

2021-2022
Academic Year

Electrical and Computer Engineering, BS Energy Concentration



ABET accredited
Course offerings subject to change
Major credits: 146 (not including GURs)

Admissions information - <https://engineeringdesign.wvu.edu/>
Academic advising available - see contact information below
Pre-major coursework in grey area.
Courses in **BOLD** required to apply to full major.

Fall

Winter

Spring

First Year	MATH 124 (5) Calculus I	MATH 125 (5) Calculus II	APPLY TO MAJOR
	PHYS 161 (5) Physics w/ Calc I	PHYS 162 (5) Physics w/ Calc II	MATH 204 (4) Linear Algebra
	CSCI 140 or 141 (4) Programm. Fundamen.	EECE 108 & 109 (2) Intro to Elect. & Comp	EECE 111 (4) Circuit Analysis I
	ENGR 101 (2) Engineering, Design, Society	CHEM 161 (5) General Chemistry I	PHYS 163 (5) Physics w/ Calc III

ENGR 101 is optional but highly recommended

Second Year	MAJOR COURSES BEGIN	EECE 220 (4) Electronics I	EECE 310 (4) Continuous Systems
	EECE 210 (4) Circuit Analysis II	EECE 244 (4) Embedded Microcontrollers	ECON 206 (4) Microeconomics
	EECE 233 (4) Digital Electronics	MATH 331 (4) Differential Equations	MATH 345 (4) Engineering Statistics
	MATH 224 (5) Multivariable Calculus	ENRG 380 (4) Energy & Environment F or W	EECE 397A (4) Wireless Networking/Applic. *

Third Year	EECE 372 (4) Electromechanical Devices	EECE 374 (4) Energy Processing	EECE 378 (4) Smart/Renewable Power
	EECE 344 (4) Embedded Microcontrollers II	EECE 360 (4) Communication Systems	ENRG 386 (4) Economics of Electricity Markets
	EECE 320 (4) Electronics II	EECE 444 (4) Embedded Systems	EECE 361 (4) Signal Propagation*
		ENRG 320 (3) Energy Science	

Fourth Year	ENG 302 (5) (WP) Technical Writing	EECE 472 (4) Project Research and Develop.	EECE 473 (4) Project Implementation
	EECE 480 (4) Control Systems	EECE 397B (4) Machine Learning*	Tech Elective
	EECE 471 (2) Project Proposal	Tech Elective	

Engineering & Design

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<http://engineeringdesign.wvu.edu>

Pre-major Advisor:

Lisa Ochs lisa.ochs@wwu.edu

Notes and Exceptions

Pre-majors apply for the major at the end of spring and/or summer quarters
Students not enrolled in MATH 124 and PHYS 161 fall quarter may not finish in four years
Math 341 may be substituted for MATH 345; CSCI 141 may be substituted for CSCI 140
*Must complete one of three courses: EECE 361 or EECE 397A or EECE 397B
Students must complete General University Requirements in addition to major courses

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Admissions

Students must first be accepted by the university. The program accepts major applications at the end of spring and summer quarters. Accepted students start major coursework fall quarter.

Required coursework to apply		Required questionnaire	Admissions statistics
MATH 124	Calculus II	Applications will include a required questionnaire. The questionnaire will ask about the applicant's goals, demonstrated leadership experiences, collaboration and teamwork examples, strategies for studying, and ability to overcome adversity.	The program typically accepts 48 students annually; 36 Electronics and 12 Energy students.
MATH 125	Calculus II		
MATH 204	Linear Algebra		
PHYS 161	Physics w/ Calc I		
PHYS 162	Physics w/ Calc II		
CSCI 140 or 141	Programming Fundamentals		
EECE 111	Circuit Analysis I		
EECE 108/109*	Into to Electrical and Computer Engineering	Applications due	
*may be waived for transfer student admissions		Applications are accepted at the end of every spring quarter and the beginning of fall quarter. Accepted students start major coursework fall quarter. See department website for specific dates.	
EECE 108 must be completed at next opportunity		Transfer students	
Other courses considered, but not required to apply		Transfer students are encouraged to contact the pre-major advisor to discuss course equivalencies and transfer timing.	
MATH 224	Multivariable Calc and Geometry I		
MATH 331	Differential Equations		
MATH 345	Engineering Statistics		
PHYS 163	Physics w/ Calc III		
CHEM 161	General Chemistry I		

Technical Electives

Majors are required to complete 6 credits of technical electives before graduation. Check the website for approved courses.

Faculty Contact Information

Associate Professor Xichen Jiang, jjiangx2@wwu.edu
 Assistant Professor Junaid Khan, khanj@wwu.edu
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