# Department of Electrical and Computer Engineering





Working with Students

### Co-op Program

The Co-op Program, a for-credit option for qualified students in the College of Science and Engineering (CSE), is a combined effort between the University and industry. Often attracting some of our best students, the program develops a noticeably greater maturity in students who have participated.

Meaningful, on-the-job, real-world engineering experiences provide students with an opportunity to apply knowledge of fundamental theory to practical problem solving and to improve communication skills through reading, writing, and speaking opportunities. During this two-year commitment, students make solid contributions to the companies for which they work. This program is managed in collaboration with the ME department.

#### To participate as a Co-op Sponsor, go to:

www.me.umn.edu/education/coop/companies.shtml. If you have questions, call Co-op Director Frank Kelso at 612-626-0714 or the ME Office at 612-625-5326.

## Internships

An internship is a short-term, non-credit opportunity providing students with hands-on experiences working with professionals in the science and engineering field to develop technical skills. Students contribute meaningful work that adds value to an organization. Participating as an intern sponsor allows your company to test out the working relationship to see if a long-term fit is possible. In addition, it helps build awareness of your company and establishes a channel for future hires. Student interns bring energy and passion to a company and are eager to contribute and to learn.

To participate as an Internship Sponsor, go to: ccse.umn.edu.

For more information, contact the CSE Career Services office at 612-624-4090 or email: ccsejobs@umn.edu.

## Senior Design Show

Senior students work on real-world, team-based projects while developing an appreciation of design methodology and team dynamics. They also refine their oral and written communications skills. Teams solve an open-ended design problem starting from developing well-defined project requirements/specifications and concluding with a functioning prototype. Projects originate both from industry and from faculty sponsors, often requiring interdisciplinary efforts, and typically having multiple paths for solution and implementation entailing trade-offs between performance, cost, and manufacturability.

To participate as a Senior Design Project Sponsor, go to: www.ece.umn.edu/researchECE.

If you have questions, please call Associate Department Head Bill Robbins at 612-626-6722 or email: robbins @umn.edu.

#### Senior Design Show Judges

Observe the students' project displays, ask questions, and rate the projects. As a volunteer judge, you have the opportunity to enjoy student creativity, innovation, and conversation.

To participate as a Senior Design Show Judge, contact Paula Beck at 612-624-2284 or email: pjbeck@umn.edu.

### **Engineers in the Classroom**

You, as an industry engineer, are welcome to attend an ECE class to talk about your unique perspectives as a practicing professional. You serve as the expert from your company, sharing information about engineering as a career, as well as, providing tips about interviewing, presentation delivery, and career paths.

#### Information sessions for students outside class time

You also may hold information sessions about your company outside of class time. ECE can set up a time and space for you.

To participate in Engineers in the Classroom or to sponsor an information session, call Kyle Dukart at 612-824-2285 or email: kdukart@umn.edu.

## **Mentor Program**

The CSE Mentor Program matches current science and engineering students with professionals in technical fields. These volunteer mentors help students prepare for the transition from the academic environment to the professional world.

To participate as a Mentor, call Ann Terry at 612-826-1802 or email: asterry@umn.edu.



## Student Scholarships and Fellowships

We encourage you to invest in our talented students; they may become your future employees. By ensuring ECE students' education, you ensure a steady flow of well-prepared, innovative, enthusiastic young minds to the engineering field.

Scholarships have become an increasingly important component for helping students finance their education. When you agree to a company-sponsored scholarship, it provides well-deserved recognition for our exceptional students and excellent visibility for your company.

John Harms ('09) said, "My dad once told me, 'School should be your full time job.' I took his advice to heart, I put all my time and energy into learning. I graduated with honors, but I couldn't have done it without the generous financial support that I received from the Green and Schott scholarships. Knowing that my rent was paid and that I had food to eat allowed me to focus on being the best student I could be."

To support student scholarships, contact Joslyn Biever at 612-625-6798 or email: biever@umn.edu.

# **Student Organizations**

ECE students are active in many campus organizations. We welcome you to provide project ideas, facility tours, or sponsorships for our student activities. Current groups include Professional Societies, Honor Societies, Leadership and Service Organizations, and Student Competitions.

To participate as Student Organization Sponsor, contact Joslyn Biever at 612-625-6798 or email: biever@umn.edu.

#### **Industry and Student Collaborations**

Because students are clamoring for real-world experiences from the moment they begin their University studies, ECE is working to expand design project opportunities. Your company can participate in this exciting new facet of co-curricular education by committing to provide an educational experience for our talented students and by agreeing to invest some of your engineers' time in nurturing them with critical early training.

To participate as a Student Collaborations Sponsor, contact Kyle Dukart at 612-624-2285 or email: kdukart@umn.edu.

# Working with Faculty



#### **Industrial Advisory Council**

The ECE's Industrial Advisory Council provides feedback and guidance to the department and helps enhance ECE's relationship with industry and our alumni. Representatives provide an industrial perspective on curriculum, and learn first-hand about departmental activities and plans.

To see who volunteers on our current Industrial Advisory Council, go to: www.ece.umn.edu/researchECE/ECEINDCOUNCILBD.

For more information about the Industrial Advisory Council, contact ECE Department Head David Lilja at 612-625-5007 or email: lilja@umn.edu.

## **Faculty Research Funding**

#### Gifts

Now, more than ever, private support of teaching and research within ECE will be key to launching the department to the next level of excellence. Support at all levels makes a difference and there are many meaningful ways to make a gift. Endowed chairs, professorships, scholarships, and fellowships are the core building blocks for the department's future. Your company can make a gift to a current fund, or create your own

Prof. Tryphon Georgiou said, "Research at academic institutions has played a defining role throughout the development of science. Academics typically are driven by intellectual challenge and the desire to acquire new knowledge. Throughout history, their research often was funded by wealthy patrons or by private funds. Endowed chairs are the present-day equivalent of such backing to pursue a long-term vision in fundamental research uninterrupted and unconstrained by pressures for short-term incremental gains. The support and freedom that were provided to me by the Vincente Hermes-Luh Chair have been invaluable."

#### Sponsored Research

Faculty research also can be sponsored directly through contracts that allow greater flexibility for intellectual property rights.

We offer the Minnesota Innovation Partners (MNIP) program that provides industry two options for sponsoring research at the University. For more information, go to: www.iem.umn. edu/Opportunities.html.

*To support faculty research,* contact Joslyn Biever at 612-625-6798 or email: biever@umn.edu.