

ENGINEERING GENERAL 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				CORE 2:			
CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
FYS 100	First Year Seminar	●	3 _____	ENG 101	Beginning Composition	●	3 _____
MTH 229	Critical Thinking Course I	●	5 _____	ENG 201	Advanced Composition	●	3 _____
SFT 235	Critical Thinking Course	●	3 _____	CMM 103	Fund Speech-Communication	●	3 _____
Additional University Requirements				MTH 229	Calculus I	●◆	5 _____
_____	Writing Intensive		3 _____	CHM 211/217	Principles of Chemistry I/Lab	●◆	5 _____
_____	Writing Intensive		3 _____	_____	Core II Humanities	●	3 _____
SFT 235	Multicultural or International		3 _____	_____	Core II Social Science	●	3 _____
ENGR 473	Capstone		3 _____	_____	Core II Fine Arts	●	3 _____

MAJOR-SPECIFIC

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

CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
MTH 229	Calculus I	●◆	5 _____	ENGR 222	Engineering Cost Analysis & Economy	◆	3 _____
MTH 230	Calculus II	◆	4 _____	ENGR 318	Fluid Mechanics	◆	3 _____
MTH 231	Calculus III	◆	4 _____	ENGR 319	Fluid Mechanics Laboratory	◆	1 _____
MTH 335	Differential Equations	◆	3 _____	ENGR 451	Intro to Proj Management	◆	3 _____
STA 345	Applied Prob and Stat	◆	3 _____	ENGR 473	Capstone Senior Design	●◆	3 _____
CHM 211	Chemistry I	●◆	3 _____	ME 245	Circuits and Instrumentation	◆	3 _____
CHM 217	Principles of Chem Lab I	●◆	2 _____	ME 330	Manufacturing Methods/Design	◆	3 _____
PHY 211	University Physics I	◆	4 _____	SFT 235	Intro to Occup Safety (CT)	●◆	3 _____
PHY 202	General Physics I Lab	◆	1 _____	_____	Engineering Elective Course	◆	3-4 _____
_____	Math/Science Elective	◆	3-5 _____	_____	Emphasis Course	◆	3 _____
ENGR 103	First-Year Engineering Seminar	◆	1 _____	_____	Emphasis Course	◆	3 _____
ENGR 104	Engineering Profession	◆	1 _____	_____	Emphasis Course	◆	3 _____
_____	CAD Course	◆	2 _____	_____	Emphasis Course	◆	3 _____
_____	Computations Course	◆	3 _____	_____	Emphasis Course	◆	3 _____
ENGR 213	Statics	◆	3 _____	_____	Emphasis Course	◆	3 _____
ENGR 214	Dynamics	◆	3 _____	_____	Emphasis Course	◆	3 _____
ENGR 215	Engineering Materials	◆	3 _____	_____	Emphasis Course	◆	3 _____
ENGR 216	Mech of Deformable Bodies	◆	3 _____	_____	Emphasis Course	◆	3 _____
ENGR 217	Engineering Career Prep	◆	1 _____				
ENGR 219	Engineering Thermodynamics	◆	3 _____				

MAJOR INFORMATION

- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.
- The Engineering degree program requires a minimum of 124 credit hours of coursework for graduation.
- Course offerings and course attributes are subject to change each semester. Please consult each semester's schedule of courses for availability and attributes.
- Math/Science Elective Option: Select one of the following: BSC 120/120L, BSC 120H/120L, CHM 212/218, MTH 300, MTH 329, PHY 213/204, STA 445.
- CAD Course: Select one of the following: CE 102 or ENGR 102.
- Computations Course: Select one of the following: CS 110, ENGR 111, or ME 111.
- Engineering Elective Option: Any 300-level or higher BME, CE, EE, ENGR, IE, or ME course not taken to satisfy degree requirements or area of emphasis requirements.
- Emphasis Course Option: Any 300-level or higher BME, CE, EE, ENGR, IE, or ME course not taken to satisfy degree requirements or area of emphasis requirements.

● 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.

ENGINEERING GENERAL ENGINEERING

The Bachelor of Science in Engineering typically spans four years and provides students with a strong foundation in the principles of engineering, mathematics, and science. Within the general engineering emphasis area, students have the flexibility to choose from a range of elective courses that align with their interests. Upon graduation, students with an undergraduate degree in engineering are equipped with a strong foundation in engineering principles and the ability to apply their knowledge to a wide range of real-world problems.

YEAR ONE	FALL SEMESTER				SPRING SEMESTER			
	CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
	CMM 103	Fund Speech Communication	● 3	_____	_____	CAD Course	◆ 2	_____
	ENG 101	Beginning Composition	● 3	_____	_____	Computations Course	◆ 3	_____
	ENGR 103	First-Year Engineering Seminar	◆ 1	_____	MTH 230	Calculus II	◆ 4	_____
	ENGR 104	Engineering Profession	◆ 1	_____	PHY 211	University Physics I	◆ 4	_____
	FYS 100	First Year Sem Crit Thinking	● 3	_____	PHY 202	General Physics I Lab	◆ 1	_____
	MTH 229	Calculus I (CT)	● ◆ 5	_____	ENG 201	Advanced Composition	● 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
	CHM 211	Principles of Chemistry I	● ◆ 3	_____	ENGR 214	Dynamics	◆ 3	_____
	CHM 217	Principles of Chem Lab I	● ◆ 2	_____	ENGR 216	Mech of Deformable Bodies	◆ 3	_____
	ENGR 213	Statics	◆ 3	_____	ENGR 217	Engineering Career Prep	◆ 1	_____
	MTH 231	Calculus III	◆ 4	_____	ENGR 222	Engineering Cost Analysis & Economy	◆ 3	_____
	SFT 235	Intro to Occup Safety (CT)	● ◆ 3	_____	MTH 335	Differential Equations	◆ 3	_____
					_____	Emphasis Course	◆ 3	_____
	TOTAL HOURS		15		TOTAL HOURS		16	

Summer Term (optional):

YEAR THREE	FALL SEMESTER				SPRING SEMESTER			
	CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
	ENGR 215	Engineering Materials	◆ 3	_____	ENGR 219	Engr. Thermodynamics	◆ 3	_____
	ENGR 318	Fluid Mechanics	◆ 3	_____	ME 245	Circuits and Instrumentation	◆ 3	_____
	ENGR 319	Fluid Mechanics Laboratory	◆ 1	_____	ME 330	Manufacturing Methods/Design	◆ 3	_____
	STA 345	Applied Prob and Stat	◆ 3	_____	_____	Math/Science Elective	◆ 3-5	_____
	_____	Emphasis Course	◆ 3	_____	_____	Emphasis Course	◆ 3	_____
	_____	Emphasis Course	◆ 3	_____				
	TOTAL HOURS		16		TOTAL HOURS		15-17	

Summer Term (optional):

YEAR FOUR	FALL SEMESTER				SPRING SEMESTER			
	CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
	ENGR 451	Intro to Proj Management	◆ 3	_____	ENGR 473	Capstone Senior Design	● ◆ 3	_____
	_____	Engineering Elective Course	◆ 3-4	_____	_____	Emphasis Course	◆ 3	_____
	_____	Emphasis Course	◆ 3	_____	_____	Emphasis Course	◆ 3	_____
	_____	Emphasis Course	◆ 3	_____	_____	Core II Humanities (WI, CT)	● 3	_____
	_____	Core II Social Science (WI)	● 3	_____	_____	Core II Fine Arts	● 3	_____
	TOTAL HOURS		15-16		TOTAL HOURS		15	

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.