MECHANICAL ENGINEERING B.S.

University of Colorado Colorado Springs

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
- Drop In Advising: Most Wednesdays, 1:00pm - 4:00pm

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

GENERAL ACADEMIC INFORMATION

Minimum Graduation Requirements
1. 127 credit hours
2. 2.0 CU cumulative GPA
3. 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:
1. All academic policies set forth by the University, College, and academic department in the UCCS Catalog: catalog.uccs.edu
2. 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.

MAJOR INFORMATION

Mechanical Engineering degree applies engineering, physics, and materials to design, analyze, manufacture, and operate mechanical systems from the miniature to the massive. Mechanical engineers work in industrial, commercial, governmental, and military applications.

Major Requirements

	Course/Area	Course Title	Credit Hours
Mechanical Engineering Core Courses (57 hours) *You must be admitted into the College of Engineering in order to take any MAE coursework.*	MAE 1502	Principles of Engineering	3
	MAE 1503	Intro to Engineering Design	3
	MAE 2055	MechEtronics I	4
	MAE 2103	Statics	3
	MAE 2104	Dynamics	3
	MAE 2200	Materials Engineering	3
	MAE 2301	Engineering Thermodynamics I	3
	MAE 3005	Engineering Measurement Lab	3
	MAE 3130	Fluid Mechanics	4
	MAE 3201	Mechanics of Materials	3
	MAE 3302	Engineering Thermodynamics II	3
	MAE 3401	Modeling & Simulation of Dynamic Systems	3
	MAE 3501	Machine Design I	3
	MAE 4000	Mechanical and Aerospace Engineering Seminar	1
	MAE 4120	Machine Design II	3
	MAE 4310	Heat Transfer	4
	MAE 4421	Automatic Control of Aerospace & Mechanical Systems	3
	MAE 4510	Engineering Design I	2
	MAE 4511	Engineering Design II	3
Technical Electives (12 hours)	*Complete 12 credit hours of technical electives. At least 6 hours must be completed from courses numbered 3000 or higher, 6 must be numbered 4000 or higher At least 6 must be MAE. Any remaining Technical Electives should be chosen from the following disciplines:* 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 General Physics III **NOTE:** MAE 3342 Engineering Economy can be counted as a business or technical elective		12
Computing Requirement (3 hours)	MAE 1090	Introduction to Structured Programming	3
Business Courses (6 hours)	MAE 3342	Engineering Ethics	3
	Business Elective	Complete one course from the following: BUAD 1000, BLAW 2010, MKTG 3000, MGMT 3300	3

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General Education and Elective Requirements

Composition (6 hours)	1. ENGL 1310 2. TCID 2090 3. PORT 3000 (0 Credits) – Writing Portfolio
Mathematics (21 hours)	1. MATH 1350 2. MATH 1360 3. MATH 2350 4. MATH 3130 5. MATH 3400 6. MATH 3810 OR ECE 3610
Basic Science (13 hours)	1. CHEM 1401/1402 2. PES 1110 3. PES 1120

Compass Curriculum
(12 hours)

- Explore and Navigate courses must be outside major requirements
- Writing Intensive, Inclusiveness, and Sustainability courses can count towards other requirements within degree

Component	Course
Gateway	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
Navigate	ENGR 3040
Summit	MAE 4511
Writing Intensive Courses (WIC) *Two courses with one upper-division (3000+ level)*	1. MAE 3130 2. MAE 4310
Inclusiveness	MAE 1503
Sustainability	MAE 3302

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.**

Year One	√	FALL	Hours	√	SPRING	Hours
		MAE 1502	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 2103	3		MAE 2104	3
		MAE 2200	3		MAE 2301	3
		MAE 2055	4		MATH 3130	3
		MATH 2350	4		MATH 3810 **OR** ECE 3610	3
		MAE 1090	3		ENGL 2090	3
		TOTAL	17		**TOTAL**	15

Year Three	√	FALL	Hours	√	SPRING	Hours
		MAE 3005	3		MAE 3130	4
		MAE 3302	3		MAE 3501	3
		MAE 3401	3		MAE 4421	3
		MAE 3201	3		Technical Elective	3
		MATH 3400	3		Explore – Society, Behavior & Health Course	3
					PORT 3000	0
		TOTAL	15		**TOTAL**	17

Year Four	√	FALL	Hours	√	SPRING	Hours
		MAE 4510 (Fall only)	2		MAE 4511 (Spring only)	3
		MAE 4000	1		Technical Elective	3
		MAE 4120	3		Technical Elective	3
		MAE 4310	4		Explore – Arts, Humanities & Cultures Course	3
		Technical Elective	3		Business Elective	3
		Business Elective	3			
		TOTAL	16		**TOTAL**	15