Engineering
Concentration: Electrical Engineering
Bachelor of Science in Engineering
2025-2026

General Areas of Service: An electrical engineer is usually involved in the conception, design, manufacturing, and testing of electrical equipment and systems. Electrical engineering projects are often related to communications, computers, consumer or industrial electronics, scientific or industrial instruments, aerospace systems, electric power systems, defense electronics and systems, or medical electronics. A variety of industries are open to the electrical engineering graduate. In addition, employment opportunities are numerous from the government. Many also advance to managerial or administrative positions or establish their own firms.

Professional Training: A bachelor's degree in engineering, with a concentration in electrical, is the minimum educational requirement to enter this profession, although graduate training is preferred or required for some jobs.

Job Outlook: The Bureau of Labor Statistics (BLS) states, "employment of electrical and electronics engineers is projected to grow 3 percent from 2022 to 2032, slower than the average for all occupations. About 20,100 openings for electrical and electronics engineers are projected each year, on average, over the decade." The decline of manufacturing and telecommunications in the U.S. is contributing to slower job growth, though demand for electrical engineers will be strong in areas involving development and technological research. Electrical engineers will also be in high demand as the need for distribution systems for new technologies and advancements to the current power grid develop according to the BLS. (See www.bls.gov)

Earnings: In their May 2023 salary survey, the Bureau of Labor Statistics reports the median annual wage for electrical engineers as $106,950 with the lowest 10 percent earning less than $62,360 and the top 10 percent earning more than $162,930. (See www.bls.gov)

Community Impact Certificate: Engineers with a heart for service are encouraged to pursue the Community Impact Certificate. This certificate is designed to provide students with a transformative complement to their chosen academic education at Walla Walla University. This program aims to engage all of its students deeply, fostering a focused community that actively learns, grows and serves together. When the requirements for the emphasis are met, they will receive a certificate on their transcript and diploma that can be seen as representing a degree of expertise in preparing them for humanitarian careers. It requires a few additional classes beyond the standard engineering classes. The number of extra classes can be minimized if general studies classes are chosen carefully.

Note: Students should take pre-calculus in high school or during the summer to allow them to enroll in Calculus I during their first quarter. Failure to complete Calculus II prior to the start of the second year will delay the student's graduation.

Students are expected to take 28 credits of Technical Electives to meet their degree requirements. Technical electives are to be selected with the approval of the student's Engineering advisor.

Engineering Phase Advancement: In the interest of having students matched with majors in which they can succeed, the School of Engineering has established three phases for students to advance through.

Before graduation, all students must take an exit exam.

SCHOOL OF ENGINEERING

Chan Shun Pavilion
(509) 527-2765

Websites
Walla Walla University
University Bulletin

School of Engineering

Faculty
Dean
Delvin Peterson

Associate Dean
Bryce Cole

Advisors
Rob Frohne
Natalie Smith-Gray
Delvin Peterson

Professional Organizations
Institute of Electrical and Electronics Engineers

Suggested Degree Path

TOTAL CREDITS REQUIRED: 200 cr. GENERAL STUDIES REQUIREMENTS: 43 cr. See the Undergraduate Bulletin for Details

The chart below details one suggested path a student may take to complete a degree in Engineering, with a concentration in Electrical. Cognates are listed in *italics*.

Freshman Year

Fall Courses	Hours
Intro to Engineering (ENGR 121)	2
Calculus I (MATH 171)	4
General Chemistry & Lab (CHEM 141 & 144)	4
Fundamentals of Programming I (CPTR 141)	4
General Studies	2
Total	16

Winter Courses	Hours
Intro to CAD (ENGR 122)	2
Calculus II (MATH 172)	4
General Chemistry & Lab (CHEM 142 & 145)	4
Fundamentals of Programming II (CPTR 142)	4
Intro to Analytical Writing (ENGL 121)	3
Total	17

Spring Courses	Hours
Intro to System Design (ENGR 123)	2
Intro to Linear Algebra (MATH 239)	4
Intro to Research Writing (ENGL 122)	3
General Studies	7
Total	16

Sophomore Year

Fall Courses	Hours
Engineering Mechanics (ENGR 221)	3
Sophomore Colloquium (ENGR 295)	0
Calculus III (MATH 273)	4
Comp. Org. & Assembly Lang. (CPTR 280)	3
Principles of Physics & Lab (PHYS 251 & 254)	4
Research Writing (ENGL 223)	3
Total	17

Winter Courses	Hours
Engineering Mechanics (ENGR 222)	3
Differential Equations (MATH 286)	3
Principles of Physics & Lab (PHYS 252 & 255)	4
General Studies	6
Total	16

Spring Courses	Hours
Engineering Mechanics (ENGR 223)	3
Circuit Analysis (ENGR 228)	4
Calculus IV (MATH 274)	4
Principles of Physics & Lab (PHYS 253 & 256)	4
General Studies	2
Total	17

Junior Year

Fall Courses	Hours
Linear Systems Analysis (ENGR 350)	4
Digital Logic (ENGR 354)	3
Engineering Electronics I (ENGR 356)	4
Junior Seminar (ENGR 396)	1
Colloquium (ENGR 495)	0
General Studies	4
Total	16

Winter Courses	Hours
Thermodynamics (ENGR 332)	3
Embedded System Design (ENGR 355)	3
Engineering Electronics II (ENGR 357)	4
-Signals & Systems (ENGR 455)	4
General Studies	3
Total	17

Spring Courses	Hours
Engineering Economy (ENGR 326)	4
Junior Seminar (ENGR 397)	0
Probability & Statistics (MATH 315)	4
Electives	4
General Studies	5
Total	17

Senior Year

Fall Courses	Hours
Digital Design (ENGR 433)	4
+Electromagnetic Fields (ENGR 451)	4
Capstone Engineering Project (ENGR 496)	1
Electives	8
Total	17

Winter Courses	Hours
+Electrical Power Engineering (ENGR 430)	4
Colloquium (ENGR 495)	0
Capstone Project (ENGR 497)	2
Electives	8
General Studies	3
Total	17

Spring Courses	Hours
+Physical Electronics & Lab (ENGR 312 & 315)	4
Capstone Engineering Project (ENGR 498)	2
Electives	8
General Studies	3
Total	17

+ Offered even years only
- Offered odd years only

Office of Academic Advisement
Canaday Technology Center, Room 311 • (800) 558-2132 • (509) 527-2132