CURRICULUM PLAN COLLEGE OF ENGINEERING AND COMPUTER SCIENCES 2023-2024 MY ADVISOR'S NAME IS: _____

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

CODE	COURSE NAME	HRS	GRADE
FYS 100	First Year Seminar	3	
MTH 229	Critical Thinking Course I	5	
SFT 235	Critical Thinking Course	3	
Additional University Requirements			
_____	Writing Intensive	3	
_____	Writing Intensive	3	
SFT 235	Multicultural or International	3	
ENGR 473	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	
CHM 211/217	Principles of Chemistry I/Lab	5	
_____	Core II Humanities	3	
_____	Core II Social Science	3	
_____	Core II Fine Arts	3	

MAJOR-SPECIFIC

All General 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	
STA 345	Applied Prob and Stat	3	
CHM 211	Chemistry I	3	
CHM 217	Principles of Chem Lab I	2	
PHY 211	University Physics I	4	
PHY 202	General Physics I Lab	1	
_____	Math/Science Elective	3-5	
ENGR 103	First-Year Engineering Seminar	1	
ENGR 104	Engineering Profession	1	
_____	CAD Course	2	
_____	Computations Course	3	
ENGR 213	Statics	3	
ENGR 214	Dynamics	3	
ENGR 215	Engineering Materials	3	
ENGR 216	Mech of Deformable Bodies	3	
ENGR 217	Engineering Career Prep	1	
ENGR 219	Engineering Thermodynamics	3	

CODE	COURSE NAME	HRS	GRADE
ENGR 222	Engineering Cost Analysis & Economy	3	
ENGR 318	Fluid Mechanics	3	
ENGR 319	Fluid Mechanics Laboratory	1	
ENGR 451	Intro to Proj Management	3	
ENGR 473	Capstone Senior Design	3	
ME 245	Circuits and Instrumentation	3	
ME 330	Manufacturing Methods/Design	3	
SFT 235	Intro to Occup Safety (CT)	3	
_____	Engineering Elective Course	3-4	
_____	Emphasis Course	3	
_____	Emphasis Course	3	
_____	Emphasis Course	3	
_____	Emphasis Course	3	
_____	Emphasis Course	3	
_____	Emphasis Course	3	
_____	Emphasis Course	3	
_____	Emphasis Course	3	
_____	Emphasis Course	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.

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.

FOUR YEAR PLAN COLLEGE OF ENGINEERING AND COMPUTER SCIENCES 2023-2024 MY ADVISOR'S NAME IS: _____

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.

GENERAL ENGINEERING — 2023-2024

INVOLVEMENT OPPORTUNITIES

- Student Government Association
- Campus Activity Board
- JMELI
- Commuter Student Advisory Board
- Club Sports
- Religious Organizations
- Political Organizations
- Residence Hall Association
- Cultural Organizations
- National Society of Leadership and Success

RELATED MAJORS

- Electrical Engineering
- Mathematics
- Statistics
- Education

GRADUATION REQUIREMENTS

- Have a minimum of 124 credit hours (some colleges or majors require more);
- Have an overall and Marshall Grade Point Average of 2.00 or higher;
- Have an overall Grade Point Average of 2.00 or higher in the major area of study;
- Have earned a grade of C or better in English 201 or 201 H;
- Have met all major(s) and college requirements;
- Have met the requirements of the Core Curriculum;
- Have met the residence requirements of Marshall University, including 12 hours of 300/400 level coursework in the student's college (see section entitled "Residence Requirements" in the undergraduate catalogue);
- Be enrolled at Marshall at least one semester of the senior year;
- Have transferred no more than 72 credit hours from an accredited West Virginia two-year institution of higher education.

Colleges and specific programs may have unique requirements that are more stringent than those noted above. Students are responsible for staying informed about and ensuring that they meet the requirements for graduation.

This academic map is to be used as a guide in planning your coursework toward a degree. Due to the complexities of degree programs, it is unfortunate but inevitable that an error may occur in the creation of this document. The official source of degree requirements at Marshall University is DegreeWorks available in your myMU portal. Always consult regularly with your advisor.

YEAR ONE

Have questions? Need to talk? You already have a Friend-At-Marshall ready to help you succeed. Find your FAM Peer Mentor here: www.marshall.edu/fam

Stay on the Herd Path and come to class! Class attendance is more important to your success than your high school GPA, your class standing, or your ACT/SAT scores.

In order to graduate on time, you need to take an average of 15 credits per semester. Are you on track? Take 15 to Finish.

Take a career self-assessment to help determine what majors fit your talents and interests and consider job shadowing opportunities.

Take a pulse check. Know what you need to do every year to keep your grants, scholarships, or federal financial aid.

Declare a major before your 30th hour. Participate in a Career Exploration Experience (job shadow) to help decide on your major and career goals.

Sign up for Handshake! Handshake is the #1 place to launch a career with no connections, experience, or luck required. The platform connects up-and-coming talent with 650,000+ employers.

YEAR TWO

Are you completing enough credits to graduate on time? Dropping or failing a class can put you behind. Use summer terms to quickly get back on track.

Run for Student Government and represent your fellow students while making a longterm difference on Marshall's campus.

In order to work in your field, you need to take a certification exam. Develop a study strategy now. Check with your advisor.

No need to wait until graduate school. Discuss undergraduate research opportunities with faculty in your major right now.

Don't enter your field with zero experience! Secure an internship related to your field of study.

Join or create a club or organization on campus about a particular issue you care about. Marshall has more than 200 student organizations.

Meet with a career education specialist to conduct a "gap analysis." Figure out the skills you'll need for the career you want while you still have time to build them.

YEAR THREE

Attend an intercultural festival or event on campus or in town.

Talk to faculty about pursuing optional professional certifications.

Are you on track to graduate? Meet with your advisor for your Junior Eval to make sure you know what requirements you have left.

Run for Student Government and represent your fellow students while making a longterm difference on Marshall's campus.

Networking is key! Attend a Career Expo to seek employment opportunities and network with employers in your field.

Prepare for and pass the FE exam.

Don't enter your field with zero experience! Secure an internship related to your field of study.

YEAR FOUR

This is it! Are you on track to graduate? Meet with your advisor for your Senior Eval to see what requirements you have left.

Want to continue your education and increase your opportunities? Talk to a faculty member about whether graduate school fits you career goals.

Strengthen your resume and enhance your presentation skills. Present what you've learned at an academic conference of campus.

Prepare for and pass the FE exam.

Run for Student Government and represent your fellow students while making a longterm difference on Marshall's campus.

Don't enter your field with zero experience! Secure an internship related to your field of study.

Be at the top of your professional game! Prepare a final resume and practice your interview skills with a career coach in Career Education.

TRANSFERABLE SKILLS ASSOCIATED WITH THIS MAJOR

- Analytical Skills
- Design Skills
- Oral and Written Communication Skills
- Critical Thinking Skills
- Leadership Skills
- The Ability to Work as Part of a Team

ASSOCIATED CAREERS

- Machine Design
- Systems Design
- Manufacturing and Production
- Energy Resources/Conservation
- Transportation and Environmental Impact

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