ENGINEERING

Associate of Science
Science, Technology, Engineering & Math Pathway

Civil Engineering
University of Colorado Denver Transfer

The Associate of Science degree in Civil Engineering is designed for you to complete the first two years of a bachelor's degree and transfer to University of Colorado Denver (UCD) for a bachelor degree in Civil Engineering. As a civil engineer you work in areas such as structural design and construction, water management, and energy explorations.

Course	Title	Credits
First Semester		
EGG 1030	Robotics Design	1
CAD 1101	Computer Aided Drafting I	3
MAT 1340	College Algebra: GT-MA1 [1]	4
ENG 1021	English Composition I: GT-CO1	3
ECO 2002	Principles of Microeconomics: GT-SS1	3
	Subtotal	**14**
Second Semester		
EGG 1051	Experimental Design	2
MAT 1440	Pre-Calculus: GT-MA1 [1]	5
CHE 1111	General College Chemistry I with Lab: GT-SC1	5
ENG 1022	English Composition II: GT-CO2	3
	Subtotal	**15**
Third Semester		
CAD 1102	Computer Aided Drafting II	3
MAT 2410	Calculus I: GT-MA1	5
PHI 1012	Ethics: GT-AH3	3
COM 2300	Intercultural Communication: GT-SS3	3
EGG 1050	Engineering Data Analysis [2]	1
	Subtotal	**15**
Fourth Semester		
MAT 2420	Calculus II: GT-MA1	5
PHY 2111	Physics Calculus Based I with Lab: GT-SC1	5
Choose One History Course (GT-HI1)		3
HIS 1320	Western Civilization: 1650-Present: GT-HI1	
HIS 1110	The World: Antiquity-1500: GT-HI1	
HIS 2005	Women in World History: GT-HI1	
HIS 2200	History of Latin America: GT-HI1	
HIS 2015	20th Century World History: GT-HI1	
HIS 2500	History of Islamic Civilization: GT-HI1	
Choose One Arts & Humanities Course (GT-AH1~GT-AH4)		3
ART 1111	Art History Ancient to Medieval: GT-AH1	
LIT 2005	Race, Ethnicity, and Culture in U.S. Literature: GT-AH2	
LIT 2059	Survey of African American Literature: GT-AH2	
MUS 1023	Survey of World Music: GT-AH1	
MUS 1025	History of Jazz: GT-AH1	
	Subtotal	**16**
	Total Credits	**60**

1. MAT 1340 and MAT 1440 are prerequisites for MAT 201, the first math class required for an engineering degree. Please see an advisor if you do not need to take MAT 1340 or MAT 1440.
2. EGG 1050 is an elective. Please see an advisor for other classes to meet graduation requirements.

CIVIL ENGINEERING
Metropolitan State University of Denver TRANSFER

The Associate of Science degree in Civil Engineering is designed for you to complete the first two years of a bachelor's degree and transfer to Metropolitan State University of Denver (MSU Denver) for a bachelor degree in Civil Engineering. As a civil engineer you work in areas such as structural design and construction, water management, and energy explorations.

Course	Title	Credits
First Semester		
EGG 1030	Robotics Design	1
CAD 1101	Computer Aided Drafting I	3
MAT 1340	College Algebra: GT-MA1 [1]	4
ENG 1021	English Composition I: GT-CO1	3
ECO 2002	Principles of Microeconomics: GT-SS1	3
	Subtotal	**14**
Second Semester		
EGG 1051	Experimental Design	2
MAT 1440	Pre-Calculus: GT-MA1 [1]	5
CHE 1111	General College Chemistry I with Lab: GT-SC1	5
ENG 1022	English Composition II: GT-CO2	3
	Subtotal	**15**
Third Semester		
CAD 1102	Computer Aided Drafting II	3
MAT 2410	Calculus I: GT-MA1	5
PHI 1012	Ethics: GT-AH3	3
COM 2300	Intercultural Communication: GT-SS3	3
EGG 1050	Engineering Data Analysis [2]	1
	Subtotal	**15**
Fourth Semester		
MAT 2420	Calculus II: GT-MA1	5
PHY 2111	Physics Calculus Based I with Lab: GT-SC1	5
Choose One History Course (GT-HI1)		3
HIS 1320	Western Civilization: 1650-Present: GT-HI1	
HIS 1110	The World: Antiquity-1500: GT-HI1	
HIS 2005	Women in World History: GT-HI1	
HIS 2200	History of Latin America: GT-HI1	
HIS 2015	20th Century World History: GT-HI1	
HIS 2500	History of Islamic Civilization: GT-HI1	
Choose One Arts & Humanities Course (GT-AH1~GT-AH4)		3
ART 1111	Art History Ancient to Medieval: GT-AH1	
LIT 2005	Race, Ethnicity, and Culture in U.S. Literature: GT-AH2	
LIT 2059	Survey of African American Literature: GT-AH2	
MUS 1023	Survey of World Music: GT-AH1	
MUS 1025	History of Jazz: GT-AH1	
	Subtotal	**16**
	Total Credits	**60**

