## **MECHANICAL ENGINEERING B.S.**



## **ACADEMIC ADVISING**

Partnering with students to successfully navigate college

Location: Main Hall 208

Phone: 719.255.3260

Website: Academic Advising

#### **Connect With Your Advisor**

**Current UCCS Students** 

• Appointments: <a href="www.uccs.edu/advising/current-students">www.uccs.edu/advising/current-students</a>
Prospective Students: <a href="www.uccs.edu/admissions/contact">www.uccs.edu/admissions/contact</a>

## **GENERAL ACADEMIC INFORMATION**

#### **Minimum Graduation Requirements**

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

		Major Requirements				
Mechanical Engineering Core Courses	Course/Area	Course Title				
(60 hours)	MAE 1502	Principles of Mechanical Engineering	3			
	MAE 1503	Intro to Engineering Design	3			
You must be admitted into the College of	MAE 2055	Mech-Etronics I	4			
Engineering in order to take any MAE coursework.	MAE 2103	Statics				
Course work.	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 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 4020	Numerical Methods with MATLAB				
	MAE 4120	Machine Design II				
	MAE 4310	Heat Transfer				
	MAE 4421	Automatic Control of Aerospace & Mechanical Systems				
	MAE 4510	Engineering Design I				
	MAE 4511	Engineering Design II	3			
Technical Electives	Complete 12 credit hours of upper-division (3000+ level) technical electives.					
(12 hours) • 6 hours must be 4000-level						
	6 hours must be from MAE courses					
NOTE: MAE 3342 Engineering Economy	Courses from the following disciplines may be used for technical electives: Computer Science,					
can be counted as a business <b>OR</b> a	Electrical Engineering, Mechanical Engineering, Math (with at least MATH 1350 as a					
technical elective.	prerequisite)	, Physics (with at least PES 1110 or MATH 1350 as a prerequisite), PES 2130				
Computing Course	MAE 1090	Introduction to Structured Programming	3			
(3 hours)						
,						
Business Courses	ENGR 3040	Engineering Ethics	3			
(6 hours)	Business Elective	Business Elective Complete one course from the following:				
		BLAW 2000, 2010, MAE 3342, MGMT 3300, MKTG 3000				

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G	General Education and Elective F	Requirements					
Core Writing Requirement (6 hours)	ENGL 1310, 1308, or 1305 (Students choosing ENGL 1305 must complete ENGL 1300 first.)     TCID 2090     PORT 3000 (0 Credits) – Writing Portfolio Assessment						
<b>Mathematics</b> (18 hours)	<ul> <li>MATH 1350</li> <li>MATH 1360</li> <li>MATH 2350</li> <li>MATH 3130</li> <li>MATH 3400</li> </ul>						
Basic Science (13 hours)	CHEM 1401/1402     PES 1110     PES 1120						
Compass Curriculum	Component	Course					
(9 hours)	Gateway	GPS 1010					
<ul> <li>Explore and Navigate courses must be</li> </ul>	<b>Explore</b> – 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)					
<ul> <li>Writing Intensive, Inclusiveness, and</li> </ul>	Explore – Physical and Natural World	PES 1110					
Sustainability courses can count	Navigate	ENGR 3040					
towards other requirements within	Summit	MAE 4511					
degree	Writing Intensive Courses (WIC) Two courses with one upper-division (3000+ level)	<ul><li>MAE 3130</li><li>MAE 4310</li></ul>					
	Inclusiveness	MAE 1503					
	Sustainability	MAE 3302					

## **FOUR-YEAR DEGREE PLAN**

Year One	1	FALL	Hours	1	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
	1	FALL	Hours	1	SPRING	Hours
Year Two		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
		T				
Year Three	J	FALL	Hours	J	SPRING	Hours
		MAE 3005	3		MAE 3130	4
		MAE 3201	3		MAE 3501	3
		MAE 3302	3		MAE 4421	3
ā		MAE 3401	3		Technical Elective	3
Ye		MAE 4020	3	-	Explore – Society, Behavior, and Health Course	3
				-	PORT 3000	0
		TOTAL	15		TOTAL	16
	1	FALL	Hours	1	SPRING	Hours
		MAE 4000	1		MAE 4511 (Spring only)	3
Year Four		MAE 4120	3		Technical Elective	3
		MAE 4310	4		Technical Elective	3
		MAE 4510 (Fall only)	2		Explore – Arts, Humanities & Cultures Course	3
		Technical Elective	3		Business Elective	3
		ENGR 3040	3			
		TOTAL	16		TOTAL	15