Electrical and Computer Engineering

▶ The University of Rochester's Department of Electrical and Computer Engineering (ECE) offers undergraduate and graduate programs that enable students to explore the breadth of topics that make up modern ECE. These range from new devices for sensing, communicating, and computing; integrated circuits and computer systems; and signal processing and communication systems. Such knowledge can be applied to a variety of industries that have broad societal impact, including health care, energy, national security, manufacturing, telecommunications, consumer goods, and media and entertainment.

The department focuses on teaching the fundamental aspects of electrical and computer engineering, including circuits and systems, electromagnetics, microelectronics, digital systems, computer architecture, and signals and communications. Many students enrich their learning experience through research, internships, and even study abroad.

The collegial atmosphere encourages close interaction between faculty and students. Upon graduation, many undergraduates enter fields as different as microelectronics, music, and entertainment, while others pursue advanced studies.

Points of Pride

Collaborative Approach

The department provides leadership for University-level initiatives ranging from nanotechnology and energy to regional economic development through technology transfer and interdisciplinary research between technology and the arts. The core technologies explored in ECE are applicable throughout every aspect of the University and lend themselves to close collaboration with the Eastman School of Music and the University of Rochester Medical Center.

Distinguished Faculty

In 2012, Wendi Heinzelman, professor of electrical and computer engineering and dean of graduate studies for Arts, Sciences & Engineering, was named a distinguished scientist by the Association for Computing Machinery. Associate Professor Gaurav Sharma was named a 2013 fellow by the Institute of Electrical and Electronics Engineers. Distinguished Professor and Chair of ECE Mark Bocko received the Goergen Award for Excellence in Undergraduate Teaching in 2012.

Sponsored Research

Master's and doctoral students work on projects sponsored by federal agencies such as the National Science Foundation and the National Institutes of Health; various agencies, including the Department of Defense; and many companies from small start-ups to large corporations.

"The professors are always available, and they truly care about our success. I appreciate all the research and collaborative opportunities I've had here, and I especially like how hands-on the labs are. I know Rochester has prepared me well for the future."

Alicia Alarie '13
electrical and computer engineering major and Harmon S. Potter Scholarship recipient

How You Can Help

Gifts to the department will help enrich the academic experience for ECE students. Consider any of these giving opportunities:
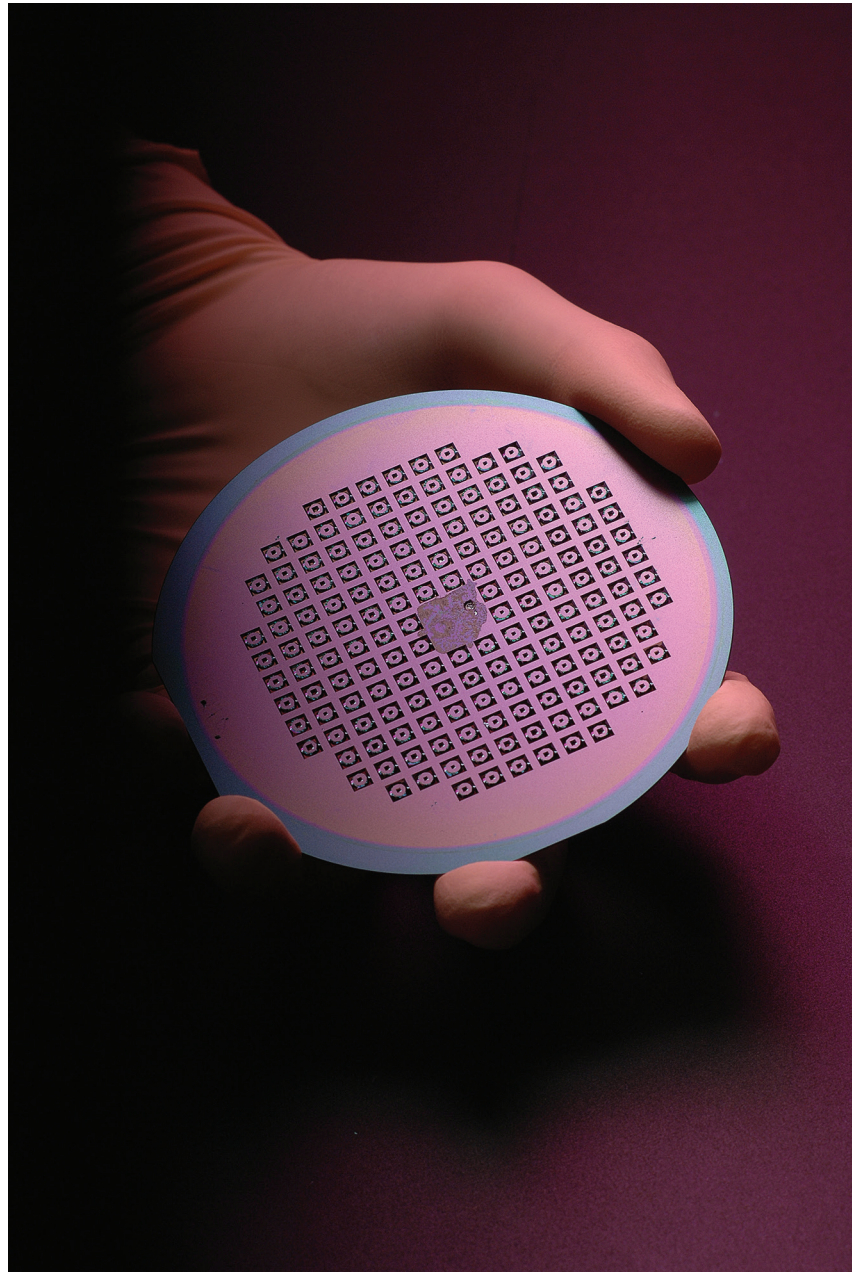
Students

Supporting students is one of the highest priorities at Rochester. Create a scholarship, as these encourage underrepresented groups to pursue electrical and computer engineering. Or provide funds to facilitate participation in conferences, professional development programs, and prestigious national competitions, such as the Mini Baja and Solar Splash contests. The department is also building a professional network for its students, identifying alumni and friends who would be open to engaging students by providing career support and mentorship.

Faculty

Endowed positions help attract and retain faculty and staff of exceptional talent and are among the most prestigious and visible honors at the University. Investing in an endowed professorship or chaired professorship ensures that students are served by world-class faculty.

Learning Environment

Putting the most up-to-date equipment and technology into students' hands is an important part of the department's success. And giving the students state-of-the-art space is important to new programs such as the major in audio and music engineering. Recording spaces are one such need. The Ronald Rettner Hall for Media Arts and Innovation will have one when it opens in the fall of 2013, but additional spaces are needed to accommodate students. Naming opportunities exist to support all of these activities.

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