

BSME Mechanical Engineering
Fall 2017

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 indicated in *italics*. 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>
MATH 2250	<i>Calculus I</i>	4	MATH 2260	<i>Calculus II</i>	4
ENGR 1920	Intro to Engineering	1	PHYS 1251	<i>Physics for Engineers I</i>	3
ENGR 1120	<i>Engineering Graphics</i>	2	ENGR 1140	<i>Computational Engr. Methods</i>	2
ENGL 1101	<i>English Composition I</i>	3	MCHE 1940	ME Design Studio/Prof. Practice	3
COMM 1100	Intro to Public Speaking	3	ENGL 1102	English Composition II	3
	Social Sciences Elective	3			
FYOS	First-Year Odyssey	1			
Total Credit Hours		17	Total Credit Hours		15

YEAR TWO

<u>Fall Semester</u>		<u>Hours</u>	<u>Spring Semester</u>		<u>Hours</u>
MATH 2500	<i>Multivariable Calculus</i>	3	MATH 2700	<i>Differential Equations</i>	3
PHYS 1252	<i>Physics for Engineers II</i>	3	ENGR 2140	<i>Strength of Materials</i>	3
ENGR 2120	<i>Statics</i>	3	ENGR 3140	<i>Thermodynamics I</i>	3
MCHE 2990	Engineering Systems in Society	3	ENGR 2130	<i>Dynamics</i>	3
CHEM 1211&L	<i>Freshman Chemistry I</i>	4	ENGR 2170	<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>
ENGR 3160	<i>Fluid Mechanics</i>	3	ENGR 3150	<i>Heat Transfer</i>	3
MCHE 3300	Machine Design I	3	CVLE 2710	Numerical Methods for Engineers	2
MCHE 3310	Engineering Materials	3	MCHE 3450	ME Lab	2
MCHE 3920	Manufacturing & Design Studio	3	ELEE 4220	Feedback Control Systems	3
ELEE 4210	Linear Systems	3		Life Science Elective*	3
MCHE 4000	ME Professional Practice	2		Mechanical Engineering Elective	3
Total Credit Hours		17	Total Credit Hours		16

YEAR FOUR

<u>Fall Semester</u>		<u>Hours</u>	<u>Spring Semester</u>		<u>Hours</u>
MCHE 4910	ME Capstone Design Project I	2	MCHE 4920	ME Capstone Design Project II	2
	Mechanical Engineering Elective	3		Mechanical Engineering Elective	3
	Major Related Elective**	3		Mechanical Engineering Elective	3
	Social Sciences Elective	3		Mechanical Engineering Elective	3
	World Lang & Culture Elective	3		Social Sciences Elective	3
	World Lang & Culture Elective	3		World Lang & Culture Elective	3
Total Credit Hours		17	Total Credit Hours		17

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

**Major-Related Elective: Select a course from another discipline or Engineering major. Course must be at the 3000-level or higher except for a language course that is not applied to the General Education core. Co-ops and CURO Research may also count. For complete information on these options, please go to the UGA Bulletin: <http://bulletin.uga.edu/>

Mechanical Engineering Electives

Choose five (5) courses from the list below (15 credit hours). The courses are grouped into related topical areas to assist if a student desired to concentrate in one area. (Note that some courses qualify as being grouped in more than one topical area).

Advanced Energy Systems

ENGR 4490/6490	Renewable Energy Engineering
ENVE 4230/6230	Energy in Nature, Civilization & Engineering
ENVE 4250	Energy Systems & The Environment
ENVE 4530/6530	Energy & Environmental Policy Analysis
MCHE 3150	Engineering Thermodynamics II
MCHE 4650/6650	HVAC Systems for Buildings and Industry
MIST 4550/6550	Energy Informatics

Advanced Mechanics

BIOE 4760/6760	Biomechanics
CSEE 4310	Embedded Robotics
CSEE 4320	Mechatronics Systems Engineering
ENGR 4350/6350	Intro to Finite Element Analysis
MCHE 4300	Mechanical Systems
MCHE 4360/6360	Robotic Manipulators
MCHE 4380	Solid Mechanics
MCHE 4390	Mechanical Vibration
MCHE 4500	Advanced Thermal Fluid Systems
MCHE 4810	Intro to Micro and Nano Systems

Architectural Engineering

CVLE 3610	Structural Design
CVLE/MCHE 4720	Engr. Design of Residential Structures
CVLE 4750	Building Information Modeling (BIM)
ENGR/LAND 4660/6660	Sustainable Building Design
MCHE 4650	HVAC Systems for Buildings and Industry
MIST 4550/6550	Energy Informatics

Industrial Design and Processes

AENG 3540	Physical Unit Operations
CSEE 4310	Embedded Robotics
ELEE 4230/6230	Sensors & Transducers
ELEE 4540/6540	Applied Machine Vison
MCHE 3150	Engineering Thermodynamics II
MCHE 4340	Machine Hydraulics
MCHE 4390	Mechanical Vibration
MCHE 4500	Advanced Thermal Fluid Systems
MCHE 4650/6650	HVAC Systems for Buildings and Industry

Modeling and Controls

CSEE 4320	Mechatronics Systems Engineering
CVLE 4750	Building Information Modeling (BIM)
ELEE 4230/6230	Sensors & Transducers
ELEE 4240	Intro to Microcontrollers
ELEE 4250/6250	Advanced Microcontrollers
ENGR 4350/6350	Intro to Finite Elements Analysis
MCHE 4360/6360	Robotic Manipulators
MCHE 4650/6650	HVAC Systems for Buildings and Industry
MIST 4550/6550	Energy Informatics