

2022-2023  
Academic Year

## Electrical and Computer Engineering, BS

### Energy Concentration

(students graduating 2024 or later)



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

Second Year	<b>MAJOR COURSES BEGIN</b>	EECE 220 (4) Electronics I	EECE 310 (4) Continuous Systems
	EECE 210 (4) Circuit Analysis II	EECE 244 (4) Embedded Microcontrollers	EECE 320 (4) Electronics II
	EECE 233 (4) Digital Electronics	MATH 331 (4) Differential Equations	MATH 345 (4) Engineering Statistics
	MATH 224 (5) Multivariable Calculus		

Third Year	EECE 311 (4) Discrete Systems	EECE 360 (4) Communication Systems	EECE 401 (1) Capstone Project Intro.
	EECE 344 (4) Embedded Microcontrollers II	EECE 444 (4) Embedded Systems	EECE 480 (4) Control Systems
	EECE 372 (4) Electromechanical Devices	EECE 374 (4) Energy Processing	EECE 378 (4) Power Sys Anal. & Smart Grid
			ENG 302 (WP) Technical Writing

Fourth Year	EECE 477 (3) Energy Capstone Proj. I	EECE 478 (3) Energy Capstone Proj. II	EECE 479 (3) Energy Capstone Proj. III
	Higher Level EECE or Technical Electives	Higher Level EECE or Technical Electives	Higher Level EECE or Technical Electives

**Engineering & Design**  
 516 High Street, Bellingham, WA 98229  
[ENGD@wwu.edu](mailto:ENGD@wwu.edu) | 360.650.3380  
<http://engineeringdesign.wvu.edu>

**Pre-major Advisor:**  
 Lisa Ochs      [lisa.ochs@wwu.edu](mailto:lisa.ochs@wwu.edu)

#### NOTES & 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  
 Students must complete General University Requirements in addition to major courses  
 \* ENGR 101 is optional but recommended

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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.
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*	Intro to Electrical & Computer Engineering		
* 109 may be waived for transfer student admissions, but 108 must be taken at first opportunity.			
<b>Other courses considered, but not required to apply</b>			
MATH 224	Multivariable Calc and Geometry I	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.	
		<b>Transfer students</b>	
MATH 331	Differential Equations	Transfer students are encouraged to contact the pre-major advisor to discuss equivalencies and transfer timing.	
MATH 341 or 345	Engineering Statistics		
PHYS 163	Physics w/ Calc III		
CHEM 161	General Chemistry I		

### Higher Level EECE Electives and Technical Electives

Students must complete 20 credits of higher level EECE electives; for the energy concentration this includes EECE 372, 374, 378, and two additional courses. Students must also complete 10 credits of tech electives. See the EECE advising website for a list of Higher Level EECE and approved tech

### Faculty Contact Information

Associate Professor Xichen Jiang, [jiangx2@wwu.edu](mailto:jiangx2@wwu.edu)  
 Assistant Professor Junaid Khan, [khanj@wwu.edu](mailto:khanj@wwu.edu)  
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updated: November 2021