1. MAT 1340 and MAT 1440 are prerequisites for MAT 201, the first math class required for an engineering degree. Please see an advisor if you do not need to take MAT 1340 or MAT 1440.
2. EGG 1050 is an elective. Please see an advisor for other classes to meet graduation requirements.

Electrical Engineering
UNIVERSITY OF COLORADO DENVER TRANSFER

The Associate of Science Degree in Electrical Engineering is designed for you to complete the first two years of a bachelor's degree and transfer to University of Colorado Denver (UCD) for a bachelor degree in Electrical Engineering. As an electrical engineer you work in areas such as communication systems, control systems, and power distribution systems.

Course	Title	Credits
First Semester		
EGG 1030	Robotics Design	1
MAT 1340	College Algebra: GT-MA1 [1]	4
ENG 1021	English Composition I: GT-CO1	3
ECO 2002	Principles of Microeconomics: GT-SS1	3
PHI 1012	Ethics: GT-AH3	3
	Subtotal	**14**

Second Semester		
EGG 1051	Experimental Design	2
MAT 1440	Pre-Calculus: GT-MA1 [1]	5
CHE 1111	General College Chemistry I with Lab: GT-SC1	5
ENG 1022	English Composition II: GT-CO2	3
	Subtotal	**15**
Third Semester		
MAT 2410	Calculus I: GT-MA1	5
CSC 1060	Computer Science I: (Language)	4
Choose One History Course (GT-HI1)		3
HIS 1320	Western Civilization: 1650-Present: GT-HI1	
HIS 1110	The World: Antiquity-1500: GT-HI1	
HIS 2005	Women in World History: GT-HI1	
HIS 2200	History of Latin America: GT-HI1	
HIS 2015	20th Century World History: GT-HI1	
HIS 2500	History of Islamic Civilization: GT-HI1	
Choose One Arts & Humanities Course (GT-AH1~GT-AH2~GT-AH4)		3
ART 1111	Art History Ancient to Medieval: GT-AH1	
LIT 2005	Race, Ethnicity, and Culture in U.S. Literature: GT-AH2	
LIT 2059	Survey of African American Literature: GT-AH2	
MUS 1023	Survey of World Music: GT-AH1	
MUS 1025	History of Jazz: GT-AH1	
	Subtotal	**15**
Fourth Semester		
MAT 2420	Calculus II: GT-MA1	5
PHY 2111	Physics Calculus Based I with Lab: GT-SC1	5
COM 2300	Intercultural Communication: GT-SS3	3
Choose One Inter-institutional Course		3
EET 2310 (MSU)		
ELEC 1510 (UCD)		
	Subtotal	**16**
	Total Credits	**60**

[1] MAT 1340 and MAT 1440 are prerequisites for MAT 2410, the first math class required for an engineering degree. Please see an advisor if you do not need to take MAT 1340 or MAT 1440.

ELECTRICAL ENGINEERING

METROPOLITAN STATE UNIVERISTY OF DENVER TRANSFER

The Associate of Science Degree in Electrical Engineering is designed for you to complete the first two years of a bachelor's degree and transfer to Metropolitan State University of Denver (MSU Denver) for a bachelor degree in Electrical Engineering. As an electrical engineer you work in areas such as communication systems, control systems, and power distribution systems.

