CURRICULUM PLAN COLLEGE OF INFORMATION TECHNOLOGY AND ENGINEERING

ENGINEERING
CIVIL ENGINEERING

2019-2020

MY ADVISOR'S NAME IS: _____

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 Sem Crit Thinking	●	3	
MTH 229	Calculus I	●	5	
_____	Critical Thinking Course	●	3	

Additional University Requirements

_____	Writing Intensive	3	
_____	Writing Intensive	3	
_____	Multicultural or International	3	
ENGR 452	Capstone	3	
ENGR 453			

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	Core II Physical/Natural Science	●	5	
_____	Core II Humanities	●	3	
_____	Core II Social Science	●	3	
_____	Core II Fine Arts	●	3	

MAJOR-SPECIFIC

All Engineering: Civil Emphasis 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. & Statistics	♦	3	
CHM 211	Chemistry I	♦	3	
CHM 217	Chemistry I Lab	♦	2	
CHM 212	Chemistry II	♦	3	
CHM 218	Chemistry II Lab	♦	2	
GLY 200	Physical Geology	♦	3	
PHY 211	University Physics I	♦	4	
PHY 202	General Physics I Lab	♦	2	
ENGR 103	Freshman Engineering Seminar	♦	1	
ENGR 104	Engineering Profession	♦	1	
ENGR 111	Engineering Computations	♦	3	
ENGR 213	Statics	♦	3	
ENGR 214	Dynamics	♦	3	
ENGR 216	Mech. of Deformable Bod	♦	3	
ENGR 217	Co-Op Prep	♦	3	
ENGR 222	Engineering Cost Analysis	♦	3	

CODE	COURSE NAME		HRS	GRADE
ENGR 318	Fluid Mechanics	♦	3	
ENGR 451	Project Management	♦	3	
CE 102	Introduction to CAD	♦	2	
CE 241	Geomatics	♦	4	
CE 312	Structural Analysis	♦	3	
CE 319	Civil Engr. Fluid Mech Lab	♦	1	
CE 321	Civil Engineering Materials	♦	4	
CE 322	Geotechnical Engineering	♦	4	
CE 331	Hydraulic Engineering	♦	3	
CE 342	Transportation Engineering	♦	3	
CE 351	Environmental Engineering	♦	3	
ENGR 452	Senior Capstone Design I	♦	2	
ENGR 453	Senior Capstone Design II	♦	3	
_____	CE Design Elective	♦	3	
_____	CE Design Elective	♦	3	
_____	CE Elective	♦	3	
_____	CE Elective	♦	3	
_____	Technical Elective	♦	3	
_____	Free Elective		3	

MAJOR INFORMATION

- To be eligible to take Senior Capstone Design I (ENGR 452), students must have senior standing in engineering. Senior standing is defined for the CE Emphasis as having completed or concurrently taking (1) at least four of these five courses and at least one CE Design Elective or (2) at least three of these five courses and at least two CE Design Electives: CE 312, CE 322, CE 331, CE 342, and CE 351.
- To be eligible to take Senior Capstone Design II (ENGR 453), students must have completed Introduction to Project Management (ENGR 451) and Senior Capstone Design I (ENGR 452).
- CE Design Electives: At least two CE design electives must be taken from the following courses: CE 413 or CE 414, CE 425, CE 434, and CE 443.
- CE Electives: At least two CE electives must be taken from the following list of courses, excluding courses that are taken to satisfy the CE Design Electives: CE 341, CE 413, CE 414, CE 425, CE 433, CE 434, CE 443, or any 300-level or higher CE course not taken to satisfy a CE Design Elective.
- Technical Elective: One technical elective that satisfies one of these criteria must be taken: Any 300-level or higher CE course not taken to satisfy a CE Design Elective or CE Elective, or any 200-level or higher ENGR, ME or EE course, with advance approval from the student's advisor and 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.
- The B.S.E. degree program requires a minimum of 128 credit hours of coursework for graduation.

