CURRICULUM PLAN COLLEGE OF ENGINEERING AND COMPUTER SCIENCES 2022-2023 MY ADVISOR'S NAME IS: _____

MECHANICAL ENGINEERING

REQUIREMENTS

CORE CURRICULUM

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at marshall.edu/gened.

CORE 1: CRITICAL THINKING

CODE	COURSE NAME		HRS	GRADE
FYS 100	First Year Seminar	●	3	
MTH 229	Critical Thinking Course I	●	5	
_____	Critical Thinking Course	●	3	
Additional University Requirements				
_____	Writing Intensive		3	
_____	Writing Intensive		3	
_____	Multicultural or International		3	
ME 452	Capstone		1	
ME 453	Capstone		3	

CORE 2:

CODE	COURSE NAME		HRS	GRADE
ENG 101	Beginning Composition	●	3	
ENG 201	Advanced Composition	●	3	
CMM 103	Fund Speech-Communication	●	3	
MTH 229	Calculus I	● ◆	5	
PHY 211/202	University Physics I/ Lab	● ◆	5	
_____	Core II Humanities	●	3	
_____	Core II Social Science	●	3	
_____	Core II Fine Arts	●	3	

MAJOR-SPECIFIC

All Mechanical Engineering majors are required to take the following courses:

CODE	COURSE NAME		HRS	GRADE
MTH 229	Calculus I	● ◆	5	
MTH 230	Calculus II	◆	4	
MTH 231	Calculus III	◆	4	
MTH 335	Differential Equations	◆	3	
CHM 211	Chemistry I	◆	3	
PHY 211	University Physics I	● ◆	4	
PHY 202	General Physics I Lab	● ◆	1	
PHY 213	University Physics II	◆	4	
PHY 204	General Physics II Lab	◆	1	
ENGR 102	Intro to CAD	◆	2	
ENGR 103	Freshman Engineering Seminar	◆	1	
ENGR 104	Engineering Profession	◆	1	
ENGR 213	Statics	◆	3	
ENGR 214	Dynamics	◆	3	
ENGR 215	Engineering Materials	◆	3	
ENGR 216	Mech of Deformable Bodies	◆	3	
ENGR 217	Engineering Co-Op Prep	◆	1	
ENGR 219	Engineering Thermodynamics	◆	3	
ENGR 222	Engineering Cost Analysis & Economy	◆	3	

CODE	COURSE NAME		HRS	GRADE
ME 111	Mech Engineering Computations	◆	3	
ME 240	Manufacturing Processes	◆	3	
ME 245	Circuits and Instrumentation	◆	3	
ENGR 335	Adv Engineering Analysis	◆	3	
ME 452	Senior Capstone Design I	◆	1	
ME 453	Senior Capstone Design II	◆	3	
ME 310	Thermodynamics II	◆	3	
ME 455	Metallurgy	◆	3	
ME 325	Exp. Design &Thermal Fluids lab	◆	2	
ME 340	Machine Element Design	◆	3	
ME 350	Heat Transfer	◆	3	
ME 360	Fluid Dynamics	◆	4	
ME 410	Kinematics & Design of Machine	◆	3	
ME 420	Control Systems	◆	3	
ME 425	Mech. Engr. Lab II	◆	1	
_____	ME Design Elective	◆	3	
_____	ME Technical Elective	◆	3	
_____	ME Technical Elective	◆	3	
_____	ME Technical Elective	◆	3	

MAJOR INFORMATION

- Senior Capstone Design I: To be eligible to take the Senior Engineering Seminar course (ME 452), students must have senior standing in mechanical engineering. Senior standing is defined for the B.S.M.E. as having completed or concurrently taking these three courses: ME 325, ME 350, and ME 410.
- Senior Capstone Design II: To be eligible to take the capstone design course, students must have completed ME 452 and at least one of the design electives (ME 430 or ME 435).
- ME Design Elective: At least one design elective must be taken from the following courses: ME 430, or ME 435.
- Technical Electives: At least three technical electives must be taken from the following approved list of courses: Any 300-level or higher ME course not taken to satisfy other B.S.M.E. degree requirements, any 300-level or higher ENGR course not taken to satisfy other B.S.M.E. degree requirements. Other courses may be taken to satisfy this requirement with the approval of the student's advisor and the division's chair.
- Course offerings and course attributes are subject to change each semester. Please consult each semester's schedule of courses for availability and attributes.
- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.

