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transportation, manufacturing, and production and distribution of power.

COURSE NAME

COURSE NAME

Circuits I

Calculus III

Programming Lab

University Physics II

Chemistry I

Calculus I (CT)

FALL SEMESTER

Freshman Engineering Seminar

Engineering Profession

Beginning Composition

Freshman First Class

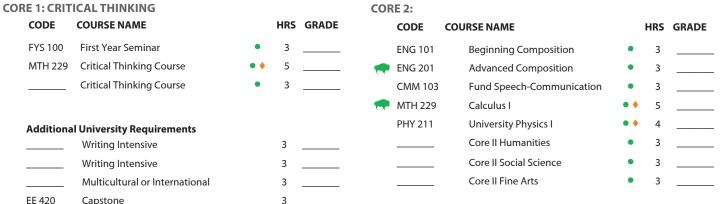
First Year Sem Crit Thinking

FALL SEMESTER

ELECTRICAL AND COMPUTER 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.



MAJOR-SPECIFIC

All Electrical and Computer Engineering majors are required to take the following courses:

	CODE	COURSE NAME	•	HRS	GRADE	5	CODE	COURSE NAME		HRS	G
	MTH 229	Calculus I	• •	5			EE 211	Intro to Comp. Engr. Conc & Desig	•	3	_
	MTH 230	Calculus II	•	4		-	EE 310	Electromagnetic Fields	•	3	_
	MTH 231	Calculus III	٠	4			EE 320	Signals & Systems	٠	3	
	MTH 335	Differential Equations	•	3			EE 330	Random Signals & Systems	•	3	_
	MTH 220	Discrete Structures	•	3			EE 340	Computer Architec & Design	•	4	_
-	CHM 211	Chemistry I	•	3			EE 350	Elec Properties of Materials	•	3	_
	PHY 211	University Physics I	• •	4			EE 360	Control Systems	•	3	_
	PHY 213	University Physics II	•	4			EE 370	Electric Machinery	•	3	_
	PHY 204	General Physics II Lab	•	1			EE 375	Communication Systems I	•	3	_
	ENGR 103	Freshman Engineering Seminar	٠	1			EE 380	Microprocessors	٠	3	
	ENGR 104	Engineering Profession	•	1			EE 401	Communication Systems II	•	3	_
	ENGR 201	Circuits I	•	4			EE 415	Intro to VHDL Design	•	3	
	ENGR 217	Co-Op Prep	٠	1			EE 425	Electric Power Systems	٠	3	
	ENGR 222	Engr. Cost Analysis & Economy	•	3			EE 440	Digital Control	•	3	_
	ENGR 335	Advance Engr. Analysis	٠	3			EE 410 or	Electrical Engineering Design or	٠	3	_
	CS 110	Computer Science I	٠	3			EE 412	Computer Engineering Design			
	EE 202	Circuits II	٠	3			EE 420	Capstone	•	3	
	EE 204	Intro to Digital Systems	٠	3				Technical Elective	•	3	_
	EE 210	Programming Lab	•	3				Technical Elective	٠	3	_

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- EE 410 or EE 412: To be eligible for EE 410 or EE 412 students must have senior standing in BSEE and have completed the following courses: EE 370, 375, and 380.
- · Capstone EE 420: To be eligible to take the capstone design course (EE 420), students must have completed EE 410 or EE 412.
- Technical Electives: At least 2 technical elective courses related to the area of emphasis must be taken. The courses must be approved by the student's advisor and the division chair. The following is a suggested list: EE 445, 447, 448, ME 465, 475, CS 412, 430, or 440.
- 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.E. degree program requires a minimum of 132 credit hours of coursework to graduate.

∢ FYS 100 UNI 100 **TOTAL HOURS** Summer Term (optional):