Course	Title	Credits
First Semester		
EGG 1030	Robotics Design	1
MAT 1340	College Algebra: GT-MA1 [1]	4
ENG 1021	English Composition I: GT-CO1	3
ECO 2002	Principles of Microeconomics: GT-SS1	3
PHI 1012	Ethics: GT-AH3	3
	Subtotal	**14**
Second Semester		
EGG 1051	Experimental Design	2
MAT 1440	Pre-Calculus: GT-MA1 [1]	5
CHE 1111	General College Chemistry I with Lab: GT-SC1	5
ENG 1022	English Composition II: GT-CO2	3
	Subtotal	**15**
Third Semester		
MAT 2410	Calculus I: GT-MA1	5
CSC 1060	Computer Science I: (Language)	4
Choose One History Course (GT-HI1)		3
HIS 1320	Western Civilization: 1650-Present: GT-HI1	
HIS 1110	The World: Antiquity-1500: GT-HI1	
HIS 2005	Women in World History: GT-HI1	
HIS 2200	History of Latin America: GT-HI1	
HIS 2015	20th Century World History: GT-HI1	
HIS 2500	History of Islamic Civilization: GT-HI1	
Choose One Arts & Humanities Course (GT-AH1~GT-AH2~GT-AH4)		3
ART 1111	Art History Ancient to Medieval: GT-AH1	
LIT 2005	Race, Ethnicity, and Culture in U.S. Literature: GT-AH2	
LIT 2059	Survey of African American Literature: GT-AH2	
MUS 1023	Survey of World Music: GT-AH1	
MUS 1025	History of Jazz: GT-AH1	
	Subtotal	**15**
Fourth Semester		
MAT 2420	Calculus II: GT-MA1	5
PHY 2111	Physics Calculus Based I with Lab: GT-SC1	5
COM 2300	Intercultural Communication: GT-SS3	3
Choose One Inter-institutional Course		3
EET 2310 (MSU)		
ELEC 1510 (UCD)		
	Subtotal	**16**
	Total Credits	**60**

[1] MAT 1340 and MAT 1440 are prerequisites for MAT 2410, the first math class required for an engineering degree. Please see an advisor if you do not need to take MAT 1340 or MAT 1440.

Mechanical Engineering

UNIVERSITY OF COLORADO DENVER TRANSFER

The Associate of Science degree in Mechanical Engineering is designed for you to complete the first two years of a bachelors degree and transfer to University of Colorado Denver (UCD) for a bachelor degree in Mechanical Engineering. As a mechanical engineer you work in areas such as manufacturing, transportation, and aerospace industries.

Course	Title	Credits
First Semester		
EGG 1030	Robotics Design	1
CAD 1101	Computer Aided Drafting I	3
MAT 1340	College Algebra: GT-MA1 [1]	4
ENG 1021	English Composition I: GT-CO1	3
ECO 2002	Principles of Microeconomics: GT-SS1	3
	Subtotal	**14**
Second Semester		
EGG 1051	Experimental Design	2
MAT 1440	Pre-Calculus: GT-MA1 [1]	5
CHE 1111	General College Chemistry I with Lab: GT-SC1	5
ENG 1022	English Composition II: GT-CO2	3
	Subtotal	**15**
Third Semester		
CAD 2455	SolidWorks/Mechanical	3
MAT 2410	Calculus I: GT-MA1	5
PHI 1012	Ethics: GT-AH3	3
COM 2300	Intercultural Communication: GT-SS3	3
EGG 1050	Engineering Data Analysis [2]	1
	Subtotal	**15**
Fourth Semester		
MAT 2420	Calculus II: GT-MA1	5
PHY 2111	Physics Calculus Based I with Lab: GT-SC1	5
Choose One History Course (GT-HI1)		3
HIS 1320	Western Civilization: 1650-Present: GT-HI1	
HIS 1110	The World: Antiquity-1500: GT-HI1	
HIS 2005	Women in World History: GT-HI1	
HIS 2200	History of Latin America: GT-HI1	
HIS 2015	20th Century World History: GT-HI1	

HIS 2500	History of Islamic Civilization: GT-HI1	
Choose One Arts & Humanities Course (GT-AH1~GT-AH2~GT-AH4)		3
ART 1111	Art History Ancient to Medieval: GT-AH1	
LIT 2005	Race, Ethnicity, and Culture in U.S. Literature: GT-AH2	
LIT 2059	Survey of African American Literature: GT-AH2	
MUS 1023	Survey of World Music: GT-AH1	
MUS 1025	History of Jazz: GT-AH1	
	Subtotal	**16**
	Total Credits	**60**

1 MAT 1340 and MAT 1440 are prerequisites for MAT 201, the first math class required for an engineering degree. Please see an advisor if you do not need to take MAT 1340 or MAT 1440.

