

Bachelor of Science in Mechanical Engineering

Mechanical Engineering (BSME)

Degree Program Guide*

The Degree Program Guide is a suggested curriculum to complete this degree program in four years. It is just one of several plans that will work and is presented only as broad guidance to students. Each student is strongly encouraged to develop a customized plan in consultation with their academic advisor. Additional information can also be found in Degree Works.

Course	Title	Credit Hours
Freshman		
Fall		
MATH 211	Calculus I (grade of C or better required)	4
CHEM 121N	Foundations of Chemistry I Lecture (grade of C or better required)	3
CHEM 122N	Foundations of Chemistry I Laboratory	1
ENGL 110C	English Composition (grade of C or better required)	3
ENGN 121	Introduction to Engineering and Technology	4
Credit Hours		15
Spring		
MATH 212	Calculus II (grade of C or better required)	4
PHYS 231N	University Physics I (grade of C or better required)	4
ENGN 122	MATLAB and C++ Programming for Engineers	4
COMM 101R	Public Speaking	3
Credit Hours		15
Sophomore		
Fall		
PHYS 232N	University Physics II	4
MATH 312 or MATH 285	Calculus III or Transfer Credit for Calculus III	4
MAE 204	Engineering Mechanics I - Statics (grade of C or better required)	3
MAE 201	Materials Science (grade of C or better required)	3
MAE 203	Mechanical Engineering Laboratory I - Materials Science	1
MAE 230	Engineering Graphics and Computer Solid Modeling	2
Credit Hours		17
Spring		
MAE 205	Dynamics (grade of C or better required)	3

MAE 220	Engineering Mechanics II - Solid Mechanics (grade of C or better required)	3
MAE 225	Mechanical Engineering Laboratory II - Solid Mechanics	1
MATH 307 or MATH 280	Ordinary Differential Equations or Transfer Credit for Ordinary Differential Equations	3
Interpreting the Past		3
ENGL 211C or ENGL 231C	Writing, Rhetoric, and Research (grade of C or better required) or Writing, Rhetoric, and Research: Special Topics	3

Credit Hours 16

Junior

Fall

MAE 303	Mechanics of Fluids (grade of C or better required)	3
MAE 305	Mechanical Engineering Laboratory III - Thermo/Fluids	1
MAE 311	Thermodynamics I (grade of C or better required)	3
MAE 340	Computational Methods in Mechanical Engineering	3
Literature		3
Human Creativity		3

Credit Hours 16

Spring

MAE 332	Mechanical Engineering Design I (grade of C or better required)	3
MAE 315	Heat and Mass Transfer	3
MAE 336	Electromechanical Systems	3
Philosophy and Ethics **		3
Human Behavior		3

Credit Hours 15

Senior

Fall

MAE 433	Mechanical Engineering Design II	3
MAE 434W	Project Design and Management I (grade of C or better required)	3
MAE 436	Dynamic Systems and Control	3
MAE Option Course		3
STAT 330	An Introduction to Probability and Statistics	3

Credit Hours 15

Spring

MAE 435	Project Design and Management II	3
MAE Option Course		3
MAE Option Course		3

Upper-Division General Education courses	6
Credit Hours	15
Total Credit Hours	124

- * Does not include the University's General Education language and culture requirement. Additional hours may be required.
- ** ENMA 480 is preferred.

Senior Electives

In the senior year, students should select their three elective courses to support a chosen specialty area. Examples include:

1. Power/energy: three courses from MAE 312, MAE 411, MAE 412, MAE 413, MAE 414, MAE 417, MAE 438, MAE 440
2. Mechanical systems design: three courses from MAE 404, MAE 422, MAE 431, MAE 438, MAE 440, MAE 441
3. Aerospace: three courses from MAE 403, MAE 406, MAE 417, MAE 420 (or MAE 440), MAE 438, MAE 460
4. Alternative combinations may be selected with advisor approval.