; Behavioral Sciences</b> .....	<b>6</b>
Two guaranteed transfer Social & Behavioral Sciences courses (GT-SS1, GT-SS2, GT-SS2, GT-SS3)	
<b>Natural &amp; Physical Sciences</b> .....	<b>10</b>
BIO 111 General College Biology I with Lab:.....	GT-SC1 ..... 5
CHE 111 General College Chemistry I with Lab: .....	GT-SC1 ..... 5
<b>Additional Required Courses</b> .....	<b>20</b>
BIO 112 General College Biology II with Lab:.....	GT-SC1 ..... 5
CHE 112 General College Chemistry II with Lab: .....	GT-SC1 ..... 5
PHY 111 Physics: Calculus-Based I with Lab: .....	GT-SC1 ..... 5
PHY 112 Physics: Calculus-Based II with Lab: .....	GT-SC1 ..... 5
<b>Electives</b> .....	<b>4</b>

**Note:** Not all courses listed below are available at CCD.

- ANT – all courses
- ARA – all courses 111 and higher
- ART – all courses
- ASL – all courses
- AST – all courses
- BIO – all courses
- CHE – all courses
- CHI – all courses 111 and higher
- CIS 118
- COM – all courses
- CSC 161
- DAN, HPL and PED - all courses
- ECO – all courses
- EDU 221
- ENG – all courses 121 and higher
- ENV 101
- FRE – all courses 111 and higher
- GEO – all courses
- GER – all courses 111 and higher
- GEY – all courses
- HIS – all courses
- HUM – all courses
- HWE 100
- ITA – all courses 111 and higher
- JOU – all courses
- JPN – all courses 111 and higher
- LIT – all courses
- MAT – all courses 121 and higher
- MUS – all courses
- PHI – all courses

- PHY – all courses
- POS – all courses
- PSY – all courses
- SOC – all courses
- SPA – all courses 111 and higher
- THE – all courses
- WST – all courses

**Total**..... **60**

Students are strongly encouraged to seek academic advising prior to registration regarding the acceptability of online science courses if they anticipate transferring to a four year institution or completing graduate work in the science or health professions. It should be noted that per Colorado Revised Statute, § 23-1-125(1)(e), general education courses taken online are guaranteed to satisfy core course (GT Pathways) requirements at all Colorado public institutions of higher education.

*Note: Course substitutions are not permitted for any Statewide Transfer Degree program.*

If, because course substitutions are not permitted, a student is not able to complete this Statewide Transfer Degree plan, the student should see a Program Advisor for guidance.

**ASSOCIATE OF SCIENCE DEGREE – GEOLOGY DESIGNATION**

**General Education Course Requirements:** ..... **36**

**Communication** ..... **6**

ENG 121 English Composition I:..... GT-CO1 ..... 3

ENG 122 English Composition II: ..... GT-CO2 ..... 3

OR

ENG 122 English Composition II: ..... GT-CO2 ..... (3)

AND

a GT-CO3 course ..... GT-CO3

**Mathematics** ..... **5**

MAT 201 Calculus I:..... GT-MA1

**Arts & Humanities**..... **6**

Two guaranteed transfer Arts & Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4)

**History** ..... **3**

One guaranteed transfer History course ..... GT-HI1

**Social & Behavioral Sciences** ..... **6**

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

**Natural & Physical Sciences**..... **10**

CHE 111 General College Chemistry I with Lab: ..... GT-SC1 ..... 5

CHE 112 General College Chemistry II with Lab: ..... GT-SC1 ..... 5

**Additional Required Courses** ..... **23**

GEY 111 Physical Geology with Lab: ..... GT-SC1 ..... 4

GEY 112 Historical Geology with Lab: ..... GT-SC1 ..... 4

MAT 202 Calculus II:..... GT-MA1 ..... 5

PHY 211 Physics: Calculus-Based I with Lab: ..... GT-SC1 ..... 5

PHY 212 Physics: Calculus-Based II with Lab: ..... GT-SC1 ..... 5

**Electives**..... **1**

*Note: Not all courses listed below are available at CCD.*

- ANT – all courses
- ARA – all courses 111 and higher
- ART – all courses
- ASL – all courses
- AST – all courses
- BIO – all courses
- CHE – all courses
- CHI – all courses 111 and higher
- CIS 118
- COM – all courses
- CSC 161
- DAN, HPL and PED - all courses
- ECO – all courses
- EDU 221

ENG – all courses 121 and higher	
ENV 101	
FRE – all courses 111 and higher	
GEO – all courses	
GER – all courses 111 and higher	
GEY – all courses	
HIS – all courses	
HUM – all courses	
HWE 100	
ITA – all courses 111 and higher	
JOU – all courses	
JPN – all courses 111 and higher	
LIT – all courses	
MAT – all courses 121 and higher	
MUS – all courses	
PHI – all courses	
PHY – all courses	
POS – all courses	
PSY – all courses	
SOC – all courses	
SPA – all courses 111 and higher	
THE – all courses	
WST – all courses	
<b>Total</b> .....	<b>60</b>

In addition to meeting the requirements listed here, contact the department at the school to which you want to transfer for program-specific information.

If these credits are not required for the major at the receiving 4-year institution, they will be applied to the Bachelor’s degree as elective credit towards graduation. Please check with the receiving institution to determine in which way these courses will be applied.

**Note: Course substitutions are not permitted for any Statewide Transfer Degree program.**

If, because course substitutions are not permitted, a student is not able to complete this Statewide Transfer Degree plan, the student should see a Program Advisor for guidance.

