

Best Choices Guide

Aerospace Engineering (BS)

The Associate of Engineering Science Degree in Aerospace Engineering program is designed for students who wish to earn an AES at a Colorado Community College and transfer to UCCS to finish a bachelor of science degree in Aerospace Engineering. Please note that final graduation requirements for the bachelor's degree will be based on your year of admission to UCCS. Contact transfer@uccs.edu for more information.

To earn the Associate of Engineering Science Degree, students must complete the following course requirements for a total minimum of 64 semester credit hours, at least 30 of which must be general education courses and at least 15 must be from Colorado State-Guaranteed courses. Courses taken at other colleges, AP, IB, CLEP, DSST, and other sources of credit may not be applicable upon transfer to UCCS even if applied to the associate's degree at the Colorado Community College (CCC). Check the CDHE's [GT Pathways](https://www.cdhe.state.co.us/gt-pathways) website for more information.

General Education Courses (42 hours)	PPSC Courses	PPSC credit hours	UCCS course equivalents
Written Communication (3 hours)	Complete one (1) course from: • ENG 1021 or • ENG 1022	3	ENGL 1310 or ENGL 1410
Mathematics (18 hours)	Complete all four (4) of the following: • MAT 2410 • MAT 2420 • MAT 2430 • MAT 2562 ¹	5 5 4 4	MATH 1350 MATH 1360 MATH 2350 MATH 3130 & 3400
Arts & Humanities (3 hours)	Complete one (1) course from: • PHI 2018 Environmental Ethics or • any GT-AH course	3	Humanities & Sustainability course Humanities course
Social & Behavioral Sciences (3 hours)	Complete one (1) course from: • COM 2220 or • ECO 2002 or • ECO 2001 or • any GT-SS course	3	Social Science course or ECON 1010 (Social Science course) or ECON 2020 (Social Science course) or Social Science course
Physical and Life Sciences (15 hours)	Complete all three (3) of the following: • PHY 2111 • PHY 2112 • CHE 1111	5 5 5	PES 1110 PES 1120 CHEM 1401 & 1402
Additional Required Courses (22-23 hours)	PPSC Courses	PPSC credit hours	UCCS course equivalents
Courses required for the Associate of Engineering Science degree in Aerospace Engineering.	EGG 2011 (Statics)	3	MAE 2103
	EGG 2012 (Dynamics)	3	MAE 2104
	EGG 2020 (Thermodynamics)	3	MAE 2301
	EGG 2041 (Circuit Analysis I) (<i>preferred</i>) or EGG 2030 (Mechanics of Solids)	3-4	MAE 2055 or MAE 3201
	EGG 1040 (Engineering Projects) or EGT 1110 (Intro Design)	3	MAE 1503
	EGG 1025 (Principles of Aerospace) (<i>preferred</i>) or EGG 1020 (Methodology) ²	3	MAE 1602 or MAE 1502
	EGG 1060 (Engineering Computing) (<i>preferred</i>) or CSC 1060 (Computer Science I) ³	4	MAE 1090
Total⁴ (64-65 hours)			

¹ 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. Credits for MAT 2540 will need to be completed in addition to the 64 credits. Additional credits over 64 may not transfer to all universities.

² Aerospace Elective: Principles of Aerospace is preferred. If Principles of Aerospace is not taken as part of the AES, it must be taken at UCCS upon transfer. If EGG 1025 - Principles of Aerospace is not offered, EGG 1020 Engineering Methodologies may be taken.

³ Engineering Computing: EGG 1060 is preferred; students may select either EGG 1060 or CSC 1060.

⁴ The Associate of Engineering Science Degree with a concentration in Aerospace Engineering requires a minimum of 64 credits.

Additional Resources

The UCCS transfer website (transfer.uccs.edu) has many additional resources for students transferring from CCCS to UCCS.

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Four-Year Degree Plan - Mechanical Engineering

The following four-year plan lists all the specific course requirements for the Bachelor of Science in Mechanical Engineering degree at UCCS. The order in which these courses are taken may vary with course availability. **Students are responsible for completing all course prerequisites.** Please note that this is a *suggested* degree program; your program may vary.

NOTE: Please be aware that completing this program as outlined here will require an additional 3 credit hours to complete the Mechanical Engineering degree due to differences in hours for math and science courses.

Suggested First Year

FALL			SPRING		
✓	Course	Hours	✓	Course	Hours
	EGG 1025 (preferred) or EGG 1020	3		EGT 1040 or EGT 1110	3
	MAT 2410	5		MAT 2420	5
	CHE 1111	5		PHY 2111	5
	ENG 1021 or ENGL 1022 or ENGL 1031*	3		GT-SS course	3
	TOTAL	16		TOTAL	16

Suggested Second Year

FALL			SPRING		
✓	Course	Hours	✓	Course	Hours
	EGG 2011	3		EGG 2012	3
	EGG 2020	3		MAT 2562	4
	MAT 2430	4		EGG 2041 (preferred)* or EGG 2030	3-4
	PHY 2112	5		EGG 1060 (preferred) or CSC 1060	4
	PHI 2018 (preferred) or GT-AH course	3			
	TOTAL	18		TOTAL	14-15

Suggested Third Year

FALL			SPRING		
✓	Course	Hours	✓	Course	Hours
	MAE 2055 or MAE 3201* (whichever wasn't taken at CCCS)	3		MAE 3130	3
	MAE 2200	3		MAE 4410	3
	MAE 3005	3		MAE 4461	3
	MAE 3401	3		MAE 4470	3
	MAE 4021	3		Humanities/Social Science elective (Inclusiveness)	3
				TCID 2090	3
	TOTAL	15		TOTAL	18

Suggested Fourth Year

FALL			SPRING		
✓	Course	Hours	✓	Course	Hours
	MAE 4000	1		MAE 4261	3
	MAE 4135	3		MAE 4511 (spring only)	3
	MAE 4316	3		ENGR 3040	3
	MAE 4360	3		Technical Elective	3
	MAE 4510 (fall only)	2		Technical Elective	3
	Technical Elective	3			
	TOTAL	15		TOTAL	15

Degree Completion

After completing the AES, you should be able to complete the remainder of your BS degree in Aerospace Engineering in two additional years, if you have followed the transfer plan in its entirety. However, most students take 1 to 3 classes in the summer to relieve their spring and fall semester loads.

*NOTE: MAE 2055 is a prerequisite for MAE 3201, so it is highly recommended that EGG 2041 be taken instead of EGG 2030 before transferring to UCCS.