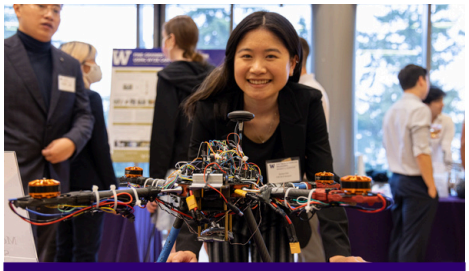
# ELECTRICAL & COMPUTER ENGINEERING

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



### QUICK FACTS

767 undergraduate students in the 2023-2024 academic year

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

52 research labs in the department

65% of undergraduate ECE students pursue at least one internship

24% 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 multinational electrical power grids to nanoscale computer chips.

## WHAT DO ELECTRICAL AND COMPUTER ENGINEERS DO?

Electrical and computer engineering has a vast range of potential applications which stem from the prevalence of computers and electrical systems 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

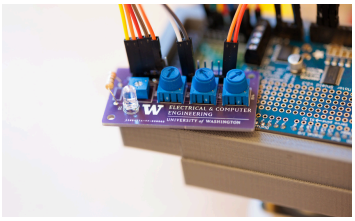
ECE offers students myriad pathways to receive their degree. Students can also take a breadth of courses rather than specializing in specific pathways to craft a degree that uniquely suits their interests.

| | |
|---|---|
| *SUSTAINABLE ENERGY SYSTEMS* | *SENSING AND COMMUNICATION* |
| *NEUROTECHNOLOGY* | *CONTROL SYSTEMS* |
| *VLSI / DIGITAL SYSTEMS DESIGN* | *COMPUTING* |
| *PHOTONICS* | *COMPUTER ARCHITECTURE* |
| *EMBEDDED SYSTEMS* | *MACHINE LEARNING* |
| *MICROELECTRONICS AND NANOTECHNOLOGY* | *QUANTUM TECHNOLOGIES* |

## WHERE DO ECE ALUMNI WORK?

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

## 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 the ECE Student Advisory Council (SAC). 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

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