**ASSOCIATE OF SCIENCE DEGREE – PHYSICS DESIGNATION**

<b>General Education Course Requirements:</b> .....	<b>36</b>
<b>Communication</b> .....	<b>6</b>
ENG 121 English Composition I:..... GT-CO1 .....	3
ENG 122 English Composition II: .....	GT-CO2.....3
OR	
ENG 122 English Composition II: .....	GT-CO2..... (3)
AND	
a GT-CO3 course .....	GT-CO3
<b>Mathematics</b> .....	<b>5</b>
MAT 201 Calculus I:.....	GT-MA1
<b>Arts &amp; Humanities</b> .....	<b>9</b>
Three guaranteed transfer Arts & Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4)	
<b>History</b> .....	<b>3</b>
One guaranteed transfer History course .....	GT-HI1
<b>Social &amp; Behavioral Sciences</b> .....	<b>3</b>
One guaranteed transfer Social & Behavioral Sciences course (GT-SS1, GT-SS2, GT-SS3)	
<b>Natural &amp; Physical Sciences</b> .....	<b>10</b>
PHY 211 Physics: Calculus-based I with Lab: .....	GT-SC1..... 5
PHY 212 Physics: Calculus-based II with Lab: .....	GT-SC1..... 5
<b>Additional Required Courses</b> .....	<b>24</b>
CHE 111 General College Chemistry I with Lab: .....	GT-SC1..... 5
CHE 112* General College Chemistry II with Lab: .....	GT-SC1..... 5
OR	
CSC 160* Computer Science I (Language).....	(4)

MAT 202	Calculus II:.....	GT-MA1 .....	5
MAT 203	Calculus III:.....	GT-MA1 .....	4
	OR		
MAT 204**	Differential Equations with Engineering Applications: .....	GT-MA1 .....	(5)
MAT 261**	Differential Equations with Engineering Applications (not offered at CCD):.....	GT-MA1 .....	4
	OR		
MAT 265	Differential Equations:.....	GT-MA1 .....	(3)
	OR		
MAT 266**	Differential Equations with Linear Algebra.....		(4)
PHY 213	Physics III: Calculus-based.....		3
<b>Electives</b>			<b>0</b>

**Note:** Not all courses listed below are available at CCD.

- ANT – all courses
- ARA – all courses 111 and higher
- ART – all courses
- ASL – all courses
- AST – all courses
- BIO – all courses
- CHE – all courses
- CHI – all courses 111 and higher
- CIS 118
- COM – all courses
- CSC 161
- DAN, HPL and PED - all courses
- ECO – all courses
- EDU 221
- ENG – all courses 121 and higher
- ENV 101
- FRE – all courses 111 and higher
- GEO – all courses
- GER – all courses 111 and higher
- GEY – all courses
- HIS – all courses
- HUM – all courses
- HWE 100
- ITA – all courses 111 and higher
- JOU – all courses
- JPN – all courses 111 and higher
- LIT – all courses
- MAT – all courses 121 and higher
- MUS – all courses
- PHI – all courses
- PHY – all courses
- POS – all courses
- PSY – all courses
- SOC – all courses
- SPA – all courses 111 and higher
- THE – all courses
- WST – all courses

**Total**..... **60**

*\*Students planning to transfer to University of Colorado Boulder must take CHE 112 (not CSC 160) to fulfill this requirement; students planning to transfer to University of Northern Colorado must take CSC 160 (not CHE 112) to fulfill this requirement; students planning to transfer to Fort Lewis College or University of Colorado Colorado Springs must take both CSC 160 and CHE 112; students planning to transfer to a receiving institution not listed here may choose either one of these courses.*

*\*\*Please Be advised: If you choose to take one of these courses, it will put you over 60 credits. The courses will transfer but the extra credits may not. That is, the receiving institution may still require the completion of 60 credits for the major.*

**Note: Course substitutions are not permitted for any Statewide Transfer Degree program.**

If, because course substitutions are not permitted, a student is not able to complete this Statewide Transfer Degree plan, the student should see a Program Advisor for guidance.

**STATEWIDE TRANSFER ARTICULATION AGREEMENT – CHEMISTRY**

**General Education Course Requirements:** ..... **30**

**Communication** ..... **6**

ENG 121 English Composition I:..... GT-CO1 ..... 3

ENG 122 English Composition II: ..... GT-CO2 ..... 3

OR

ENG 122 English Composition II: ..... GT-CO2 ..... (3)

AND

a GT-CO3 course ..... GT-CO3

**Mathematics**..... **5**

MAT 201 Calculus I:..... GT-MA1

**Arts & Humanities**..... **3**

One guaranteed transfer Arts & Humanities course (GT-AH1, GT-AH2, GT-AH3, GT-AH4)

**History** ..... **3**

One guaranteed transfer History course ..... GT-HI1

**Social & Behavioral Sciences** ..... **3**

One guaranteed transfer Social & Behavioral Sciences course (GT-SS1, GT-SS2, GT-SS3)

**Natural & Physical Sciences**..... **10**

CHE 111 General College Chemistry I with Lab: ..... GT-SC1 ..... 5

CHE 112 General College Chemistry II with Lab: ..... GT-SC1 ..... 5

**Additional Required Courses** ..... **29**

CHE 211 Organic Chemistry I with Lab..... 5

CHE 212 Organic Chemistry II with Lab..... 5

MAT 202 Calculus II:..... GT-MA1 ..... 5

MAT 203 Calculus III:..... GT-MA1 ..... 5

PHY 211 Physics: Calculus-Based I with Lab: ..... GT:SC1 ..... 5

PHY 212 Physics: Calculus-Based II with Lab: ..... GT-SC1 ..... 5

**Electives**..... **1**

*Note: Not all courses listed below are available at CCD.*

- ANT – all courses
- ARA – all courses 111 and higher
- ART – all courses
- ASL – all courses
- AST – all courses
- BIO – all courses
- CHE – all courses
- CHI – all courses 111 and higher
- CIS 118
- COM – all courses
- CSC 161
- DAN, HPL and PED - all courses
- ECO – all courses
- EDU 221
- ENG – all courses 121 and higher
- ENV 101
- FRE – all courses 111 and higher
- GEO – all courses
- GER – all courses 111 and higher
- GEY – all courses
- HIS – all courses
- HUM – all courses
- HWE 100
- ITA – all courses 111 and higher
- JOU – all courses
- JPN – all courses 111 and higher
- LIT – all courses
- MAT – all courses 121 and higher
- MUS – all courses

- PHI – all courses
- PHY – all courses
- POS – all courses
- PSY – all courses
- SOC – all courses
- SPA – all courses 111 and higher
- THE – all courses
- WST – all courses

**Total**..... **60**

This statewide transfer articulation agreement in Chemistry does not fulfill requirements for the GT Pathways general education curriculum or the Associate of Science degree prior to transfer; however, this agreement does guarantee a student, if admitted, junior standing and completion of the baccalaureate degree within an additional 60 semester hours at the receiving institution.

