

ACADEMIC ADVISING

Partnering with students to successfully navigate college

Location: Main Hall 208

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Website: [Academic Advising](http://www.uccs.edu/academic-advising)

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Current UCCS Students

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

Prospective Students: www.uccs.edu/admissions/contact

GENERAL ACADEMIC INFORMATION

Minimum Graduation Requirements

- 157 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: catalog.uccs.edu
- 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 Mechanical Engineering: [Mechanical and Aerospace Engineering - Bachelor of Science in Aerospace Engineering and Mechanical Engineering](http://www.uccs.edu/mechanical-engineering) | [College of Engineering and Applied Science \(uccs.edu\)](http://www.uccs.edu/college-engineering)

Major Requirements			
Mechanical and Aerospace Engineering double major (81 hours)	Course/Area	Course Title	Credit Hours
• Requires a minimum of 81 hours of MAE course work, and a minimum of 59 hours of upper-division MAE (3000+ level) course work. • Requires an additional 21 hours of upper-division Technical Electives. • A minimum GPA of 2.0 must be maintained on all MAE course work. <i>You must be admitted into the College of Engineering in order to take any MAE coursework.</i>	MECHANICAL AND AEROSPACE ENGINEERING CORE COURSES (44 hours)		
	MAE 1502 <i>or</i> MAE 1602	Principles of Mechanical Engineering <i>or</i> Principles of Aerospace Engineering	3
	MAE 1503	Intro to Engineering Design	3
	MAE 2055	Mech-Etronics I	4
	MAE 2103	Statics	3
	MAE 2104	Dynamics	3
	MAE 2200	Materials Engineering	3
	MAE 2301	Engineering Thermodynamics I	3
	MAE 3005	Engineering Measurements Lab	3
	MAE 3130	Fluid Mechanics	4
	MAE 3201	Mechanics of Materials	3
	MAE 3401	Modeling & Simulation of Dynamic Systems	3
	MAE 4000	Mechanical and Aerospace Engineering Seminar	1
	MAE 4020 <i>or</i> MAE 4021	Numerical Methods with MATLAB <i>or</i> Numerical Methods with MATLAB for Aerospace Engineering	3
	MAE 4510	Engineering Design I (<i>fall only</i>)	2
	MAE 4511	Engineering Design II (<i>spring only</i>)	3
	MECHANICAL ENGINEERING CORE COURSES (16 hours)		
	MAE 3302	Engineering Thermodynamics II	3
	MAE 3501	Machine Design I	3
	MAE 4120	Machine Design II	3
	MAE 4310	Heat Transfer	4
	MAE 4421	Automatic Control of Aerospace & Mechanical Systems	3
	AEROSPACE ENGINEERING CORE COURSES (21 hours)		
	MAE 4135	Aerodynamics	3
	MAE 4261	Space Structures	3
	MAE 4316	Aerospace Propulsion	3
	MAE 4360	Aerospace Thermal Systems	3
	MAE 4410	Fundamentals of Astrodynamics	3
	MAE 4461	Attitude Determination and Control	3
	MAE 4470	Space Systems Engineering	3

**MECHANICAL ENGINEERING/AEROSPACE ENGINEERING
B.S. DOUBLE MAJOR**



University of Colorado
Colorado Springs

Technical Electives (21 hours) NOTE: MAE 3342 Engineering Economy can be counted as a business OR a technical elective.	Complete 21 credit hours of upper-division (3000+ level) technical electives. 12 hours must be 4000-level. 12 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. - Major core courses may not be used to meet technical elective requirements.		21
Computing Course (3 hours)	MAE 1090	Introduction to Structured Programming	3
Business Courses (6 hours)	ENGR 3040	Engineering Ethics	3
	Business Elective	Complete one course from the following: BLAW 2000, MAE 3342, MGMT 3300, MKTG 3000	3

General Education and Elective Requirements

Core Writing Requirement (6 hours)	- ENGL 1310, 1308, or 1305 (<i>Students choosing ENGL 1305 must complete ENGL 1300 first.</i>) OR - ENGL 1410 - TCID 2090 - Writing Portfolio – PORT 3000 (0 credits) or PORT 4000 (1 credit) or alternative – See Degree Audit	
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 (9 hours) - Explore and Navigate courses must be taken in departments other than the major. - Writing Intensive, Inclusiveness, and Sustainability courses may count toward other requirements within the degree.	Component	Course
	Gateway Program Seminar	GPS 1010
	Explore – Arts, Humanities and Cultures	See Degree Audit (counts towards HUM/SS Electives)
	Explore – Society, Behavior and Health	See Degree Audit (counts towards HUM/SS Electives)
	Explore – Physical and Natural World	PES 1110 (included in Basic Science requirement)
	Navigate	ENGR 3040 (included in Business requirement)
	Summit	MAE 4511
	Writing Intensive Courses (WIC) <i>Two courses with one upper-division (3000+ level)</i>	- MAE 3005 - MAE 3130
	Inclusiveness	MAE 1503
	Sustainability	MAE 3302

FIVE-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.**

Year One	✓	FALL	Hours	✓	SPRING	Hours
		MAE 1502 <i>or</i> MAE 1602	3		MAE 1503	3
		MATH 1350	4		MATH 1360	4
		GPS 1010	3		PES 1120	4
		ENGL 1310	3		CHEM 1401	4
		PES 1110	4		CHEM 1402	1
		TOTAL	17		TOTAL	16

Year Two	✓	FALL	Hours	✓	SPRING	Hours
		MAE 1090	3		MAE 2104	3
		MAE 2103	3		MAE 2301	3
		MAE 2055	4		MATH 3130	3
		MAE 2200	3		MATH 3400	3
		MATH 2350	4		TCID 2090	3
		TOTAL	17		TOTAL	15

Year Three	✓	FALL	Hours	✓	SPRING	Hours
		MAE 3005	3		MAE 3130	4
		MAE 3201	3		MAE 3501	3
		MAE 3302	3		MAE 4421	3
		MAE 3401	3		Technical Elective	3
		MAE 4020 <i>or</i> MAE 4021	3		Explore – Society, Behavior, and Health Course	3
					PORT 3000	0
		TOTAL	15		TOTAL	16

Year Four	✓	FALL	Hours	✓	SPRING	Hours
		MAE 4000	1		MAE 4511 (<i>spring only</i>)	3
		MAE 4120	3		MAE 4310	4
		MAE 4135	3		Technical Elective	3
		MAE 4510 (<i>fall only</i>)	2		Technical Elective	3
		Technical Elective	3		Explore – Arts, Humanities & Cultures Course	3
		ENGR 3040	3			
		TOTAL	15		TOTAL	16

Year Five	✓	FALL	Hours	✓	SPRING	Hours
		MAE 4316	3		MAE 4261	3
		MAE 4360	3		MAE 4461	3
		MAE 4410	3		MAE 4470	3
		Technical Elective	3		Technical Elective	3
		Technical Elective	3		Business Elective	3
		TOTAL	15		TOTAL	15