# 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.wwu.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 Algegra	
	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, Deisgn, Society	CHEM 161 (5) General Chemistry I	PHYS 163 (5) Physics w/ Calc III	
ENGR 101 is optional but highly recommended				
Second	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	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**

516 High Street, Bellingham, WA 98229

ENGD@wwu.edu | 360.650.3380

http://engineeringdesign.wwu.edu

**Pre-major Advisor:** 

Lisa Ochs <u>lisa.ochs@wwu.edu</u>

#### **Notes and Exceptions**

Pre-majors apply for the major at the end of spring and/or summer quarters

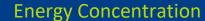
Students not enrolled in MATH 124 and PHYS 161 fall quarter may not finish in four years

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

Studens must complete General University Requirements in addition to major courses

# Electrical and Computer Engineering, BS





## **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

MATH 124	Calculus II
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 Analsis I

EECE 108/109\* Into to Electrical and Computer Engineering

\*may be waived for transfer student admissions EECE 108 must be completed at next opportunity

### Other courses considered, but not required to apply

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

#### Required questionnaire

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.

#### Applications due

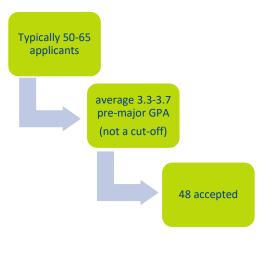
Applications are accepted at the end of every spring quarter and the beginning of fall guarter. Accepted students start major coursework fall quarter. See department website for specific dates.

#### Transfer students

Transfer students are encouraged to contact the pre-major advisor to discuss course equivalencies and transfer timing.

#### Admissions statistics

The program typically accepts 48 students annually; 36 Electronics and 12 Energy students.



## **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, jiangx2@wwu.edu

Assistant Professor Junaid Khan, khanj@wwu.edu

Professor Andy Klein, kleina5@wwu.edu Associate Professor Ying Lin, liny4@wwu.edu Associate Professor John Lund, lundi9@wwu.edu

Professor Todd Morton, toddm@wwu.edu

Assistant Professor Amr Radwan, radwana@wwu.edu

Assistant Professor Bhaskar Ramasubramian

updated: May 2021