

ELECTRICAL ENGINEERING



Electrical engineers harness energy to power change, imagining and driving technological innovations that make the world a better place. Rapidly growing fields such as autonomous systems & robotics, biomedical devices, artificial intelligence, cybersecurity and renewable energy depend on the expertise of electrical engineers. They engineer everything from the smallest components to the most complex systems, and master the power of energy, light, circuits and systems to empower solutions to the world's biggest challenges.

FOR MORE INFORMATION, VISIT:

www.engr.uky.edu/explore/electrical-engineering

ELECTRICAL ENGINEERING CURRICULUM SAMPLE

This is a sample list of classes a student will take to pursue a degree in electrical engineering. As part of the electrical engineering curriculum, students must complete the pre-engineering requirements, major requirements and general education coursework, called UK Core.

Note: This sample represents one of several paths to an electrical engineering degree. Consult the departmental website for details on specific paths.

Freshman Year

Calculus I and II	8
Chemistry I and Physics I and Lab	9
Composition & Communication I and II	6
Engineering Exploration I and II	3
Fundamentals of Engineering Computing	2
Introduction to Program Design	4
Total hours	32

Sophomore Year

AC Circuits	4
Calculus III and IV	7
Circuits I	4
Digital Logic Design	4
Introduction to Embedded Systems	4
Physics II and lab	5
UK Core Course	6
Total hours	34

Junior Year

EE Laboratory Electives	4
Electromechanics	3
Engineering/Science Elective	3
Intro to Electronics	3
Intro to Engineering Electromagnetics	4
Intro to Probability or Engineering Stats	3
Signals and Systems	3
Technical Electives	6
UK Core Course	3
Total hours	32

Senior Year

EE Capstone Design I and II	6
EE Technical Electives	12
Engineering/Science Elective	3
Math/Statistics Elective	3
UK Core Courses	6
Total hours	30

PURSuing ELECTRICAL ENGINEERING AT UK

Electrical engineering students at UK learn to envision, imagine and create the technologies that power the world. Our faculty members bring their cutting-edge research in robotics, artificial intelligence, cybersecurity, aerospace, nanotechnology and renewable energy directly into the classroom, where students get hands-on experience in state-of-the-art laboratory facilities. In the ECE Engineering Prototype and Innovation Center (EPIC), students use advanced fabrication, 3D printing and circuit prototyping tools.

CAREER PROSPECTS IN ELECTRICAL ENGINEERING

Electrical engineering is consistently one of the highest-paid and most in-demand careers. Nearly every industry relies on electrical engineers to create both the underlying power and communications infrastructures for the consumer products that power our lives. When radical new technologies appear that will dramatically change our technological landscape, one thing is certain: they will come from the imaginations of electrical engineers.

UNDERGRADUATE RESEARCH IN ELECTRICAL ENGINEERING

Our faculty's diverse range of research expertise opens the door for undergraduate students to participate in exciting and impactful research projects. Undergraduate research opportunities include all fields of study: robotics, artificial intelligence, cybersecurity, aerospace, nanotechnology, renewable energy and more.

CO-OPS

UK provides numerous opportunities to co-op with companies. Students can co-op during the fall, spring or summer semesters. Those who complete three co-op rotations will receive formal recognition on their transcript and a special cord at graduation. Students work with the Co-op Director and their academic advisor to determine the best timing for their co-op experience.

The University of Kentucky's electrical engineering program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

Revised August 2021. Information subject to change. For the most up-to-date information on the UK College of Engineering, visit www.engr.uky.edu.