

EXPLORE ELECTRICAL ENGINEERING AT THE UNIVERSITY OF KENTUCKY



“A graduate degree in electrical engineering from UK can help you chart a lucrative, satisfying career path in industry, academia and more. Please contact us for more information about how you can get started today.”

*-Caicheng Lu
Director of Graduate Studies*

Contact us today to tour our facilities and meet our faculty.

Apply online at: www.research.uky.edu/gs

Department of Electrical and Computer Engineering

453 F. Paul Anderson Tower

Lexington, KY 40506-0046

(859) 257-8042

ecedgs@uky.edu

UNIVERSITY OF
KENTUCKY
College of Engineering

An Equal Opportunity University

see blue.



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KENTUCKY
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WHY PURSUE GRADUATE STUDIES IN ELECTRICAL ENGINEERING AT UK?

Our graduate students collaborate with faculty researchers in the department and across the College of Engineering to make the technological advances that can improve everyday life, whether through faster communications, greener energy transmission and distribution, enhanced national security or more effective and less expensive health care. They also work across disciplinary boundaries with researchers in other engineering departments and in world-class facilities like the Center for Nanoscale Science and Engineering. Students can pursue master's and doctoral degrees in electrical engineering and even obtain a graduate certificate in power and energy through the Power and Energy Institute of Kentucky.

WHAT AREAS OF RESEARCH WILL BE AVAILABLE TO ME?

Electrical engineering is a diverse field with plenty of opportunities for specialization. Here is a sample of what you can research under the guidance of our expert faculty.

CONTEMPORARY RESEARCH AREAS

RESEARCH PROJECTS

Micro- and Nano-scale Devices, Materials and Manufacturing and Integrated Circuit

Nanoscale electronic, photonic and magnetic devices with applications in energy, health care, chemical sensing, computing, communications and data storage. Advanced nano-manufacturing and nanomaterials. Integrated circuits (VLSI) and systems (MEMS).

Electromagnetics

High-performance electromagnetic analysis and design of circuits, antennas, and materials in very complex environment

Computer Engineering

Supercomputing, high performance distributed computing, embedded systems, quantum computing, novel computing

Communications, Signal Processing and Controls

Image and audio analysis, 3-D imaging, computational photography, cyber physical systems and security and manufacturing system control

Electromechanics and Power

AC machines, power electronics, power systems and renewable energy integration



AVAILABLE DEGREES AND REQUIREMENTS

MASTER OF SCIENCE IN ELECTRICAL ENGINEERING DEGREE (MSEE)

For the MSEE degree, both the thesis and non-thesis options are available. The thesis option (Plan A) requires 24 hours of acceptable graduate level course credits plus satisfying the requirements for the thesis. The non-thesis option (Plan B) requires 30 hours of acceptable graduate course credit hours plus an additional three hours of a research course on the special problems project. All students in their first semester of regular graduate work will select an academic advisor who will assist the student in formulating a graduate plan of study. This plan contains a tentative course list and a proposed thesis area or specialized project topic.

PH.D. IN ELECTRICAL ENGINEERING DEGREE

For the Ph.D. degree, students who start with a bachelor's degree needs to complete 42 hours of course work. Students who have a master's degree from an accredited institution must complete 18 hours of course work (students who have a master's degree from a non-accredited institution must complete 24 hours of course work). To obtain a Ph.D. degree in electrical engineering, in addition to meeting the general Graduate School requirements, students need to:

- Earn sufficient graduate credit hours as stated above
- Satisfy the writing requirement
- Pass the Ph.D. written qualifying examination
- Pass the Ph.D. oral qualifying examination
- Present and satisfactorily defend the dissertation