Completion of the receiving institution’s lower division general education requirements is fulfilled only under the condition that one GT Pathways-approved course in arts and humanities (AH1, AH2, AH3, or AH4) and one GT Pathways-approved course in social and behavioral sciences (SS1, SS2, or SS3) are successfully completed at the receiving institution within the first 30 hours or 12 calendar months.

Students transferring to a 4-yr college/university under this Chemistry agreement are encouraged to ‘reverse’ transfer the one GT Pathways course in arts and humanities and the one GT Pathways course in social and behavioral sciences (Note #2 above) back to their community college in order to complete the GT Pathways general education program and to earn their Associate of Science degree with a Chemistry designation.

Lecture and laboratory portions of organic chemistry, CHE 211 and 212, must not be taken in an online delivery format.

**Note: Course substitutions are not permitted for any Statewide Transfer Articulation Agreement.**

If, because course substitutions are not permitted, a student is not able to complete this Statewide Transfer Articulation Agreement, the student should see a Program Advisor for guidance.

## **ASSOCIATE OF APPLIED SCIENCE TRANSFER DEGREE IN ACCOUNTING**

### **Accounting**

The following courses represent the transfer oriented Associate of Applied Science Degree for Accounting majors. Upon completion of the AAS Transfer Degree in Accounting, students may transfer to Metropolitan State University of Denver’s Bachelor of Science program in Accounting. An additional 60 credits of MSU-Denver coursework must be completed to earn the Bachelor of Science Degree in Accounting from MSU-Denver. All AAS Transfer Degree coursework must be completed with a grade of C or better.

### **General Education Requirements**

CIS 118	Introduction to PC Applications.....	3
COM 115	Public Speaking .....	3
ECO 201	Principles of Macroeconomics:.....	GT-SS1 ..... 3
ECO 202	Principles of Microeconomics: .....	GT-SS1 ..... 3
ENG 121	English Composition I:.....	GT-CO1 ..... 3
ENG 122	English Composition II: .....	GT-CO2 ..... 3
MAT 123	Finite Mathematics:.....	GT-MA1 ..... 4
MAT 125	Survey of Calculus: .....	GT-MA1 ..... 4
POS 111	American Government: .....	GT-SS1 ..... 3
<b>Subtotal</b>	.....	<b>29</b>

### **Program Requirements**

ACC 115	Payroll Accounting.....	3
ACC 121	Accounting Principles I .....	4
ACC 122	Accounting Principles II .....	4
ACC 125	Computerized Accounting .....	3
ACC 132	Tax Help Colorado.....	2
ACC 133	Tax Help Colorado Practicum .....	1
ACC 135	Spreadsheet Applications for Accounting .....	3
BUS 115	Introduction to Business .....	3

BUS 216	Legal Environment of Business.....	3
BUS 217	Business Communication and Report Writing.....	3
MAR 160	Customer Service.....	3
<b>Subtotal</b>		<b>32</b>
<b>Total</b>		<b>61</b>

## CERTIFICATE IN ENGINEERING GRAPHICS

### Scanned Input 3D Modeling Certificate

*\*\*This program is not eligible for federal student aid.\*\**

The 7 credit hour certificate covering both 3D Printing and 3D Scanning and Modeling is design for post Engineering Graphics/Mechanical Designer AAS or CAD designers with established 3D parametric modeling skills. The first class, **3D Printing**, will provide students with the ability to blend the virtual and real design worlds together through the use 3D CAD Modeling and 3D Printing. The second class, **3D Scanning and Modeling**, exposes students to 3D scanning and modeling. Students will manipulate various types of 3D scanning technology and create CAD models using scanning software and other CAD programs.

### Program Admission Requirements

Meet with Program Chair or Program Advisor. Call to make an appointment.

### Requirements

CAD 262	3D Printing/Additive Manufacturing.....	3
CAD 264	3D Scanning and Modeling.....	4
<b>Total</b>		<b>7</b>

## CERTIFICATE IN MACHINE TECHNOLOGIES

CCD Manufacturing Center

### Multi Axis Lathe Certificate

*\*\*This certificate is not eligible for federal student aid.\*\**

This program is designed to instruct students in the set-up, operation, and programming of multi axis lathes. The student will work with live-tooling and dual-spindles to program and manufacture one-off parts. This course of study is an advanced program meant for Machining Technologies AAS degree graduates or for incumbent employees with advanced CNC skills and advanced programming experience.

### Program Admission Requirements

Completion of a Machining Technologies degree within the past 5 years. Minimum work history requirements, prior CNC programming experience, minimum testing scores and employer references.

### Requirements

MAC 262	Introduction to multi-axis lathe.....	2
MAC 263	Multi-Axis Lathe Operation.....	3
MAC 264	Multi-Axis Lathe Programming.....	3
<b>Total</b>		<b>8</b>

## CERTIFICATE IN MACHINE TECHNOLOGIES

CCD Manufacturing Center

### CNC Wire EDM Certificate

*\*\*This certificate is not eligible for federal student aid.\*\**

This program will instruct a student in he basics of CNC wire EDM set-up, programming and controller operations. This course of study is an advanced program meant for Machining Technologies AAS degree graduates or for incumbent employees with advanced CNC skills and programming experience.

### Program Admission Requirements

Completion of a Machining Technologies degree within the past 5 years. Minimum work history requirements, prior CNC programming experience, minimum testing scores and employer references.

### Requirements

MAC 251	Introduction to Wire EDM.....	2
MAC 253	Wire EDM Operation.....	3
MAC 257	Wire EDM Programming.....	3
<b>Total</b>		<b>8</b>

## CERTIFICATE IN MACHINE TECHNOLOGIES

CCD Manufacturing Center

### Five Axis Milling Machine Certificate

*\*\*This certificate is not eligible for federal student aid.\*\**

Upon completion of this program a student will be able to set-up, operate and program five-axis milling machines. The student will be familiar with tool management, pallet changers, and lights-out manufacturing. This course of study is an advanced program meant for Machining Technologies AAS degree graduates or for incumbent employees with advanced CNC skills and advanced programming experience.

#### Program Admission Requirements

Completion of a Machining Technologies degree within the past 5 years. Minimum work history requirements, prior CNC programming experience, minimum testing scores and employer references.

