Electrical Engineering B.S.E.E.

Major
Bachelor of Science
Electrical Engineering
Swenson College of Science and Engineering

The electrical engineering B.S.E.E. program is concerned with the theory, design, and application of electrical phenomena. The department displays strengths in such diverse areas as microelectronics and VLSI, signal processing, electromagnetics, digital computer systems, automatic control, communications, and power and energy. The program balances theoretical and practical experience in electrical engineering through analysis, synthesis, and experimentation, using facilities that include major instructional laboratories and research laboratories.

Why UMD

- Active learning environment
- Access to state-of-the-art instrumentation
- Focus on undergraduate teaching and research

Acquired Skills

- An understanding of the mathematics and statistics that underlie scientific applications.
- Ability to design, develop, and analyze significant software systems.
- An understanding of the fundamentals of computer systems organization
- An understanding of the fundamentals of data structures and related algorithms.

Career Possibilities

Electrical Engineering graduates are qualified for employment in a wide variety of organizations, both public and private. For example, recent graduates have taken positions with the following: American Precision Avionics, Banner, Cybertral, Edison-tech, Enbridge, Nilfisk, Open Systems, and Oshkosh Corp..

Scholarships

We offer multiple scholarships including the UMD Thor A. Gustafson Scholarship, the UMD Robert J. Marchetti Engineering Scholarships, and the UMD Electrical and Computer Engineering Scholarships.

Student Clubs

We have 2 electrical engineering clubs on campus. The Institute of Electrical and Electronics Engineers student chapter provides the opportunity for students to meet and communicate with each other. During meetings students partake in sharing of the latest technology and information in the electrical and computer related fields, as well as the job opportunities, and scholarship information.

UMD Robotics is a club devoted to inspiring students in science and technology. The club's activities involve getting together and having a good time while working on large projects or goals. In the past we've built battlebots to compete in nation-level competitions and racing drones to fly around when it isn't stormy outside.

In addition to electrical engineering clubs we also have multiple engineering societies and clubs that serve the students by supporting ideas and innovation. Including the Society of Women Engineers, the Tau Beta Pi
Engineering Honor Society, the Minnesota Society of Professional Engineers (MnSPE), and the Order of Engineer.

**Graduate Report**

Recent UMD Graduates Job Placement Data & Employers

Here's a sampling of positions Electrical Engineering grads have attained six months to one year after graduation.

- **Electrical Project Engineer** - 3M, St. Paul, MN
- **Electrical Engineer** - Cargill, New Iberia, LA
- **Automation Software Engineer** - Emerson Industrial Automation, Eden Prairie, MN
- **Electronic Hardware Engineer** - General Electric, Dallas, TX
- **Systems Engineer** - IBM, Rochester, MN
- **Electrical Engineer** - Nova-Tech Engineering, Willmar, MN
- **Systems Engineer** - Open Systems International, Medina, MN
- **Electronic Design Engineer** - Silicon Graphics International, Chippewa Falls, WI
- **Radio Frequency Design Engineer** - UTC Climate Controls & Security, Arden Hill, MN

For more data see the [Electrical Engineering Graduate Follow-Up Report](http://d.umn.edu/career-internship-services/choosing-major/what-are-recent-grads-doing/graduate-follow-major/electrical-engineering) [1].

For ideas about Electrical Engineering and other majors visit [Career & Internship Services](https://champ.d.umn.edu/career-internship-services/choosing-major) [2].