

BSME Mechanical Engineering
Fall 2023

This document is an example of a BSME program of study. Several factors can affect the course scheduling sequence. For a copy of the official curriculum, please go to the UGA Bulletin: <http://bulletin.uga.edu/>

Major Requirements

Students must earn a grade of "C" (2.0) or better in the courses indicated in **bold**.

High Demand Entrance Requirements

To be considered as a candidate for BSME, students must complete the courses listed in *italics* with a grade of "C" (2.0) or better. For more information on entrance requirements, please refer to the UGA Bulletin: <http://bulletin.uga.edu/> and our website.

YEAR ONE					
<u>Fall Semester</u>		<u>Hours</u>	<u>Spring Semester</u>		<u>Hours</u>
<i>MATH 2250</i>	<i>Calculus I</i>	4	<i>MATH 2260</i>	<i>Calculus II</i>	4
<i>ENGR 1120</i>	<i>Engineering Graphics</i>	2	<i>PHYS 1251</i>	<i>Physics for Engineers I</i>	3
<i>ENGL 1101</i>	<i>English Composition I</i>	3	<i>ENGR 1140</i>	<i>Computational Engr. Methods</i>	2
COMM 1110 ¹	Intro to Public Speaking	3	MCHE 1940	ME Design Studio/Prof. Practice	3
	Social Sciences Elective	3	ENGL 1102	English Composition II	3
FYOS	First-Year Odyssey Seminar	1			
Total Credit Hours		16	Total Credit Hours		15
YEAR TWO					
<u>Fall Semester</u>		<u>Hours</u>	<u>Spring Semester</u>		<u>Hours</u>
<i>MATH 2500</i>	<i>Multivariable Calculus</i>	3	<i>MATH 2700</i>	<i>Differential Equations</i>	3
<i>PHYS 1252</i>	<i>Physics for Engineers II</i>	3	<i>ENGR 2140</i>	<i>Strength of Materials</i>	3
<i>ENGR 2120</i>	<i>Statics</i>	3	<i>ENGR 3140</i>	<i>Thermodynamics I</i>	3
<i>CHEM 1211&L</i>	<i>Freshman Chemistry I</i>	4	<i>ENGR 2130</i>	<i>Dynamics</i>	3
	Social Sciences Elective	3	<i>ENGR 2170</i>	<i>Electrical Circuits</i>	3
Total Credit Hours		16	Total Credit Hours		15
YEAR THREE					
<u>Fall Semester</u>		<u>Hours</u>	<u>Spring Semester</u>		<u>Hours</u>
<i>ENGR 3160</i>	<i>Fluid Mechanics</i>	3	<i>ENGR 3150</i>	<i>Heat Transfer</i>	3
MCHE 2990	Engineered Systems in Society	3	MCHE 3410	Numerical Methods for ME	3
MCHE 3300	Machine Design I	3	MCHE 3450	ME Lab	2
MCHE 3310	Engineering Materials	3	MCHE 3990	Design Methodologies	3
ELEE 4210	Linear Systems	3		Mechanical Engineering Elective	3
MCHE 4000	ME Professional Practice	2		World Lang & Culture Elective	3
Total Credit Hours		17	Total Credit Hours		17
YEAR FOUR					
<u>Fall Semester</u>		<u>Hours</u>	<u>Spring Semester</u>		<u>Hours</u>
MCHE 4910	Capstone Design I	2	MCHE 4911	Capstone Design II	2
MCHE 3920	Design Studio	3		Mechanical Engineering Elective	3
	Mechanical Engineering Elective	3		Mechanical Engineering Elective	3
	Math/Statistics Elective ²	3		Mechanical Engineering Elective	3
	Life Science Elective³	3		Social Sciences Elective	3
	World Lang & Culture Elective	3		World Lang & Culture Elective	3
Total Credit Hours		17	Total Credit Hours		17

¹COMM 1110 is required for BSME; it will also satisfy the Humanities & The Arts requirement.

²Math/Statistics Elective: Select from ENGR 2090 or MATH 3300.

³Life Science Elective: Select from BIOL 1103 or BIOL 1104 or BIOL 1107&L or BIOL 1108&L.

Mechanical Engineering Electives

Choose five (5) courses from the list below (15 credit hours).

AENG 3540	Physical Unit Operations
BIOE 4760/6760	Biomechanics
CSCI 3360	Data Science I
CSEE 4310	Embedded Robotics
CSEE 4320	Mechatronics
CVLE 3610	Structural Design
CVLE 4610	Design of Light Steel Structures
CVLE/MCHE/LAND 4660/6660	Sustainable Building Design
CVLE 4720	Engineering Design of Residential Structures
CVLE 4750	Building Information Modeling (BIM)
ELEE 4220/6220	Feedback Control Systems
ELEE 4230/6230	Sensors and Transducers
ENGR 3620	Introduction to E-Mobility
ENGR 4350/6350	Finite Element Analysis
ENGR 4490/6490	Renewable Energy Engineering
ENGR 4545	Engineering Entrepreneurship
ENGR 4670/6670	Quality Engineering
ENGR 4825/6825	Aerospace Design and Optimization
ENVE 4230/6230	Energy in Nature, Civilization & Engineering
ENVE 4250/6250	Energy Systems & The Environment
ENVE 4530/6530	Energy and Environmental Policy Analysis
FDST 3000	Intro to Food Science and Technology
IDEA 4000/6000	Innovation Catalyst and Design
INFO 4160/6160	Introduction to Industrial Internet of Things
MCHE 3120	Mechanical Engineering CAD/CAE
MCHE 3150	Engineering Thermodynamics II
MCHE 4300	Mechanical Systems
MCHE 4310/6310	Introduction to Vehicle Dynamics
MCHE 4340	Machine Hydraulics
MCHE 4360/6360	Robotic Manipulators
MCHE 4380/6380	Solid Mechanics
MCHE 4390	Mechanical Vibration
MCHE 4400/6400	Air Pollution Engineering
MCHE 4440	Design and Control of Production Systems
MCHE 4500	Advanced Thermal Fluid Systems
MCHE 4530/6530	Combustion and Flames
MCHE 4580/6580	Computational Fluid Dynamics (CFD)
MCHE 4590/6590	Fluid Mechanics II
MCHE 4650/6650	HVAC Systems for Buildings and Industry
MCHE 4810	Introduction to Micro and Nano Systems
MCHE 4850	Advanced Manufacturing Processes
MCHE 4860	Advanced Vehicle Manufacturing

Either of the following will also satisfy one ME Elective (one ME elective credit for ENGR 3910 and one for any combination of MCHE 4960, 4970 or 4980):

ENGR 3910 (Cooperative Work Experience): Must complete three co-op rotations with (preferably) the same company and provide the required documentation to the College of Engineering's Director for Experiential Learning and Outreach.

MCHE 4960, MCHE 4970, MCHE 4980 (CURO Research): Must be more than one semester and the total of credit hours being 3 or more. The formal description of the research as outlined by college procedures must be provided.