#### Requirements

MAC 259	Introduction to Five-axis Milling Machine .....	2
MAC 260	Five-axis Milling Machine Operation.....	3
MAC 261	Five-axis Milling Machine Programming.....	3
<b>Total</b>	.....	<b>8</b>

## COMPUTED TOMOGRAPHY CERTIFICATE

Center for Health Sciences at Lowry

### Computed Tomography Certificate, Non-Distance

The medical imaging modality of Computed Tomography (CT) is critical in the diagnosis and treatment of trauma, as well as in the evaluation of many pathological processes. This program will assist qualified students in obtaining the necessary didactic education and mandatory clinical competencies to prepare them to sit for the American Registry of Radiologic Technologists (ARRT) CT Certification Examination. The program will prepare students for entry-level clinical practice.

The Non-Distance Computed Tomography Certificate program consists of two online didactic classes and two semesters (500 hours) of clinical internship.

Enroll in RTE 240 and RTE 255 didactic classes, with two semesters of clinical RTE 284 (6 credit hours per semester) where CCD would provide clinical experience through the current clinical affiliates of CCD. Students would receive regular clinical instruction by CCD faculty and be covered under CCD's professional liability insurance.

Students must complete the minimum of 500 documented CT clinical training hours within 24 months prior to graduation.

#### Program Admission Requirements

Prior to enrolling in the program, students must complete all steps of the CCD college admission process. The online college application is available at [www.ccd.edu](http://www.ccd.edu) : select "Future Student, Apply to CCD Today". NOTE: Admission to the college does not guarantee admission to the CT program.

Only students who wish to perform a clinical internship in one of CCD's clinical affiliate facilities must apply to the program. Enrollment in RTE 240 and RTE 255 does not require a program application packet; just register following standard college enrollment procedures.

Admission to the CT Non-Distance Certificate Program is dependent upon the following:

- Fulfilling all requirements for admission to CCD.
- Possess a current ARRT or NMTCB certification, or be a registry eligible graduate of an accredited program in Radiologic Technology, Nuclear Medicine and/or Radiation Therapy.

Applicants must have a minimum of one year experience in direct patient care.

Submission of a complete admissions packet a minimum of eight weeks prior to the start of the semester in which the student plans to begin the program. Dates will be verified by postmark.

Clinical site availability. Internship placement is on a first-come, first-served basis. Students will be notified by the CT Coordinator of acceptance and placement.

#### Admissions Packet

The admissions packet consists of documents that can be downloaded from the website <https://www.ccd.edu/academics/academic-centers/health-sciences-lowry/programs-study/radiologic-technology/apply> and includes the following:

*All changes are shaded yellow.*



- CT Program Application
- Current resume with proof of one year direct patient care experience
- Copy of current ARRT or NMTCB certification card
- Current CPR (BLS for Healthcare Providers) card

Background Check and Drug Screen – must be completed six weeks prior to the start of the semester after notification of acceptance into the program by the CT coordinator

Documentation of current Qualitative Respiratory Fit Test

Immunization record documenting the following:

- PPD done within the last 3 months
- MMR - 2 immunizations or documentation of immunity
- Hepatitis B series
- Varicella - immunization or documentation of disease
- Tetanus/Diphtheria Toxoid (TD)
- Annual Flu Shot

Other documents as listed on the website

### Requirements

RTE 240	Principles of CT Imaging*	3
RTE 255	Multiplanar Sectional Imaging*	2
RTE 284	Advanced Clinical Internship (CT)	6
RTE 286	Advanced Clinical Specialty II	6
<b>Total</b>		<b>17</b>

\*Courses are offered online through Desire2Learn and can be taken separately.

\*Enrollment in RTE 240 and RTE 255 is not restricted and does not require application to program.

## COMPUTED TOMOGRAPHY CERTIFICATE

Center for Health Sciences at Lowry

### Computed Tomography Certificate, Distance

The medical imaging modality of Computed Tomography (CT) is critical in the diagnosis and treatment of trauma, as well as in the evaluation of many pathological processes. This program will assist qualified students in obtaining the necessary didactic education to prepare them to sit for the American Registry of Radiologic Technologists (ARRT) CT Certification Examination.

The Computed Tomography Distance Certificate program is designed primarily for long distance or out-of-state students. It consists of two online didactic classes and an instructor review of clinical competencies.

Enroll in RTE 240 and RTE 255 didactic classes and RTE 284 (1 credit hour), which would be used for verification of clinical competencies and required clinical hours. The student would be responsible for obtaining their own clinical placement and would not receive any clinical instruction by CCD faculty or be covered under CCD's professional liability insurance.

Students must complete the minimum of 500 documented CT clinical training hours within 24 months prior to graduation.

### Program Admission Requirements

Prior to enrolling in the program, students must complete all steps of the CCD college admission process. The online college application is available at [www.ccd.edu](http://www.ccd.edu) : select "Future Student, Apply to CCD Today".

Enrollment in RTE 240 and RTE 255 does not require a program application packet; just register following standard college enrollment procedures.

Admission to the CT Distance Certificate Program is dependent upon the following:

- Fulfilling all requirements for admission to CCD.
- Possess a current ARRT or NMTCB certification, or be a registry eligible graduate of an accredited program in Radiologic Technology, Nuclear Medicine and/or Radiation Therapy.

Submission of a complete admissions packet a minimum of four weeks prior to the start of the semester in which the student plans to begin the program. Dates will be verified by postmark.

### Admissions Packet

The admissions packet consists of documents that can be downloaded from the website <https://www.ccd.edu/academics/academic-centers/health-sciences-lowry/programs-study/radiologic-technology/apply> and includes the following:

- CT Program Application
- Current resume with proof of one year direct patient care experience
- Copy of current ARRT or NMTCB certification card
- Immunization record documenting the following:
  - PPD done within the last 3 months
  - MMR - 2 immunizations or documentation of immunity
  - Hepatitis B series
  - Varicella - immunization or documentation of disease
  - Tetanus/Diphtheria Toxoid (TD)
  - Annual Flu Shot
- Other documents as listed on the website

**Requirements**

RTE 240	Principles of CT Imaging*	3
RTE 255	Multiplanar Sectional Imaging*	2
RTE 284	Advanced Clinical Internship (CT)	1
<b>Total</b>		<b>6</b>

\*Courses are offered online through Desire2Learn and can be taken separately.

\*Enrollment in RTE 240 and RTE 255 is not restricted and does not require application to program.

