Associate of Engineering Science Degree in General Engineering
University of Colorado Boulder

Courses that Fulfill General Education Requirements			**34**
Content Area	Credit Hours	Community College Course No.	Course Title or Category
Written Communication	3	ENG 1021 **OR** ENG 1022	Requirements are specific to individual Articulation Agreements, but include: • English Composition I (GT-CO1) **OR** • English Composition II (GT-CO2)
Calculus I & II	10	MAT 2410 (5) **AND** MAT 2420 (5)	Calculus I (GT-MA1) **AND** Calculus II (GT-MA1)
Arts & Humanities	3	**Any GT-AH**	One GT Pathways Arts & Humanities course (GT-AH1, GT-AH2, GT-AH3, GT-AH4)
Social & Behavioral Sciences	3	ECO 2002 **OR** ECO 2001 **OR** **Any GT-SS**	One GT Pathways Social & Behavioral Sciences course (GT-SS1, GT-SS2, GT-SS3)
Natural & Physical Sciences	15	PHY 2111 (5) **AND** PHY 2112 (5) **AND** CHE 1111 (5)	Calculus-based Physics I/Lab (GT-SC1) **AND** Calculus-based Physics II/Lab (GT-SC1) **AND** General College Chemistry I/Lab (GT-SC1)
Additional Required Courses			**15**
Note: If these credits are *not* required for the *major* at a receiving institution, they will be applied to the bachelor's degree as *elective credit* towards *graduation*. Check with the receiving institution to determine in which way these courses will be applied. **Additional credits earned in Calculus III will reduce the credits needed in electives below.**			
Content Area	Credit Hours	Community College Course No.	Course Title
Calculus III[1]	4	MAT 2430 (4) **OR** MAT 2431 (5)	Calculus III (4) **OR** Calculus III with Engineering Applications (5)
Differential Equations & Linear Algebra[2]	4[2]	MAT 2561 (4) **AND** MAT 2540 (3) **OR** MAT 2560 (3) **AND** MAT 2540 (3) **OR** **MAT 2562 (4)**	Differential Equations with Engineering Applications[2] (4) **AND** Linear Algebra (3) **OR** Differential Equations[2] (3) **AND** Linear Algebra (3) **OR** Differential Equations with Linear Algebra[2] (4)
Engineering Projects	3	EGG 1040 (3) **OR** EGT 1110 (3) **OR** EGG 1020 (3) **OR** EGG 1051 (2) **AND** EGG 1030 (1)	Engineering Projects (3) **OR** Intro Design/Engineering Apps (3) **OR** Engineering Methodologies (3) **OR** Experimental Design (2) **AND** Robotics Design (1)
Computer Science	4	CSC 1060 (4) **OR** EGG 1060	Computer Science I **OR** Engineering Computing (*preferred*)
Electives Please see page 2 for recommendations by major for programs that do not have an existing AES pathway			**11**
Please see page 2 for major-specific electives			
Visit https://www.colorado.edu/engineering/CCCSTransfer for suggested course options by major			
Total			**60**

Notes:

[1]***Calculus III.*** *MAT 2431 is preferred; However, additional credits over 60 may not transfer.*
[2]***Differential Equations & Linear Algebra:*** It is **recommended** for students **to complete MAT 2562. If a student completes MAT 2560 OR MAT 2561, they must also complete MAT 2540 Linear Algebra** *along with MAT 2560 or MAT 2561.Credits for MAT 2540 will need to be completed in addition to the 60 credits. Additional credits over 60 may not transfer to all universities.*

***If you plan to transfer to CU Boulder, please prioritize the following electives, based on your intended engineering major while meeting the minimum degree credit requirements:**

Aerospace Engineering:

Electives		
Credit Hours	*Community College Course No.*	*Course Title*
1	EGG 1000	Intro to Engineering
4	CSC 1061 (4)	Computer Science 2
6	**EGG 2011 (3) **AND** EGG 2030	Engineering Mechanics I (Statics) Solid Mechanics
3	EGG 2020 (3)	Thermodynamics

** CSC 1061 will count as a professional area elective (technical elective) in the ASEN degree*
*** EGG2030+EGG 2011 combined count as ASEN 2701 - Introduction to Statics, Structures, and Materials*

Applied Mathematics:

Electives		
Credit Hours	*Community College Course No.*	*Course Title*
1	EGG 1000	Intro to Engineering
3	CAD 2455	SolidWorks 3D
3	EGG 2011	Engineering Mechanics I (Statics)
3	EGG 2012	Engineering Mechanics II (Dynamics)
3	EGG 2020	Thermodynamics
3	EGG 2030	Solid Mechanics
3	CAD 1101	Computer Aided Drafting

** Electives are different for select concentrations in this major. Confirm with a CU Boulder Pre-Transfer Advisor for specific details.*

Biomedical Engineering:

Electives		
Credit Hours	*Community College Course No.*	*Course Title*
1	EGG 1000	Intro to Engineering
3	CAD 2455	SolidWorks 3D
3	EGG 2011	Engineering Mechanics I (Statics)
3	EGG 2030	Solid Mechanics
10	BIO 1111+1112	General Biology 1+2

** BIO 1111+1112 = CHEN 2810 – Biology for Engineers at CU Boulder*

Chemical/Chemical and Biological Engineering:

Electives		
Credit Hours	*Community College Course No.*	*Course Title*
1	EGG 1000	Intro to Engineering
5	CHE 1112	General College Chemistry II/Lab
10	BIO 1111+1112	General Biology 1+2
5	CHE 2111	Organic Chemistry 1
5	CHE 2112	Organic Chemistry 2

**BIO 1111+1112 = CHEN 2810 – Biology for Engineers at CU Boulder*

Creative Technology and Design:

Electives NOTE: Elective courses may only count for free electives in this major. Please consult the CTD electives website here:		
Credit Hours	*Community College Course No.*	*Course Title*
1	EGG 1000	Intro to Engineering
4	CSCI 1061	Computer Science 2
5	BIO 1111	General Biology 1
4	MAT 2520	Discrete Mathematics
3	CAD 1101	Computer Aided Drafting

Environmental Engineering:

Electives		
Credit Hours	*Community College Course No.*	*Course Title*
1	EGG 1000	Intro to Engineering
5	CHE 1112	General College Chemistry II/Lab
3	EGG 2011	Engineering Mechanics I (Statics)
3	EGG 2020	Thermodynamics
3	EGG 2030	Solid Mechanics

** Electives are different for select concentrations in this major. Confirm with a CU Boulder Pre-Transfer Advisor for specific details.*