2 EGG 1050 is an elective. Please see an advisor for other classes to meet graduation requirements.

MECHANICAL ENGINEERING

METROPOLITAN STATE UNIVERISTY OF DENVER TRANSFER

The Associate of Science degree in Mechanical Engineering is designed for you to complete the first two years of a bachelors degree and transfer to Metropolitan State University of Denver (MSU Denver) for a bachelor degree in Mechanical Engineering. As a mechanical engineer you work in areas such as manufacturing, transportation, and aerospace industries.

Course	Title	Credits
First Semester		
EGG 1030	Robotics Design	1
CAD 1101	Computer Aided Drafting I	3
MAT 1340	College Algebra: GT-MA1 [1]	4
ENG 1021	English Composition I: GT-CO1	3
ECO 2002	Principles of Microeconomics: GT-SS1	3
	Subtotal	**14**
Second Semester		
EGG 1051	Experimental Design	2
MAT 1440	Pre-Calculus: GT-MA1 [1]	5
CHE 1111	General College Chemistry I with Lab: GT-SC1	5
ENG 1022	English Composition II: GT-CO2	3
	Subtotal	**15**
Third Semester		
CAD 2455	SolidWorks/Mechanical	3
MAT 2410	Calculus I: GT-MA1	5
PHI 1012	Ethics: GT-AH3	3
COM 2300	Intercultural Communication: GT-SS3	3
EGG 1050	Engineering Data Analysis [2]	1
	Subtotal	**15**
Fourth Semester		
MAT 2420	Calculus II: GT-MA1	5
PHY 2111	Physics Calculus Based I with Lab: GT-SC1	5
Choose One History Course (GT-HI1)		3
HIS 1320	Western Civilization: 1650-Present: GT-HI1	
HIS 1110	The World: Antiquity-1500: GT-HI1	
HIS 2005	Women in World History: GT-HI1	
HIS 2200	History of Latin America: GT-HI1	
HIS 2015	20th Century World History: GT-HI1	
HIS 2500	History of Islamic Civilization: GT-HI1	
Choose One Arts & Humanities Course (GT-AH1~GT-AH2~GT-AH4)		3
ART 1111	Art History Ancient to Medieval: GT-AH1	
LIT 2005	Race, Ethnicity, and Culture in U.S. Literature: GT-AH2	
LIT 2059	Survey of African American Literature: GT-AH2	
MUS 1023	Survey of World Music: GT-AH1	
MUS 1025	History of Jazz: GT-AH1	
	Subtotal	**16**
	Total Credits	**60**

1 MAT 1340 and MAT 1440 are prerequisites for MAT 201, the first math class required for an engineering degree. Please see an advisor if you do not need to take MAT 1340 or MAT 1440.

2 EGG 1050 is an elective. Please see an advisor for other classes to meet graduation requirements.

Associate of Engineering Science

Associate Of Engineering Science (AES)

Science, Technology, Engineering & Math Pathway

CCD offers the following Associate of Engineering Science (AES) Degrees:

- Associate of Engineering Science (AES)- (Colorado School of Mines Transfer)
- Associate of Engineering Science (AES)- Mechanical (Colorado State University Transfer Track)
- Associate of Engineering Science (AES)- Mechanical (University of Colorado Boulder Transfer Track)
- Associate of Engineering Science (AES)- Civil (University of Colorado Boulder Transfer Track)
- Associate of Engineering Science (AES)- Architectural Engineering (University of Colorado Boulder Transfer Track)

Colorado School of Mines Transfer

The Associate of Engineering Science degree in Engineering is designed for you to complete the first two years of a bachelors degree and transfer to Colorado School of Mines (CSM) for a bachelor degree in Engineering.

