



# ELECTRICAL & COMPUTER ENGINEERING

**ELECTRICAL AND COMPUTER ENGINEERS DEVELOP NEW TECHNOLOGIES AT THE CUTTING EDGE OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE.**



## QUICK FACTS

759 undergraduate students in the 2024–2025 academic year

#1 startup generator of all UW departments for over 10 consecutive years

52 research labs in the department

66% of undergraduate ECE students pursue at least one internship

248 of undergraduate ECE students go on to pursue graduate studies following graduation

Consistently ranked in the Top 20 EE / ECE departments in the country by *U.S. News & World Report*

Electrical and computer engineering (ECE) is a broad, dynamic and rapidly evolving field that encompasses a wide spectrum of technical areas related to electrical engineering and computer science. ECE involves the design of devices and systems that can range greatly in scale — from microchips to multinational electrical power grids.

## WHAT DO ELECTRICAL AND COMPUTER ENGINEERS DO?

Electrical and computer engineering has a vast range of potential applications which stem from the prevalence of electrical systems and computers in everyday life. Graduates with degrees in electrical and computer engineering work in areas that include power systems, computing systems and the semiconductor industry.

As a career, ECE offers flexibility with transferable knowledge between a wide range of sub-fields. Our work is driven by innovation, exploration and a passion for problem solving.

## OPTIONAL ACADEMIC PATHWAYS IN ECE

ECE offers students myriad pathways to receive their degree. Students can also take a breadth of courses rather than specializing in specific pathways to craft a degree that uniquely suits their interests.

*SUSTAINABLE ENERGY SYSTEMS*

*NEUROTECHNOLOGY*

*VLSI / DIGITAL SYSTEMS DESIGN*

*PHOTONICS*

*EMBEDDED SYSTEMS*

*MICROELECTRONICS AND*

*NANOTECHNOLOGY*

*SENSING AND COMMUNICATION*

*CONTROL SYSTEMS*

*COMPUTING*

*COMPUTER ARCHITECTURE*

*MACHINE LEARNING*

*QUANTUM TECHNOLOGIES*

*INTEGRATED SYSTEMS*

## WHERE DO ECE ALUMNI WORK?

<b>Air and space</b>	<i>Communications, power electronics and drives, controls   Boeing, SpaceX, Blue Origin, NASA</i>
<b>Computing, data and digital technologies</b>	<i>Digital VLSI, embedded computing systems   Microsoft, Amazon, Meta, Google</i>
<b>Environment, sustainability and energy</b>	<i>Sustainable power systems, power electronics and drives   Public Utilities, Tesla, Jet Propulsion Lab (JPL)</i>
<b>Health and medicine</b>	<i>Biomedical instrumentation, neural engineering   Medtronic, Philips</i>
<b>Infrastructure, transportation and society</b>	<i>Power electronics and drives, communications, controls   Honeywell, Boeing, Seattle Metro</i>
<b>Robotics and manufacturing</b>	<i>Integrated systems, controls   Honeywell, BluHaptics</i>

## WHAT MAKES ECE SPECIAL?

ECE offers students many flexible pathways to pursue a degree that quickly adapts to technological advances in research areas such as neural engineering, sustainable energy, quantum computing, data science, photonics and nanotechnology.

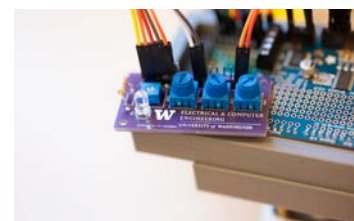
Students can choose to gain broad knowledge of the field or focus on specialized areas. The flexibility of the major enables students to pursue minors, double degrees, study abroad opportunities, research or internships — enhancing the educational experience for students while they obtain a degree highly sought after by employers.

As seniors, ECE students choose between culminating capstone project options, either student driven or industry-led. ECE has several associated student organizations including the student chapter of IEEE and IEEE-WIE (Women in Engineering). The department offers strong internship and career opportunities thanks to our strong interdisciplinary partnerships and proximity to leading technology companies. Research by our faculty and students is world-class, sparking groundbreaking discoveries and innovative startup companies that have broad economic, societal and human impact.

## HOW CAN I LEARN MORE?

If you think the ECE department might be for you, there are many opportunities to explore more.

- Perform research in a lab before placing into a major
- Join a club in an electrical engineering role
- Check out EE 215 Fundamentals of Electrical Engineering
- Come to an [information session](#) for prospective students
- Attend [drop in hours](#) for prospective students designed for brief questions
- Meet with an ECE peer adviser to learn about the student experience



[UNDERGRADECE@UW.EDU](mailto:UNDERGRADECE@UW.EDU) | [ECE.UW.EDU](http://ECE.UW.EDU)



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