



Electrical and Computer Engineering

What we do will surprise you!

ece.osu.edu



Why Electrical and Computer Engineering?

Electrical engineers and computer engineers work at the frontier of high technology and are involved in research, the creation of new ideas, the design and development of new products and technologies, manufacturing and marketing activities.

Change the world, become an electrical or computer engineer

ECEs **help save lives** by designing medical technologies like monitoring devices, surgical robots and lasers; **help preserve the environment** by developing hybrid electric vehicles and solar or wind power; **improve the safety of critical high technology systems** by designing anti-skid braking systems and nuclear power plant controls; and **reduce human toil in manufacturing** with computer automation technologies. Pursue an exciting career and make a difference by helping people worldwide.

Invent, create, design key technologies

Challenge what is possible. Invent new technologies and innovations in a range of fields, from nanotechnology to biotechnology. Electrical engineers find innovative ways to use electricity, electric materials, and electrical and magnetic phenomena (like radio waves and signals) to make people's lives better. Computer engineers design computer systems, both hardware and software, to create new technology and meet new societal needs.

Work with smart people on cool technologies

Electrical and computer engineers create innovative, practical solutions and work with other smart, inspiring people to invent, design and build technologies and products that matter. ECEs design high-profile technologies and products, including medical devices, tablet computers, smart phones, video games, wireless networks, 3D television and high-fidelity audio.

"I was once told, 'if you want to save the world, become an engineer.' I started in an undecided engineering survey class my first term. Electrical engineering is the major that most appealed to me. The curriculum is challenging and the material is interesting."

Kate Scherer
ECE Class of '12



Electrical and computer engineers enjoy diverse careers in various fields, including:

Automation

Nanotechnology

Biotechnology

Renewable Energy

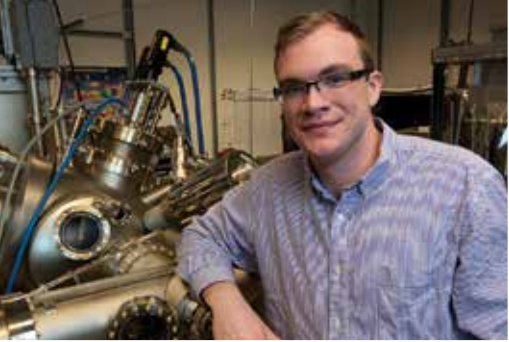
Entertainment

Robotics

Homeland Security

Telecommunications





Why Electrical and Computer Engineering at **Ohio State**?

We provide a top-notch education.

Ohio State's accredited ECE program is the top ranked electrical and computer engineering program in Ohio and is consistently ranked in the top 10 percent nationally.

Get more value for your money at Ohio State.

SmartMoney magazine ranks Ohio State as a top university for return on tuition investment.

The critical engineering foundation you need, the options you want.

Our program is designed around a core curriculum that establishes a strong engineering foundation, with electives that allow the flexibility to specialize in the technology areas that interest you most.

We offer a broad variety of courses and labs, enabling students to gain knowledge and hands-on experience in topics like photonics, electrical energy conversion, high voltage engineering, integrated circuit fabrication, microcontrollers, microprocessors, signal processing and much more.

Our world-renowned faculty teach all lecture courses and are highly committed to education.

Hands-on engineering from day one.

Ohio State's unparalleled first-year engineering experience program enables qualified students to take engineering courses beginning their first semester. The program includes a team-based design-build project that provides early exposure to many aspects of engineering including design, testing, fabrication, project management and budgeting.

Use the latest equipment, learn advanced concepts early.

With modern lab spaces and a redesigned curriculum, the ECE department exploits technology to expose undergraduate students to advanced concepts early, and empowers self-guided learning on state-of-the-art equipment through video instruction and carefully designed manuals.

Learn more about our program: ece.osu.edu/futurestudents

"I really like the ECE program, because all of the professors really care about the students and want to see you succeed."

Bethany Halasz, ECE Class of '11

Program Highlights

BS/MS Program

ece.osu.edu/currentstudents/undergrad/bsms

Earn a master's degree in less time. Our combined BS/MS program allows qualified students to start on a master's degree while completing a bachelor's degree.

Engineering Honors

ece.osu.edu/futurestudents/undergrad/honors

The Engineering Honors Program challenges superior students by offering them access to more advanced levels of study. Honors students are eligible to receive scheduling priority, enroll in honors courses, apply for residence in an honors living-learning center and participate in an undergraduate research project and senior research thesis.