## Updates and Corrections to Programs

### ASSOCIATE OF APPLIED SCIENCE DEGREE IN ENGINEERING GRAPHICS

#### Mechanical Drafter AAS Degree

The Engineering Graphics Mechanical Drafter program allows students to pursue an Associate of Applied Science Degree that provides an opportunity to learn the skills needed to become a CAD/Drafter in many of the important industries throughout Colorado and the country. This degree program will include the skills from 2D CAD drafting to 3D parametric modeling. Along the degree path, students will also have opportunities to augment their CAD skills with rapid prototyping, using a state-of-the-art 3D printer, as well as exposure to Computer Aided Machining programs such as Gibbs CAM and MasterCAM. Also in the degree plan, students will be trained in mechanical design and will develop an understanding of mechanical design with an eye towards manufacturability.

#### Program Admission Requirements

Meet minimum assessment scores or prerequisites required for general education courses in the program.

Meet with Program Chair or Program Advisor. Call to make an appointment.

#### General Education Requirements

CIS 118	Introduction to PC Applications.....	3
COM 115	Public Speaking .....	3
ENG 121	English Composition I:..... GT-CO1 .....	3
MAT 108	Technical Mathematics .....	4
PHY 105	Introduction to Physics:..... GT-SC1 .....	4
<b>Total</b>		<b>17</b>

#### Program Requirements

CAD 101	Computer Aided Drafting I.....	3
CAD 102	Computer Aided Drafting II.....	3
CAD 217	Rhino .....	3
CAD 240	Inventor I-AutoDesk .....	3
CAD 255	Solidworks/Mechanical.....	3
CAD 262	3D Printing/Additive Manufacturing .....	3
CAD 264	3D Scanning and Modeling .....	4
EGT 103	Technical Drafting III.....	3
EGT 106	Introduction to Axonometric Views .....	3
EGT 107	Introduction to Sections and Auxiliary Views.....	3
EGT 160	Introduction to Industrial Drafting and Design .....	3
EGT 205	Geometric Dimension & Tolerance .....	3
EGT 280	Internship .....	6
	OR	
EGT 289	Capstone: Projects in 3-D for Industrial Drafting & Design .....	(6)
<b>Subtotal</b>		<b>43</b>
<b>Total</b>		<b>60</b>

## CERTIFICATE IN ENGINEERING GRAPHICS

### Engineering Graphics Intermediate Mechanical Certificate

This certificate builds on the Basic Certificate. It provides currency and skill training for individuals wanting to work in the field of Engineering Graphics Mechanical Design. This program includes skills needed to understand 3D parametric drafting using the state of the art drafting program. This certificate is fully transferable to the Mechanical Drafter AAS Degree. Please see a Program Advisor about this pathway.

#### Program Admission Requirements

Meet minimum assessment scores or prerequisites required for general education courses in the program.

Meet with Program Chair or Program Advisor. Call to make an appointment.

#### Requirements

CAD 101	Computer Aided Drafting I.....	3
CAD 102	Computer Aided Drafting II.....	3
CAD 217	Rhino .....	3
CAD 240	Inventor I-AutoDesk .....	3
CAD 255	Solidworks/Mechanical.....	3
CAD 262	3D Printing/Additive Manufacturing .....	3
CIS 118	Introduction to PC Applications.....	3
COM 115	Public Speaking .....	3
EGT 103	Technical Drafting III.....	3
EGT 106	Introduction to Axonometric Views .....	3
EGT 107	Introduction to Sections and Auxiliary Views.....	3
EGT 160	Introduction to Industrial Drafting .....	3
MAT 108	Technical Mathematics .....	4
<b>Total</b> .....		<b>40</b>

## SPANISH DWD

### Science Requirement:

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

## COMMUNICATIONS DWD

Electives have been updated to the following:

**Note:** *Not all courses listed below are available at CCD.*

ACC 121, 122

ANT – all courses

ARA – all courses 111 and higher

ART – all courses

ASL – all course 121 and higher

AST – all courses

BIO – all courses

BUS 115, 216, 217, 226

CHE – all courses

CHI – all courses 111 and higher

CIS 118

COM – all courses

CRJ 110

DAN & PED – all courses (up to 4 credits total)

ECE 101, 102, 205, 238, 241

ECO – all courses

EDU 221

ENG – all courses 121 and higher

ENV 101

FRE – all courses 111 and higher

GEO – all courses

GER – all courses 111 and higher

GEY – all courses

HIS – all courses

HUM – all courses

HWE 100

ITA – all courses 111 and higher

JOU – all courses	
JPN – all courses 111 and higher	
LIT – all courses	
MAT – all courses 120 and higher	
MGD – all courses	
MUS – all courses	
PHI – all courses	
PHY – all courses	
POS – all courses	
PSY – all courses	
SCI 155, 156	
SOC – all courses	
SPA – all courses 111 and higher	
THE – all courses	
WST – all courses	
<b>Total</b> .....	<b>60</b>

**PHILOSOPHY DWD**

Electives have been updated to the following:

*Note: Not all courses listed below are available at CCD.*

ACC 121, 122	
ANT – all courses	
ARA – all courses 111 and higher	
ART – all courses	
ASL – all course 121 and higher	
AST – all courses	
BIO – all courses	
BUS 115, 216, 217, 226	
CHE – all courses	
CHI – all courses 111 and higher	
CIS 118	
COM – all courses	
CRJ 110	
DAN & PED – all courses (up to 4 credits total)	
ECE 101, 102, 205, 238, 241	
ECO – all courses	
EDU 221	
ENG – all courses 121 and higher	
ENV 101	
FRE – all courses 111 and higher	
GEO – all courses	
GER – all courses 111 and higher	
GEY – all courses	
HIS – all courses	
HUM – all courses	
HWE 100	
ITA – all courses 111 and higher	
JOU – all courses	
JPN – all courses 111 and higher	
LIT – all courses	
MAT – all courses 120 and higher	
MGD – all courses	
MUS – all courses	
PHI – all courses	
PHY – all courses	
POS – all courses	
PSY – all courses	
SCI 155, 156	
SOC – all courses	
SPA – all courses 111 and higher	
THE – all courses	
WST – all courses	
<b>Total</b> .....	<b>60</b>

*All changes are shaded yellow.*

## RADIATION THERAPY

Upon successful completion of the Radiation Therapy Program, graduates are eligible to apply for registry by the American Registry of Radiologic Technologists (ARRT) in Radiation Therapy. This program will prepare diagnostic technologists, RT(R), to be Radiation Therapists, RT(T). A certificate is obtained over three semesters. A new class begins in the fall semester of each year. Graduates will be dual registered, RT(R)(T).