Course	Title	Credits
First Semester		
MAT 2410	Calculus I: GT-MA1	5
EGT 1110	IDEA: Introduction to Design and Engineering Applications	3
ENG 1031	Technical Writing I: GT-CO1	3
ECO 2001	Principles of Macroeconomics: GT-SS1	3
	Subtotal	**14**
Second Semester		
MAT 2420	Calculus II: GT-MA1	5
PHY 2111	Physics Calculus Based I with Lab: GT-SC1	5
HIS 2015	20th Century World History: GT-HI1	3
PHI 2018	Environmental Ethics: GT-AH3	3
	Subtotal	**16**
Third Semester		
MAT 2431	Calculus III with Engineer Applications: GT-MA1	5
PHY 2112	Physics Calculus-Based II with Lab: GT-SC1	5
CHE 1111	General College Chemistry I with Lab: GT-SC1	5
	Subtotal	**15**
Fourth Semester		
MAT 2562	Differential Equations with Linear Algebra	4
CHE 1112	General College Chemistry II with Lab: GT-SC1	5
CSC 1060	Computer Science I: (Language)	4
PED 9050- Physical Education		2
	Subtotal	**15**
	Total Credits	**60**

ASSOCIATE OF ENGINEERING SCIENCE (AES)- MECHANICAL

Colorado State University Transfer Track

The Associate of Engineering Science degree in Mechanical Engineering is designed for you to complete the first two years of a bachelors degree and transfer to Colorado State University (CSU) for a bachelor degree in Mechanical Engineering. As a mechanical engineer you work in areas such as manufacturing, transportation, and aerospace industries.

Course	Title	Credits
First Semester		
MAT 2410	Calculus I: GT-MA1	5

EGT 1110	IDEA: Introduction to Design and Engineering Applications	3
ENG 1031	Technical Writing I: GT-CO1	3
ECO 2001	Principles of Macroeconomics: GT-SS1	3
CAD 2455	SolidWorks/Mechanical	3
	Subtotal	**17**
Second Semester		
MAT 2420	Calculus II: GT-MA1	5
PHY 2111	Physics Calculus Based I with Lab: GT-SC1	5
EGG 1060	Introduction to Engineering Computing	4
EGG 2011	Engr Mechanics I - Statics	3
	Subtotal	**17**
Third Semester		
MAT 2431	Calculus III with Engineer Applications: GT-MA1	5
PHY 2112	Physics Calculus-Based II with Lab: GT-SC1	5
EGG 2012	Engineering Mechanics II (Dynamics)	3
PHI 2018	Environmental Ethics: GT-AH3	3
	Subtotal	**16**
Fourth Semester		
MAT 2562	Differential Equations with Linear Algebra	4
CHE 1111	General College Chemistry I with Lab: GT-SC1	5
EGG 1050	Engineering Data Analysis	1
EGG 1051	Experimental Design	2
ENG 1022	English Composition II: GT-CO2	3
	Subtotal	**15**
	Total Credits	**65**

ASSOCIATE OF ENGINEERING SCIENCE (AES)- MECHANICAL

University of Colorado Boulder TRANSFER TRACK

The Associate of Engineering Science degree in Mechanical Engineering is designed for you to complete the first two years of a bachelors degree and transfer to University of Colorado Boulder (CU) for a bachelor degree in Mechanical Engineering. As a mechanical engineer you work in areas such as manufacturing, transportation, and aerospace industries.

Course	Title	Credits
First Semester		
MAT 2410	Calculus I: GT-MA1	5
EGT 1110	IDEA: Introduction to Design and Engineering Applications	3
ENG 1031	Technical Writing I: GT-CO1	3
ECO 2001	Principles of Macroeconomics: GT-SS1	3
CAD 2455	SolidWorks/Mechanical	3
	Subtotal	**17**
Second Semester		
MAT 2420	Calculus II: GT-MA1	5
PHY 2111	Physics Calculus Based I with Lab: GT-SC1	5
EGG 1060	Introduction to Engineering Computing	4
EGG 2011	Engr Mechanics I - Statics	3
	Subtotal	**17**
Third Semester		
MAT 2431	Calculus III with Engineer Applications: GT-MA1	5
PHY 2112	Physics Calculus-Based II with Lab: GT-SC1	5
EGG 2012	Engineering Mechanics II (Dynamics)	3
PHI 2018	Environmental Ethics: GT-AH3	3
	Subtotal	**16**
Fourth Semester		
MAT 2562	Differential Equations with Linear Algebra	4
CHE 1111	General College Chemistry I with Lab: GT-SC1	5
EGG 2030	Mechanics of Solids	3
Choose One Course		3-4
CSC 1061	Computer Science II: (Language)	
PHY 2113	Physics III: Calculus Based Modern Physics	
	Subtotal	**15-16**
	Total Credits	**65-66**

