BSME Mechanical Engineering
Effective Fall 2019

YEAR ONE

Fall Semester		**Hours**	**Spring Semester**		**Hours**
MATH 2250	**Calculus I**	4	**MATH 2260**	**Calculus II**	4
ENGR 1120	**Engineering Graphics**	2	**PHYS 1251**	**Physics for Engineers I**	3
ENGL 1101	English Composition I	3	**ENGR 1140**	**Computational Engr. Methods**	2
COMM 1100	Intro to Public Speaking	3	MCHE 1940	ME Design Studio/Prof. Practice	3
FYOS	First-Year Odyssey	1	ENGL 1102	English Composition II	3
	Social Sciences Elective	3			
Total Credit Hours		**16**	**Total Credit Hours**		**15**

YEAR TWO

Fall Semester		**Hours**	**Spring Semester**		**Hours**
MATH 2500	**Multivariable Calculus**	3	**MATH 2700**	**Differential Equations**	3
PHYS 1252	**Physics for Engineers II**	3	**ENGR 2140**	**Strength of Materials**	3
ENGR 2120	**Statics**	3	**MCHE 3140**	**Thermodynamics I**	3
MCHE 2990	Engineering Systems in Society	3	**ENGR 2130**	**Dynamics**	3
CHEM 1211&L	**Freshman Chemistry I**	4	**ENGR 2170**	**Electrical Circuits**	3
Total Credit Hours		**16**	**Total Credit Hours**		**15**

YEAR THREE

Fall Semester		**Hours**	**Spring Semester**		**Hours**
ENGR 3160	**Fluid Mechanics**	3	**ENGR 3150**	**Heat Transfer**	3
MCHE 3300	Machine Design I	3	MCHE 3410	Mech Eng Numerical Methods	3
MCHE 3310	Engineering Materials	3	MCHE 3450	ME Lab	2
MCHE 3920	Manufacturing & Design Studio	3		Life Science Elective*	3
ELEE 4210	Linear Systems	3		ME Elective	3
MCHE 4000	ME Professional Practice	2		ME Elective	3
Total Credit Hours		**17**	**Total Credit Hours**		**17**

YEAR FOUR

Fall Semester		**Hours**	**Spring Semester**		**Hours**
MCHE 4910	ME Capstone Design Project I	2	MCHE 4920	ME Capstone Design Project II	2
	ME Elective	3		ME Elective	3
	Major Related Elective**	3		ME Elective	3
	Social Sciences Elective	3		ME 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: Courses that automatically qualify for this elective credit include: MCHE 3900 or ENGR 3910 (Complete three semesters of engineering co-op and provide the required documentation to the Director for Experiential Learning and Outreach); CURO Research for a total of a minimum of three credit hours; Other University of Georgia Engineering Courses at the 3000-level or 4000-level

Other allowable courses include: Courses from other disciplines, as outlined in the following paragraph. These courses must be pre-approved by the School Chair or designated faculty. Courses must be at the 3000-level or higher, unless the course is in a foreign language and this course is above and beyond the credits used to satisfy the World Language and Culture requirement for UGA.

Courses in BOLD require a grade of "C" or better

BSME Electives Effective Fall 2019

Choose 6 courses from the list below (18 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	Renewable Energy Engineering
MCHE 4650	HVAC Systems for Buildings and Industry
ENVE 4230	Energy in Nature, Civilization & Engineering
ENVE 4250	Energy Systems & The Environment
ENVE 4530	Energy & Environmental Policy Analysis
MCHE 3150	Engineering Thermodynamics II
MCHE 4500	Advanced Thermal Fluid Systems
MCHE 4590	Fluids II
MIST 4550	Energy Informatics

Advanced Mechanics

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

Architectural Engineering

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

Industrial Design and Processes

AENG 3540	Physical Unit Operations
ELEE 4220	Feedback Control Systems
ELEE 4230	Sensors & Transducers
ELEE 4540	Applied Machine Vison
CSEE 4310	Embedded Robotics
MCHE 4340	Machine Hydraulics
MCHE 4650	HVAC Systems for Buildings and Industry
MCHE 3150	Engineering Thermodynamics II
MCHE 4390	Mechanical Vibration
MCHE 4500	Advanced Thermal Fluid Systems
MCHE 4590	Fluids II

Modeling and Controls

CSEE 4320	Mechatronics Systems Engineering
CVLE 4750	Building Information Modeling (BIM)
ELEE 4220	Feedback Control Systems
ELEE 4230	Sensors & Transducers
ELEE 4240	Intro to Microcontrollers
ELEE 4250	Advanced Microcontrollers
ENGR 4350	Intro to Finite Elements Analysis
MCHE 4650	HVAC Systems for Buildings and Industry
MCHE 4360	Robotic Manipulators
MIST 4550	Energy Informatics

Major Requirements:

All students must earn a grade of "C" (2.0) or better in each of the following courses: BIOL 1103 or BIOL 1104 or BIOL 1107-BIOL 1107L or BIOL 1108-BIOL 1108L, CHEM 1211-CHEM 1211L, ENGR 1120, ENGR 1140, ENGR 2120, ENGR 2130, ENGR 2140, ENGR 2170, ENGR 3150, ENGR 3160, MATH 2250, MATH 2260, MATH 2500, MATH 2700, MCHE 3140, PHYS 1251 and PHYS 1252.

Except for those courses requiring a grade of "C" (2.0) or better, a maximum of two (ENGR, MCHE, CVLE, ENVE, ELEE) prefix courses with grades of "D" (1.0) may be used to satisfy graduation requirements. Competency in a computer programming language is expected and may be satisfied with ENGR 1140.

THE FUNDAMENTALS OF ENGINEERING (FE) EXAM IS A GRADUATION REQUIREMENT FOR THIS DEGREEE PROGRAM.