● General Education Requirement ■ College Requirement ◆ Major Requirement ◆ Area of Emphasis

Milestone Course: This is a key success marker for your major. See your advisor to discuss the importance of this course in your plan of study.

FOUR YEAR PLAN | COLLEGE OF ENGINEERING AND COMPUTER SCIENCES | 2022-2023 | MY ADVISOR'S NAME IS: _____

MECHANICAL ENGINEERING

Mechanical Engineers apply fundamental math and physics laws to design, fabricate and innovate mechanical devices. They are multi-skilled and have working knowledge of computers, electricity, structures and mechanisms, materials, and manufacturing processes. The Bachelors of Science in Mechanical Engineering (B.M.S.E.) at Marshall University is designed to emphasize service, systems-based knowledge, and sustainability combining a traditional engineering approach with new and emerging fields.

YEAR ONE

FALL SEMESTER					SPRING SEMESTER				
CODE	COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRADE
CHM 211	Principles of Chemistry I	◆	3		MTH 230	Calculus II	◆	4	
MTH 229	Calculus I (CT)	● ◆	5		ENG 101	Beginning Composition	●	3	
ENGR 103	Freshman Engineering Semin	◆	1		ENGR 102	Intro to CAD	◆	2	
ENGR 104	Engineering Profession	◆	1		PHY 211	University Physics I	● ◆	4	
CMM 103	Fund Speech Communication	●	3		PHY 202	General Physics I Lab	● ◆	1	
FYS 100	First Year Sem Crit Thinking	●	3		ME 111	Mech Engineering Computations	◆	3	
UNI 100	Freshman First Class		1						
TOTAL HOURS			17		TOTAL HOURS			17	

Summer Term (optional):

YEAR TWO

FALL SEMESTER					SPRING SEMESTER				
CODE	COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRADE
ENGR 213	Statics	◆	3		ENGR 214	Dynamics	◆	3	
ENGR 215	Engineering Materials	◆	3		ENGR 216	Mech of Deformable Bodies	◆	3	
ME 245	Circuits and Instrumentation	◆	3		ENGR 217	Engineering Co-Op Prep	◆	1	
MTH 231	Calculus III	◆	4		ENGR 219	Engr. Thermodynamics	◆	3	
PHY 213	University Physics II	◆	4		ME 240	Manufacturing Processes	◆	3	
					MTH 335	Differential Equations	◆	3	
TOTAL HOURS			17		TOTAL HOURS			16	

Summer Term (optional):

YEAR THREE

FALL SEMESTER					SPRING SEMESTER				
CODE	COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRADE
ME 310	Thermodynamics II	◆	3		ME 420	Control Systems	◆	3	
ENGR 335	Adv Engineering Analysis	◆	3		ME 325	Exp. Design &Thermal Fluids lab	◆	2	
ME 340	Machine Element Design	◆	3		ME 350	Heat Transfer	◆	3	
ENGR 222	Engineering Cost Analysis & Economy	◆	3		ME 410	Kinematics & Design of Machine	◆	3	
					ENG 201	Advanced Composition	●	3	
ME 360	Fluid Dynamics	◆	4		_____	Core II Social Science (MC/I, WI)	●	3	
TOTAL HOURS			16		TOTAL HOURS			17	

Summer Term (optional):

YEAR FOUR

FALL SEMESTER					SPRING SEMESTER				
CODE	COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRADE
ME 452	Senior Capstone Design I	◆	1		ME 453	Senior Capstone Design II	◆	3	
ME 425	Mech. Engr. Lab II	◆	1		ME 455	Metallurgy	◆	3	
_____	ME Technical Elective	◆	3		_____	ME Technical Elective	◆	3	
_____	ME Technical Elective	◆	3		_____	Core II Humanities (WI, CT)	●	3	
_____	ME Design Elective	◆	3						
_____	Core II Fine Art	●	3						
TOTAL HOURS			14		TOTAL HOURS			12	

Summer Term (optional):

◆ Area of Emphasis
◆ Major Requirement
■ College Requirement
● General Education Requirement

Milestone Course: This is a key success marker for your major. See your advisor to discuss the importance of this course in your plan of study.