### Application Information

See program application process at our website [www.ccd.edu/program/radiation-therapy](http://www.ccd.edu/program/radiation-therapy).

Qualified applicants will be notified on or before May 25. Upon program acceptance, background check, fingerprinting and drug screening must be completed prior to the start of classes.

### Radiation Therapy Certificate

Center for Health Sciences at Lowry

#### Fall

RTH 221	Principles-Radiation Therapy I .....	3
RTH 225	Oncology Pathophysiology .....	3
RTH 242	Radiation Physics.....	3
RTH 281	Internship I.....	12
	<b>Subtotal .....</b>	<b>21</b>

#### Spring

RTH 222	Principles-Radiation Therapy II.....	2
RTH 243	Oncology Principle and Practice I.....	2
RTE 255	Multiplanar Sectional Imaging.....	2
RTH 261	Treatment Planning.....	3
RTH 282	Internship II.....	12
	<b>Subtotal .....</b>	<b>21</b>

#### Summer

RTH 244	Oncology Principle and Practice II.....	2
RTH 283	Internship III.....	12
	Subtotal.....	14
	<b>Total .....</b>	<b>56</b>

## ASSOCIATE OF APPLIED SCIENCE DEGREE IN RADIOLOGIC TECHNOLOGY

### Steps to a Successful Application

Prior to enrolling in the program, students must complete all steps of the CCD college admissions process. The online college application is available at [www.ccd.edu](http://www.ccd.edu): select "Future Student, Apply to CCD Today". Radiologic Technology admissions packets are accepted annually. They are available July 1st and must be submitted and postmarked by December 1st to be considered for admission into the class beginning fall of the next academic year. Only packets complete in entirety upon submission will be accepted for consideration. They will be evaluated by the program faculty.

- Admission to the program, which is a highly competitive process, is based on a point system (100), determined by the following required criteria:
  - Minimum GPA of 3.0 for science and medical terminology courses and 2.8 for General Education courses (20 points)  
*Note: All prerequisites must be taken for a letter grade.*
  - Performance on Health Occupational Aptitude Exam (20 points)
- This exam will be by invitation only, based upon having met the minimum requirements and submission of a completed application.
  - 12 hours of documented job shadowing (minimum) (12 points)
  - 2 structured letters of recommendation (minimum) (10 points)
  - Interview with the application panel (30 points)  
*Note: The number of applicants who are invited to participate in the interviews depends upon the number of clinical placement sites which are available. Approximately 36 interviews will be granted.*
  - Health care experience (not requisite criteria) (4 points)
  - Proof of Colorado residency (4 points)
- Approximately 25 of the highest scoring candidates from the panel interview and admissions evaluation will be invited to enter the Radiologic Technology program.
- Candidates who are not selected to enter the program will be provided with advisement, if desired. Students may apply for the program a total of three times.
- All prerequisite science classes must have been taken within seven academic years prior to the July start of the program. All math courses must have been taken within 10 academic years prior to the start of the program. Science courses must have been taken within 7 academic years prior to the start of the program.

## MAMMOGRAPHY CERTIFICATE

### Program Admission Requirements

Prior to enrolling in the program, students must complete all steps of the CCD college admissions process. The online college application is available at [www.ccd.edu](http://www.ccd.edu): select "Future Student, Apply to CCD Today".

**Note:** Admission to the college does not guarantee admission to the Mammography program.

- Admission to the Mammography program is dependent upon the following:
- Fulfilling all requirements for admission to CCD.
- Current ARRT certification in Radiography.
- Applicants must have a minimum of one year experience in direct patient care.
- Submission of a complete admissions packet a minimum of eight weeks prior to the start of the semester in which the student plans to begin the program. Dates will be verified by postmark.
- Clinical sites are limited. Enrollment in RTE 291 is restricted, and internship placement is on a first-come, first-served basis. Students will be notified by the Mammography Coordinator of acceptance and placement.

### Admissions Packet

The admissions packet consists of documents that can be downloaded from the website <https://www.ccd.edu/academics/academic-centers/health-sciences-lowry/programs-study/radiologic-technology/apply> and includes the following:

- Mammography Program Application
- Current resume with proof of one year direct patient care experience
- Copy of current ARRT certification card
- Current CPR (BLS for Healthcare Providers) card
- Background Check and Drug Screen - must be completed six weeks prior to start of the semester after notification of acceptance into the program by the Mammography Coordinator.
- State of Colorado Provisional Mammography License--Colorado requires a provisional license for mammographers in training. Students will apply for this license upon acceptance into the program and completion of the requisite Background Check and Drug Screen. Immunization record documenting the following:
- PPD done within the last 3 months
- MMR - 2 immunizations or documentation of immunity
- Hepatitis B series
- Varicella - immunization or documentation of disease
- Tetanus/Diphtheria Toxoid (TD)
- Annual Flu Shot

## New Courses

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### ANT 126 Colorado Archaeology

3 credit hours

*Prerequisite:* Grade of C or better in CCR 092, CCR 093, CCR 094, or ENG 090; or equivalent English and Writing assessment score placements; or equivalent ACT/SAT scores

Identifies and evaluates distinct prehistoric cultures present in the region now known as Colorado since about 10,000 years ago, using specific archaeological techniques and terminologies.

### ANT 137 Southwest US Archaeology

3 credit hours

*Prerequisite:* Grade of C or better in CCR 092, CCR 093, CCR 094, or ENG 090; or equivalent English and Writing assessment score placements; or equivalent ACT/SAT scores

Identifies the complex regional population centers and cultural traditions of prehistoric peoples of the 4-Corners (Colorado, Arizona, New Mexico, Utah) and analyses evidence of cultural interaction with peoples of Meso-America and with the ecology of the region.