Research ece.osu.edu/currentstudents/undergrad/ugresearch

As one of the largest and most extensive research universities, Ohio State offers many student research opportunities. Under a faculty member's direction, students can work on a research problem that may involve laboratory work, computer programming, data analysis and literature searching.

Internships & Co-Ops ecs.osu.edu

The majority of Ohio State engineering students—more than 80 percent—gain real-world experience outside the classroom through co-ops, internships or research projects. The Engineering Career Services office assists students in finding opportunities and launching their careers.

Student Projects engineering.osu.edu/studentorgs

The College of Engineering offers 30 student project teams. Students can help Buckeye Current set electric motorcycle speed records, travel to Haiti to bring solar-powered light to areas of critical need with Solar Outreach and Education, build a solar-powered home with Solar Decathlon and more.

Professional & Honor Societies

ece.osu.edu/currentstudents/studentlife

The active Institute of Electrical and Electronics Engineers OSU Student Chapter helps students create a network of faculty, peers and engineers from industry. Eta Kappa Nu, the electrical engineering honorary society, provides tutoring, industry speakers and student/faculty events.

Study Abroad oia.osu.edu/study-abroad

Ohio State offers numerous opportunities to learn about cultures, including more than 100 study abroad programs in 40 countries around the world.

Women in Engineering wie.osu.edu

WiE supports women engineering students through peer mentoring, networking events with professional women engineers and community service opportunities.

Minority Engineering Program engineering.osu.edu/mep

This area develops programs and offers services to assist in the recruitment and retention of engineering students of African American, Hispanic and Native American descent.



"Get involved! Ohio State has so much to offer. The college alone has 30 project teams and OSU has over 1000 student organizations. Chances are pretty good that you'll find one of them interesting. You're not only giving yourself a more well-rounded practical experience, you're also making yourself more appealing to employers."

Robert Breetz, ECE student



Looking for an Exciting, Rewarding Career?

Electrical and computer engineers are in high demand and Ohio State's excellent reputation translates into global job opportunities.

An ECE degree can take you anywhere

A degree in electrical and computer engineering from Ohio State opens the door to a wide range of career opportunities. Our program provides a solid foundation in high technology problem-solving and enables engineers to expand their careers into other fields including business (with an MBA you could manage a high technology firm), medicine (obtain an MD to practice medicine or conduct research in medical technologies) and law (you could specialize in patent law).

Many ECEs become entrepreneurs, launching new businesses by applying electrical and computer engineering systems and technology to new areas. Around 15% of our graduates attend graduate school to earn a master's or doctorate degree in electrical and computer engineering.

Land your dream job, make the big bucks!

ECEs are not only highly respected, they are highly paid. **The average beginning salary for Ohio State ECE graduates with a bachelor's degree is approximately \$61,000 per year.**

Both large and small companies heavily recruit Ohio State's electrical and computer engineering graduates for positions in automotive, aerospace, communications, entertainment, military, manufacturing and other industries. Some of the most recognized employers are: American Electric Power, Apple, AT&T, Battelle, Boeing, Cisco Systems, General Electric, IBM, Intel, Lockheed Martin, Marathon Petroleum, Mettler Toledo, Microsoft, Motorola, Northrop Grumman, Procter & Gamble, Raytheon, Texas Instruments and Verizon Wireless.

"I think the ECE program gives you a lot of great opportunities once you graduate. It's very intensive, so when people see that you have an ECE degree from Ohio State it's greatly respected. Once you get that ECE degree you can choose to stay in electrical engineering, or you can branch out and do a lot of great things."

Derrick Amanor
ECE Class of '13



Get to Know Us

Visit the ECE website to meet our students and faculty, and learn more about our programs.

ece.osu.edu/futurestudents

Visit

Get a closer look at Ohio State by visiting campus. While you're here, make some contacts in the College of Engineering, stroll across the oval and check out some of the engineering labs and classroom spaces.

campusvisit.osu.edu

Apply

Students who have been admitted to Ohio State indicating engineering as their area of interest and having competitive ACT or SAT scores will be directly enrolled as pre-engineering students in the College of Engineering. Students not eligible to directly enroll in engineering may be reviewed on a case-by-case basis. Apply for admission to Ohio State online.

apply.osu.edu



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