ELECTRICAL ENGINEERING

EECS Department
The Electrical Engineering and Computer Science (EECS) Department at WSU offers undergraduate degrees in electrical engineering, computer engineering and computer science. EECS offers a Master of Science degree in computer science, electrical engineering, and a computer networking, and a doctoral degree in electrical engineering and computer science.

Career Opportunities
The demand for electrical engineering graduates continues to increase. The electrical engineering graduate is qualified for entry positions in a large number of industries and governmental organizations as a result of the graduate’s broad technical background. An electrical engineering degree opens the door to a satisfying and rewarding career. Electrical engineering graduates have the potential to shape the future of society through creative problem solving, design, innovation, and discovery.

Electrical Engineering at WSU
The electrical engineering program at WSU is accredited by ABET, the accrediting body for all engineering and related programs. The electrical engineering program is designed to involve students in design from their first semester through their graduation. Electrical engineering elective course offerings include: communications and signal processing, control systems, digital systems, electric power systems, and electronics. In your senior year, you will work with a team of students on a two-semester real world project under the supervision of a faculty member. These projects prepare you for a professional career with an emphasis on the skills required of engineering professionals.

Internship and Cooperative Education
There are many opportunities for EECS students to obtain valuable experience through the WSU Cooperative Education program. EECS students currently participate in the co-op program at Bombardier-Learjet, Cessna, Hawker Beechcraft, Integra Technologies, NetApp, Netvision Technologies, Qualcomm and many more.

Engineer of 2020
To give our students the most complete education possible, we developed the Engineer of 2020 program. Through service learning, study abroad and global learning, undergraduate research, leadership, multidisciplinary education and internships and cooperative education, students make their engineering degree more meaningful, giving them an advantage in the job market and when applying to graduate school.

Laboratory and Computer Facilities
At Wichita State, you will have access to modern electrical, electronic, and computer laboratories. As an engineering student, you will also have access to design and simulation software in our computer studios, computational hub and virtual instrumentation lab in the new Experiential Engineering Building on WSU’s Innovation Campus.

Engineering Student Engagement
When you enroll in an engineering program at WSU, you join a community where faculty, staff and fellow students work together to help you reach graduation. The Engineering Student Success Center will help you succeed academically, personally and professionally through engagement in our Engineering Living Learning Community (LLC), Mentor UPP (Undergraduate Peer Partners) program, and GEEKS (Great Expectations: Engineering Kansas Scholars) tutoring.

You are encouraged to participate in the student branch of The Institute of Electrical and Electronics Engineers, Inc. (IEEE), the Engineering Council, and many other student organizations. A chapter of Eta Kappa Nu, the national honor society for electrical and computer engineering students, is located at WSU.

Advising
You will be assigned an EECS department advisor who will help you plan your course of study. It is important that you complete Calculus I and the EECS section of Circuits I as soon as possible, since they are prerequisites for major EE courses. If a student chooses to earn a degree in both EE and Computer Engineering, by selecting technical electives carefully, both degrees can be earned with a minimum of an additional 30 hours of course work.
Education Requirements

**Basic Skills (9 hours minimum)**
- Must be completed in the first 48 college hours and a C or better.
  - College English Composition (ENG 100 or 101 and 102) - 6 credit hours
  - Public Speaking (Communication 111) - 3 credit hours

**Mathematics and Natural Sciences**
- Calculus I, II and III - 13 credit hours
- Differential Equations I - 3 credit hours
- Physics for Scientists I and II - 8 credit hours
- General Chemistry I - 5 credit hours
- Linear Algebra - 3 credit hours
- Engineering Probability & Statistics I - 3 credit hours

**Fine Arts, Humanities, and Social and Behavioral Sciences (18 hours minimum)**
- One introductory course from a fine arts discipline - 3 credit hours
- One introductory course from a humanities disciplines - 3 credit hours
- One introductory course from a social and behavioral sciences discipline - 3 credit hours
- One introductory course from a second social and behavioral sciences or humanities discipline - 3 credit hours
- One advanced further study course from humanities or social and behavioral sciences - 3 credit hours
- Philosophy 385 Engineering Ethics - 3 credit hours

**Major Requirements**

**Basic Skills**
- Introduction to Programming - 4 credit hours
- Statics - 3 credit hours
- Circuits I and II - 7 credit hours
- Engineering Economy - 3 credit hours
- Thermodynamics - 3 credit hours
- Introduction to Digital Design - 4 credit hours
- Signals and Systems - 3 credit hours
- Applied Engineering Electromagnetics - 3 credit hours

**Mathematics and Natural Sciences**
- Electric Machines & Transformers - 4 credit hours
- Electronic Circuits I - 4 credit hours
- Electronic Circuits II or Power Electronics - 4 credit hours
- Introduction to Communication Systems - 4 credit hours
- Introduction to Control System Concepts - 3 credit hours
- Mechanical Control Systems - 3 credit hours
- Electrical Design Projects I and II - 4 credit hours
- Technical Electives - 31 credit hours

**Faculty**

- Rajiv Bagai (PhD). Data Bases, Programming Languages.
- Animesh Chakravarthy (PhD). Dynamics and Controls.
- Debswapna Bhattachary (PhD). Bioinformatics, machine learning.
- Ali Eslam (PhD). Error Correcting Codes.
- Yanwu Ding (PhD). Signal Processing.
- Keenan Jackson (MS). Programming Languages. Lecturer
- Preethika Kumar (PhD). Quantum Computing.
- Manira Rani (MS). FPGA Programming.
- Kaushik Sinha (PhD). Machine Learning and Data Mining.
- Steven R. Skinner (PhD). Optics.
- Perlekar Tamtam (PhD) Power Systems.
- Pu Wang (PhD). Modeling and Optimization of Date Networks.

For more information

If you have further questions or would like to schedule a campus visit, please contact the Office of Admissions.

**Visits**

**Office of Admissions**
1845 Fairmount
Wichita, KS 67260-0124
Wichita.edu/admissions
Wichita.edu/visit

For more information on Electrical Engineering at WSU visit wichita.edu/engineering or call (316) 978-3156.