ASSOCIATE OF ENGINEERING SCIENCE (AES)- Civil

UNIVERSITY OF COLORADO BOULDER TRANSFER TRACK

The Associate of Engineering Science degree in Civil Engineering is designed for you to complete the first two years of a bachelors degree and transfer to University of Colorado Boulder (CU) for a bachelor degree in Civil Engineering. As a civil engineer you work in areas such as structural design and construction, water management, and energy explorations.

Course	Title	Credits
First Semester		
MAT 2410	Calculus I: GT-MA1	5
EGT 1110	IDEA: Introduction to Design and Engineering Applications	3
ENG 1031	Technical Writing I: GT-CO1	3
ECO 2001	Principles of Macroeconomics: GT-SS1	3
CAD 2220	Revit Architecture	3
	Subtotal	**17**
Second Semester		
MAT 2420	Calculus II: GT-MA1	5
PHY 2111	Physics Calculus Based I with Lab: GT-SC1	5
EGG 1060	Introduction to Engineering Computing	4
EGG 2011	Engr Mechanics I - Statics	3
	Subtotal	**17**
Third Semester		
MAT 2431	Calculus III with Engineer Applications: GT-MA1	5
PHY 2112	Physics Calculus-Based II with Lab: GT-SC1	5
EGG 2012	Engineering Mechanics II (Dynamics)	3
PHI 2018	Environmental Ethics: GT-AH3	3
	Subtotal	**16**
Fourth Semester		
MAT 2562	Differential Equations with Linear Algebra	4
CHE 1111	General College Chemistry I with Lab: GT-SC1	5
EGG 2030	Mechanics of Solids	3
Choose One Course		3-4
GEY 1111	Physical Geology with Lab: GT-SC1	
EGG 2020	Thermodynamics	
	Subtotal	**15-16**
	Total Credits	**65-66**

ASSOCIATE OF ENGINEERING SCIENCE (AES)- Architectural Engineering

University of Colorado Boulder TRANSFER TRACK

The Associate of Engineering Science degree in Architectural Engineering is designed for you to complete the first two years of a bachelor's degree and transfer to University of Colorado Boulder (CU Boulder) for a bachelor's degree in architectural engineering. As an architectural engineer you work in areas such as architectural engineering, manufacturing, real estate developing, building equipment designing, as well as developing and creating innovative buildings and structures.

Course	Title	Credits
First Semester		
PSY 1001	General Psychology I: GT-SS3	3
ENG 1021	English Composition I: GT-CO1	3
MAT 2410	Calculus I: GT-MA1	5
CHE 1111	General College Chemistry I with Lab: GT-SC1	5
	Subtotal	**16**
Second Semester		
EGT 1110	IDEA: Introduction to Design and Engineering Applications	3
MAT 2420	Calculus II: GT-MA1	5
CAD 2220	Revit Architecture	3

PHY 2111	Physics Calculus Based I with Lab: GT-SC1	5
	Subtotal	**16**
Third Semester		
EGG 2011	Engr Mechanics I - Statics	3
EGG 2020	Thermodynamics	3
EGG 1060	Introduction to Engineering Computing	4
Choose One Mathematics Course (GT-MA1)		4-5
MAT 2430	Calculus III: GT-MA1	
MAT 2431	Calculus III with Engineer Applications: GT-MA1	
	Subtotal	**14-15**
Fourth Semester		
MAT 2562	Differential Equations with Linear Algebra	4
EGG 2030	Mechanics of Solids	3
PHI 2018	Environmental Ethics: GT-AH3	3
PHY 2112	Physics Calculus-Based II with Lab: GT-SC1	5
	Subtotal	**15**
	Total Credits	**61-62**