### AST 155 Astronomy of Ancient Cultures: GT - SC2

3 credit hours

*Prerequisite:* Grade of C or better in CCR 092, CCR 093, CCR 094, or ENG 090 and REA 090; and grade of C or better in MAT 090 or MAT 050; or English assessment score of 95 or better and/or Reading assessment score of 80 or better; and Math assessment score of 60 or better; or equivalent ACT/SAT scores

Introduces the study of archaeoastronomy and ethnoastronomy. Students will study the principles of naked eye astronomy and examine how those principles have been used for timekeeping, navigation, religion and ritual, political power, cosmology and worldview. Methods of the ethnoastronomer will be covered, including measurement of alignments, analysis of written records, examination of art and architecture, and incorporation of general knowledge about the culture being studied. This course is one of the Statewide Guaranteed Transfer Courses. GT-SC2

**CAD 175 Special Topics**

3 credit hours

*Prerequisite: This course may require prerequisites or permission of instructor*

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**CAD 264 3D Scanning and Modeling**

3 credit hours

*Prerequisite: CAD 262 with a grade of C or better*

Exposes student to 3D scanning and modeling. Students will manipulate various types of 3D scanning technology and create CAD models using scanning software and other CAD programs.

**EGG –ENGINEERING COURSES****ESL 054 ESL Reading and Composition Foundations**

5-6 credit hours

*Prerequisite: ESL 023, 043, and 052 or LOEP REA score 96 or better and Writing Assessment and LOEP Grammar score of 66 or better*

Integrates reading and composition skills. The course reviews paragraph organization and develops the skill of writing essays using selected rhetorical modes. It emphasizes accurate use of advanced grammatical structures. Includes summarizing, paraphrasing, and research writing. In addition, the course focuses on strategies for vocabulary development, improved reading comprehension, and enrichment.

**MGD 275 Special Topics.**

0-12 credit hours

*Prerequisite: Grade of C or better in MGD 101 and MGD 116*

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**VET 101 Career Development Animals**

2 credit hours

*Prerequisite: Admission into the Veterinary Technology or Veterinary Technology Assistant program*

Assists the student in recognizing their career potential in the animal industry. It will supply the tools necessary to be competitive in the animal industry and provides students with the ability to make realistic decisions concerning education and occupational objectives.

**WEL 107 Railroad Welding I Mechanical Structural Welding and Cutting Basics**

3 credit hours

*Prerequisite: Program Chair approval*

Introduces fundamental cutting and welding skills required for welding to D15.1 Railroad welding Specification-Cars and Locomotives code.

**WEL 108 Railroad Welding II - Mechanical Structural Stick Welding**

3 credit hours

*Prerequisite: Program Chair approval*

Develops the fundamental Shielded Metal Arc Welding (SMAW) skills, including theory, safety, and equipment set up and operation for welding to D15.1 Railroad welding Specification-Cars and Locomotives code.

**WEL 109 Railroad Welding III – Mechanical Structural Wire Welding**

3 credit hours

*Prerequisite: Program Chair approval*

Develops the fundamental Gas Shielded Flux Cored Arc Welding (FCAW-G) skills, including theory, safety, and equipment set up and operation as it applies to the American Welding Society (AWS) D15.1 Railroad welding Specification-Cars and Locomotives code.

## Updates and Corrections to Courses

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**“950” courses in all subject prefixes denote inter-institutional courses. See the Glossary of Student Services Terms for more information. “Interinstitutional Registration: CCD students may take select college-level courses at MSU Denver, UC Denver, or Colorado School of Mines under the inter-institutional agreement if space is available. Under this agreement, MSU Denver, UC Denver, and Colorado School of Mines students may take select college level courses at CCD if permitted by their home institution”**

### **CIS 110 Introduction to Computing Technology**

1 credit hour

*Prerequisite:* English assessment score of 20 or better, or equivalent ACT/SAT scores, or instructor permission

Introduces basic computing technology with an emphasis on document creation and storage. Use of technology for email, web surfing, and access to course materials is included.

### **CIS 118 Introduction to PC Applications**

3 credit hours

*Prerequisite:* CIS 110 or CIS 117 with a grade of C or better; or English assessment score of 50 or better and Math assessment score of AR 40 or EA 30 or better

Introduces basic computer terminology, file management, and PC system components. Provides an overview of office application software including word processing, spreadsheets, database, and presentation graphics. Includes the use of a web browser to access the internet.

### **EGT 289 Capstone-Projects in 3D for Industrial Drafting and Design**

6 credit hours

*Prerequisite:* Chair permission

A demonstrated culmination of learning within a given program of study.

### **ESL 031 Basic Listening & Speaking**

3 credit hours

*Prerequisite:* LOEP Listening assessment score of 35-49

Focuses on listening and speaking activities that help the student communicate more competently. Provides practice with pronunciation, vocabulary, and basic grammatical patterns.

### **ESL 032 Intermediate Listening & Speaking**

3 credit hours

*Prerequisite:* ESL 031 or ESL 071 with a grade of C or better, or LOEP Listening assessment score of 50-69

Teaches listening, pronunciation and conversation skills. Increases speed and accuracy in speaking through free and guided conversational practice.

### **ESL 033 Advanced Listening & Speaking**

3 credit hours

*Prerequisite:* ESL 032 or ESL 072 with a grade of C or better, or LOEP Listening assessment score of 70-89

Provides students with opportunities to increase the listening and speaking skills required in academic and work situations. Emphasizes vocabulary building, listening, and note-taking strategies, as well as questioning, discussion and presentation skills.

### **HIS 203 Civil War Era in American History: GT-HI1**

3 credit hours

*Prerequisite:* Grade of C or better in CCR 092, CCR 093, CCR 094, or ENG 090; or English assessment score of 95 or better, or equivalent ACT/SAT scores

Explores the causes, course, and consequences of the American Civil War, from the Colonial period to the 21st Century, in order to understand the multiple meanings of a transforming event in American history. Students will explore the meanings of the war as defined in many ways: national, sectional, racial, gender, constitutional, individual, social, intellectual, or moral. Students will closely examine four broad themes: the crisis of union and disunion in an expanding republic; slavery, race, and emancipation as national problem, personal experience, and social process; the experience of modern, total war for individuals and society; and the political and social challenges of Reconstruction. This course is one of the Statewide Guaranteed Transfer courses. GT-HI1

### **HPR 112 Phlebotomy**

4 credit hours

*Prerequisite:* Grade of C or better in BIO 201, BIO 202, ENG 121, HPR 137, HPR 178 and MOT 136

Teaches the duties associated with the practice of venipuncture, capillary puncture, and special collection procedures. Students will have experience with quality control, infection control and safety procedures as well as laboratory computer systems. Students successfully completing this course may apply for a National Phlebotomy Registry Examination.