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 Education Requirement ■ College Requirement ♦ Major Requirement ◆ Area of Emphasis

FOUR YEAR PLAN COLLEGE OF INFORMATION TECHNOLOGY AND ENGINEERING

ENGINEERING
CIVIL ENGINEERING

2019-2020

MY ADVISOR'S NAME IS: _____

Civil engineers apply fundamental mathematics and physics to develop solutions to problems that affect the daily lives of citizens. They are multi-skilled and are able to design and conduct experiments, as well as to analyze and interpret complex data. Engineers can design a system, component, or process to meet desired needs within realistic constraints. They can function on multidisciplinary teams and have a solid understanding of professional and ethical responsibility.

YEAR ONE

FALL SEMESTER					SPRING SEMESTER				
CODE	COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRADE
ENGR 103	Freshman Engineering Semin	♦	1		CE 102	Introduction to CAD	♦	2	
ENGR 104	Engineering Profession	♦	1		ENGR 111	Engineering Computations	♦	3	
MTH 229	Calculus I (CT)	● ♦	5		MTH 230	Calculus II	♦	4	
ENG 101	Beginning Composition	●	3		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		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
ENGR 213	Statics	♦	3		ENGR 214	Dynamics	♦	3	
CE 241	Geomatics	♦	4		ENGR 216	Mech. of Deformable Bod	♦	3	
MTH 231	Calculus III	♦	4		ENGR 222	Engineering Cost Analysis	♦	3	
CHM 211	Chemistry I	♦	3		CHM 212	Chemistry II	♦	3	
CHM 217	Chemistry I Lab	♦	2		CHM 218	Chemistry II Lab	♦	2	
ENGR 217	Co-Op Prep	♦	1		MTH 335	Differential Equations	♦	3	
TOTAL HOURS			**17**		**TOTAL HOURS**			**17**	

Summer Term (optional):

YEAR THREE

FALL SEMESTER					SPRING SEMESTER				
CODE	COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRADE
ENGR 318	Fluid Mechanics	♦	3		CE 322	Geotechnical Engineering	♦	4	
CE 319	Civil Engr. Fluid Mech Lab	♦	1		CE 331	Hydraulic Engineering	♦	3	
CE 312	Structural Analysis	♦	3		CE 342	Transportation Engineering	♦	3	
CE 321	Civil Engr. Materials	♦	4		CE 351	Environmental Engineering	♦	3	
STA 345	Applied Prob. & Statistics	♦	3		_____	CE Design Elective	♦	3	
GLY 200	Physical Geology	♦	3						
TOTAL HOURS			**17**		**TOTAL HOURS**			**16**	

Summer Term (optional):

YEAR FOUR

FALL SEMESTER					SPRING SEMESTER				
CODE	COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRADE
_____	CE Design Elective	♦	3		_____	CE Elective	♦	3	
_____	CE Elective	♦	3		ENGR 453	Senior Capstone Design II	♦	3	
ENGR 451	Project Management	♦	3		_____	Technical Elective	♦	3	
ENGR 452	Senior Capstone Design I	♦	2		_____	Free Elective		3	
_____	Core II Social Science (MC/I, WI)	●	3		_____	Core II Fine Arts	●	3	
_____	Core II Humanities (WI, CT)	●	3						
TOTAL HOURS			**17**		**TOTAL HOURS**			**15**	

Summer Term (optional):

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 Education Requirement ■ College Requirement ♦ Major Requirement ◆ Area of Emphasis

CIVIL ENGINEERING — 2019-2020

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

- Business
- Mathematics
- Statistics
- Geography
- Geology

GRADUATION REQUIREMENTS

- Have a minimum of 128 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.

Explore peer leadership opportunities through the FAM Program, or apply to be a UNI Peer Mentor.

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 long-term 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 long-term 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.

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

Prepare for and pass the FE exam.

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

- Structural Engineer
- Urban Planner
- Construction Engineer
- Environmental Engineer
- Transportation Engineer
- Geotechnical Engineer

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