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CODE

MTH 229

ENGR 103

ENGR 104

ENG 101

CODE EE 210

ENGR 201

MTH 231

PHY 213

CHM 211

PHY 204	Physics II Lab	٠	1			MTH 335	Differential Equations	•	3	
ENGR 217	Co-Op Prep	•	1				_ Core II Social Science (MC/I, WI)	•	3	
TOTAL HO	URS		17			TOTAL HO	DURS		18	
Summer Term (op	tional):									
	FALL SEMESTER						SPRING SEMESTER			
CODE	COURSE NAME		HRS	GRADE		CODE	COURSE NAME		HRS	GRADE
ENGR 335	Advance Engr. Analysis	٠	3		-	ENG 201	Advanced Composition	•	3	
🜪 EE 310	Electromagnetic Fields	•	3			EE 360	Control Systems	•	3	
EE 340	Computer Architecture & Design	٠	4			EE 330	Random Signals & Systems	•	3	
EE 350	Elec Properties of Materials	•	3			EE 375	Communication Systems I	•	3	
EE 320	Signals & Systems	٠	3			EE 370	Electric Machinery	٠	3	
						EE 380	Microprocessors	•	3	
TOTAL HO	URS		16			TOTAL HO	DURS		18	
Summer Term (op	tional):									
	FALL SEMESTER						SPRING SEMESTER			
CODE	CODE COURSE NAME		HRS	GRADE		CODE	COURSE NAME		HRS	GRADE
EE 401	Communication Systems II	٠	3			EE 420	Capstone	٠	3	
EE 410 or	Electrical Engineering Design or	•	3			EE 415	Intro to VHDL Design	•	3	
EE 412	Computer Engineering Design						Technical Elective	•	3	
EE 425	Electric Power Systems	•	3				Technical Elective	•	3	
EE 440	Digital Control	٠	3				Core II Fine Arts	٠	3	
	Core II Humanities (WI, CT)	٠	3							
TOTAL HOURS						TOTAL HO	DURS		15	
Summer Term (optional):			15						-	

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ELECTRICAL AND COMPUTER ENGINEERING

Eletrical and Computer Engineers design and maintain electrical control systems and components. They are multi-skilled and are able to work in projects from the design phase, through development, implementation, testing, up to client follow-up. The impact of their work is seen all over the building industry, services,

		SPRING SEMESTER							
HRS	GRADE		CODE	COURSE NAME		HRS	GRADE		
3			CS 110	Computer Science I	٠	3			
5			MTH 230	Calculus II	•	4			
1			PHY 211	University Physics I	• •	4			
1			CMM 103	Fund Speech Comm	•	3			
3			MTH 220	Discrete Structures	٠	3			
3									
1									

TOTAL HOURS

SPRING SEMESTER HRS GRADE CODE **COURSE NAME** HRS GRADE EE 202 Circuits II 4 З ♦ 4 _____ ENGR 222 Engr. Cost Analysis & Economy • 3 EE 204 Intro to Digital Systems • 3 EE 211 Intro to Comp Engr. Concept & Des • 3

INVOLVEMENT OPPORTUNITIES

- Student Government Association
- Campus Activity Board
- JMFH
- 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
- Education
- Mechanical Engineering

GRADUATION REQUIREMENTS

- Have a minimum of 132 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 twoyear 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

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.



Take a career self-assessment to help determine what majors fit your



30th hour. Participate in a Career Exploration Experience (job shadow)

career goals.





Declare a major before your to help decide on your major and



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.



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



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

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



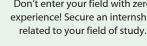
Run for Student Government and represent your fellow students while making a long-term difference on Marshall's campus.



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

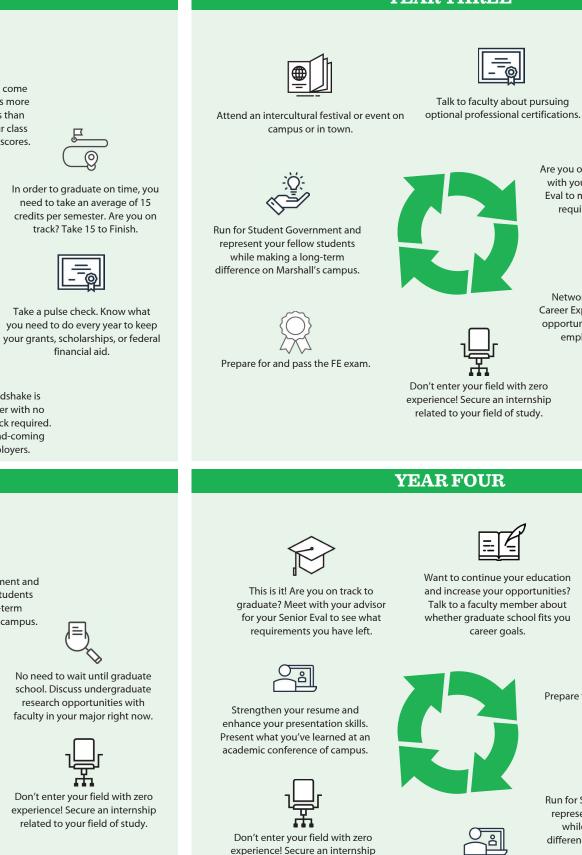


Don't enter your field with zero experience! Secure an internship



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.

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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.

YEAR THREE

ELECTRICAL AND COMPUTER ENGINEERING - 2022-2023





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



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

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

- Information Protection
- Operating Systems
- Computer Networks
- Circuit Design
- Robotics
- Bioelectronics
- Energy Systems
- Digital Systems

Prepare for and pass the FE exam.



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



Marshall University College of Engineering and Computer Sciences One John Marshall Drive Huntington, WV 25755 1-304-696-5453 cecs@marshall.edu marshall.edu/cecs