**HPR 137 Human Diseases**

4 credit hours

*Prerequisite:* Grade of C or better in BIO 201, BIO 202, HPR 178 and MOT 136

*Corequisite:* MOT 150

Covers basic knowledge of the deviations that occur in the human body with disease and injury. An integrated study of signs/symptoms, diagnostic tests and treatment.

**JOU 106 Media News and Reporting**

3 credit hours

*Prerequisite:* Grade of C or better in CCR 092, CCR 093, CCR 094, or ENG 090; or English assessment score of 95 or better, or equivalent ACT/SAT scores

Introduces newswriting, reporting and interviewing with an emphasis on clarity, accuracy, completeness, timeliness and fairness.

**JOU 225 New Media**

3 credit hours

*Prerequisite:* ENG 121 with a grade of C or better

Explores techniques and approaches in the latest delivery methods for internet-based journalism. Students explore digital media outlets such as blogs, audio and video podcasts, e-zines and social networks. Students create journalistic pieces for internet-based media, focusing on best journalistic practices, ethics of internet media, and technology emergence effecting digital journalism. Concepts in video production, photography, writing, sourcing, editing and relevant skills necessary for the citizen journalist are introduced. Students create components for online news dissemination.

**MAN 226 Principles of Management**

3 credit hours

*Prerequisite:* BUS 115 with a grade of C or better

Presents a survey of the principles of management. Emphasis is on the primary functions of planning, organizing, leading and controlling with a balance between the behavioral and operational approach.

**MGD 111 Adobe Photoshop I**

3 credit hours

*Prerequisite:* Grade of C or better in MGD 101 and MGD 116, or MGD 116 as a corequisite

Concentrates on the high-end capabilities of a Adobe Photoshop as an illustration, design and photo retouching tool. Students explore a wide range of selection and manipulation techniques that can be applied to photos, graphics and videos. Course competencies and outline follow those set out by the Adobe Certified Associate exam in Visual Communication Using Adobe Photoshop.

**MOT 138 Medical Assisting Laboratory Skills**

4 credit hours

*Prerequisite:* Grade of C or better in BIO 201, BIO 202, COM 220, ENG 121, HPR 178, MOT 136 and PSY 101

Introduces the student to basic routine laboratory skills and techniques for collection, handling, and examination of laboratory specimens often encountered in the ambulatory care setting. Emphasizes hands-on experience.

**MOT 140 Medical Assisting Clinical Skills**

4 credit hours

*Prerequisite:* Grade of C or better in BIO 201, BIO 202, COM 220, ENG 121, HPR 178, MOT 136 and PSY 101; and grade of C or better in MAT 121 or Math assessment score of 85 or better

Provides hands on experience with the clinical skills required for assisting with patient care. Delivers the theory behind each skill presented as well as proper technique for performing each skill.

**MOT 150 Pharmacology for Medical Assistants**

3 credit hours

*Prerequisite:* Grade of C or better in BIO 201, BIO 202, HPR 178 and MOT 136

*Corequisite:* HPR 137

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.

### **RTE 132 Radiographic Pathology and Image Evaluation II**

1.5 credit hours

*Prerequisite:* RTE 101, RTE 111, RTE 121, RTE 122, RTE 131, RTE 141, RTE 142, RTE 181, RTE 182, and RTE 183 with a grade of C or better

*Corequisite:* RTE 221 and RTE 281

Provides detailed anatomic/pathologic discussion of the spine, circulatory system, nervous system and skull and related medical terminology.

### **RTE 221 Advanced Medical Imaging**

3 credit hours

*Prerequisite:* RTE 101, RTE 111, RTE 121, RTE 122, RTE 131, RTE 141, RTE 142, RTE 181, RTE 182, and RTE 183 with a grade of C or better

*Corequisite:* RTE 231 and RTE 281

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 credit hours

*Prerequisite:* RTE 101, RTE 111, RTE 121, RTE 122, RTE 131, RTE 141, RTE 142, RTE 181, RTE 182, and RTE 183 with a grade of C or better

*Corequisite:* RTE 221 and RTE 281

Provides the basic knowledge and understanding of the biologic effects of ionizing radiation and radiation protection and safety.

### **RTE 281 Radiographic Internship IV**

8 credit hours

*Prerequisite:* RTE 101, RTE 111, RTE 121, RTE 122, RTE 131, RTE 141, RTE 142, RTE 181, RTE 182, and RTE 183 with a grade of C or better

*Corequisite:* RTE 221 and RTE 231

Introduces the student to the radiographic specialty areas of Pediatrics, Geriatrics, the out-patient clinic, as well as increasing proficiency in general radiography.

### **RTE 282 Radiographic Clinical Internship V**

8 credit hours

*Prerequisite:* RTE 101, RTE 111, RTE 121, RTE 122, RTE 131, RTE 141, RTE 142, RTE 181, RTE 182, RTE 183, RTE 221, RTE 231, and RTE 281 with a grade of C or better

*Corequisite:* RTE 132 and RTE 289

Introduces the student to the radiographic specialty areas of pediatrics, geriatrics, the outpatient clinic, portable and trauma radiography as well as increasing proficiency in general radiography.

### **RTE 289 Radiographic Capstone**

3 credit hours

*Prerequisite:* RTE 101, RTE 111, RTE 121, RTE 122, RTE 131, RTE 141, RTE 142, RTE 181, RTE 182, RTE 183, RTE 221, RTE 231, and RTE 281 with a grade of C or better

*Corequisite:* RTE 132 and RTE 282

Prepares the radiologic technology student to sit for the American Registry of Radiologic Technologists (ARRT) certification examination through a comprehensive review of RTE program curriculum, with practice answering certification examination-type questions through the administration of multiple mock certification exams. Provides the student with the requisite skills to effectively search for a job in medical imaging.

### **RTE 291 Mammography Internship**

3-9 credit hours

*Prerequisite:* ARRT Certified

Provides clinical experience for demonstrating and documenting clinical competencies required by the American Registry of Radiologic Technologist for application for registry examination.

### **SOC 210 Technology and Society**

3 credit hours

*Prerequisite:* ENG 121; and SOC 101 or SOC 102 with a grade of C or better

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.