AEROSPACE ENGINEERING B.S.



ACADEMIC ADVISING

Partnering with students to successfully navigate college

Location: Main Hall 208 **Phone:** 719.255.3260

Website: www.uccs.edu/advising

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• Appointments: www.uccs.edu/advising/current-students
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GENERAL ACADEMIC INFORMATION

Minimum Graduation Requirements

- 126 credit hours
- 2.0 CU cumulative GPA
- Residency: Last 30 credit hours of degree must be completed while registered in the College Engineering & Applied Science at UCCS

Student Responsibilities

Students are required to know and follow:

- All academic policies set forth by the University, College, and academic department in the UCCS Catalog: <u>catalog.uccs.edu</u>
- All course prerequisites designated by the University. Failure to meet course prerequisites may result in an administrative drop of the course from a student's schedule. See degree audit for course prerequisites within the academic major.

DEGREE REQUIREMENTS

Explore Aerospace Engineering: Mechanical and Aerospace Engineering - Bachelor of Science in Aerospace Engineering | College of Engineering and Applied Science (uccs.edu)

		Major Requirements			
Aerospace Engineering Core Courses	Course/Area	Course Title	Credit Hours		
(65 hours)	MAE 1503	Introduction to Engineering Design	3		
	MAE 1602 <i>or</i>	Principles of Aerospace Engineering or	3		
A minimum GPA of 2.0 must be	MAE 1502	Principles of Mechanical Engineering			
maintained on all MAE course work.	MAE 2055	Mech-Etronics I	4		
	MAE 2103	Statics	3		
You must be admitted into the College of	MAE 2104	Dynamics	3		
Engineering in order to take any MAE	MAE 2200	Materials Engineering	3		
coursework.	MAE 2301	Engineering Thermodynamics I	3		
	MAE 3005	Engineering Measurement Lab	3		
	MAE 3130	Fluid Mechanics	4		
	MAE 3201	Mechanics of Materials	3		
	MAE 3401	Modeling and Simulation of Dynamic Systems	3		
	MAE 4000	Mechanical and Aerospace Engineering Seminar	1		
	MAE 4021	Numerical Methods with MATLAB for Aerospace Engineering	3		
	MAE 4135	5 Aerodynamics			
	MAE 4261	Space Structures			
	MAE 4316	Aerospace Propulsion	3		
	MAE 4360	Aerospace Thermal Systems			
	MAE 4410	AE 4410 Fundamentals of Astrodynamics			
	MAE 4461	Attitude Determination and Control	3		
	MAE 4470	Space Systems Engineering			
	MAE 4510	Engineering Design I	2		
	MAE 4511	Engineering Design II	3		
	1				
Technical Electives	Complete 9 cred	dit hours of upper-division (3000+ level) technical electives.	12		
(9 hours)	6 hours must be 4000-level				
	6 hours must be from MAE courses				
	Courses from the following disciplines may be used for technical electives: Computer				
	Science, Electrical Engineering, Mechanical Engineering, Math (with at least MATH 1350				
	as a prerequisite), Physics (with at least PES 1110 or MATH 1350 as a prerequisite), PES				
	2130	J.			
Computing Course	MAE 1090	Introduction to Structured Programming	3		
(3 hours)		Saustion to structure at rogitalining			
(2 110013)					
Business Course	ENGR 3040	Engineering Ethics	3		
(3 hours)					

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G	ieneral Education and Elective F	Requirements	
Core Writing Requirement (6 hours)	 ENGL 1310, 1308, or 1305 (Students choosing EN OR ENGL 1410 TCID 2090 PORT 3000 (0 Credits) – Writing Portfolio Assessr 	. , ,	
Mathematics (18 hours)	 MATH 1350 MATH 1360 MATH 2350 MATH 3130 MATH 3400 		
Basic Science (13 hours)	 CHEM 1401 & 1402 PES 1110 PES 1120 		
Compass Curriculum	Component	Course	
(9 hours)	Gateway	GPS 1010	
Explore and Navigate courses must be	Explore – Arts, Humanities and Cultures	See Degree Audit (counts towards HUM/SS Electives)	
outside major requirements	Explore – Society, Behavior and Health	See Degree Audit (counts towards HUM/SS Electives)	
Writing Intensive, Inclusiveness, and	Explore – Physical and Natural World	PES 1110 (included in Basic Science requirement)	
Writing Intensive, Inclusiveness, and Sustainability courses can count	Navigate	ENGR 3040	
•	Summit	MAE 4511	
towards other requirements within	Writing Intensive Courses (WIC)	• MAE 3130	
degree	Two courses with one upper-division (3000+ level)	• ENGR 3040	
	Inclusiveness	MAE 1503	
	Sustainability	See Degree Audit	

FOUR-YEAR DEGREE PLAN

Please note that this is an *example* degree program and your program may vary. Students are responsible for completing all course prerequisites.

| FALL | Hours | J | SPRING

	J	FALL	Hours	1	SPRING	Hours		
One		MAE 1602	3		MAE 1503	3		
		MATH 1350	4		MATH 1360	4		
ő		GPS 1010	3		PES 1120	4		
Year		ENGL 1310	3		CHEM 1401	4		
>		PES 1110	4		CHEM 1402	1		
		TOTAL	17		TOTAL	16		
	1	FALL	Hours	1	SPRING	Hours		
0		MAE 1090	3		MAE 2104	3		
Two		MAE 2055	4		MAE 2301	3		
Ľ		MAE 2103	3		MATH 3130	3		
Year		MAE 2200	3		MATH 3400	3		
>		MATH 2350	4		TCID 2090	3		
		TOTAL	17		TOTAL	15		
	1	FALL	Hours	1	SPRING	Hours		
٠.		MAE 3005	3		MAE 3130	4		
je.		MAE 3201	3		MAE 4410	3		
Three		MAE 3401	3		MAE 4470	3		

Year Three	1	FALL	Hours	V	SPRING	Hours
		MAE 3005	3		MAE 3130	4
		MAE 3201	3		MAE 4410	3
		MAE 3401	3		MAE 4470	3
		MAE 4021	3		MAE 4361	3
		Explore – Society, Behavior and Health course (Sustainability)	3		Explore – Arts, Humanities and Cultures course	3
					PORT 3000	0
		TOTAL	15		TOTA	L 16

ur	1	FALL	Hours	1	SPRING	Hours
		MAE 4000	1		MAE 4511 (Spring only)	3
		MAE 4135	3		MAE 4261	3
요		MAE 4316	3		ENGR 3040	3
Year		MAE 4510 (Fall only)	2		Technical Elective	3
		MAE 4360	3		Technical Elective	3
		Technical Elective	3			
		TOTAL	15		TOTAL	15