

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. The EECS Department offers master of science degrees in computer science, electrical engineering, and computer networking and a doctoral degree in electrical engineering. The EECS Department came into existence in the 2008 fall semester as a result of the merger of Electrical and Computer Engineering Department and the Computer Science Department. As a result of this reorganization, the computer science program was moved from the Fairmont College of Liberal Arts and Sciences to the College of Engineering.

EE Program at WSU

The electrical engineering program at WSU is accredited by ABET, the accrediting body for all engineering and related programs. The undergraduate program in electrical engineering offers electives in 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 are conducted in such a manner as to prepare you for a professional career with an emphasis on those skills required of engineering professionals.

Students have the option of earning a degree in electrical engineering, computer engineering, or both. If a student chooses to do so, by selecting technical electives carefully, both

degrees can be earned with a minimum of an additional 26 hours of course work. If one degree has been granted first, an additional 30 hours is required for the second degree.

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 graduates 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.

Engineer of 2020

All graduates of the College of Engineering are required to complete three of the following six activities: undergraduate research, cooperative education or internship, study abroad or global learning, leadership, and multidisciplinary education. These requirements have been made in response to recommendations by the National Academy of Engineering on the future needs for engineering graduates.

Cooperative Education Program

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, CCH, Cessna, Hawker Beechcraft, Integra

Technologies, LSI Logic, Netvision Technologies, Qualcomm, System Soft, and many more. For information on the co-op program, contact the co-op office at (316) 978-3688.

Advising

You will be assigned an EECS department adviser who will help you plan your course of study and will outline specific requirements for degree completion. It is important that you complete Calculus I (Math 242), the EECS department's C Language course (CS211), and Introduction to Digital Design (CS 194) as soon as possible, since they are prerequisites for many ECE courses. The electrical engineering program is designed to involve students in design from their first semester until their graduation.

Laboratory and Computer Facilities

At Wichita State, you will have access to modern electrical, electronic, optical, power and computer laboratories. A local area network connects the department's computers to the computers in other departments, the rest of the University, and the Internet.

Related Opportunities

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.

EECS Faculty

- Rajiv Bagai (Ph.D., University of Victoria). Data Bases, Programming Languages.
- Yanwu Ding (Ph.D., McMaster University), Signal Processing.
- Keenan Jackson, (M.S., Wichita State University). Programming Languages.
- Neeraj Jaggi (Ph.D., Rensselaer Polytechnic Institute). Wireless Networks, Sensor Networks.
- Ward T. Jewell (Ph.D., Oklahoma State University). Power Systems.
- Preethika Kumar (Ph.D., Wichita State University). Quantum Computing.
- Hyuck M. Kwon (Ph.D., University of Michigan). Communications Systems.
- Vinod Nambodiri (Ph.D., University of Massachusetts). Mobile Computing, Wireless Networks.
- Ravi Pendse (Ph.D., Wichita State University). Director of Advanced Networking Research Center, Associate VP for Academic Affairs and Research. Computer Networking.
- Prakash Ramaman (Ph.D., University of Illinois). Algorithms, Data Base Systems.
- M. Edwin Sawan (Ph.D., University of Illinois-Urbana). Control Theory.
- Steven R. Skinner (Ph.D., University of Iowa). Optics.
- Sejun Song (Ph.D., University of Minnesota). Data Storage and Networking.
- Bin Tang (Ph.D., Stony Brook University). Data Insensitive Sensor Networks.
- Asrat Teshome (Ph.D., Cornell University). Power Systems and Control Theory.
- John M. Watkins (Ph.D., The Ohio State University). Control Systems.
- Paul K. York, (Ph.D., Texas A&M University). Professor Emeritus and Advisor.

For More Information

To receive more information or to arrange a campus visit, contact:

Office of Admissions
 Marcus Welcome Center
 Wichita State University
 1845 Fairmount
 Wichita, Kansas 67260-0124
 Telephone (316) 978-3085
 Toll-free (800) 362-2594
www.wichita.edu

For more specific program information contact:
 Electrical Engineering and Computer Science Department
 Wichita State University
 1845 Fairmount
 Wichita, Kansas 67260-0044
 Phone (316) 978-3415
eecsdesk@cs.wichita.edu
<http://webs.wichita.edu/?u=ece>

General Education Requirements

Basic Skills (9 hours minimum) Must be completed in the first 48 college hours with a C or better	Minimum number of semester hours
<ul style="list-style-type: none"> • College English Composition (English 100 or 101 and 102) • Public Speaking (Communication 111) 	6 3
Fine Arts, Humanities, and Social and Behavioral Sciences (18 hours minimum) <ul style="list-style-type: none"> • One introductory course from a fine arts discipline • One introductory course from a humanities discipline • One introductory course from a social and behavioral sciences discipline • One introductory course from a second humanities discipline or a second social and behavioral sciences discipline • One further study course from one of the two disciplines in the division, humanities or social and behavioral sciences, in which two introductory courses are taken • Philosophy 385: Engineering Ethics 	3 3 3 3 3
Mathematics and Natural Sciences Calculus I, II, and III Ordinary Differential Equations University Physics I and II General Chemistry I Linear Algebra Probability and Statistics	13 3 8 5 3 3
Minimum requirements TOTAL	62 Hours

Professional Courses

	Semester Hours
Engineering Computing in C	4
Statics	3
Circuits I and II	7
Engineering Economy	3
Thermodynamics	3
Introduction to Digital Design	4
Signals and Systems	3
Applied Electromagnetics	3
Electric Machines and Transformers	4
Electronic Circuits I and II	7
Intro Communication Systems	4
Intro Control System Concepts	3
Electrical Design Projects I and II	4
Technical electives	14
TOTAL	66 Hours

The University reserves the right to revise or change rules, charges, fees, schedules, courses, requirements for degrees, and any other regulations affecting students whenever considered necessary or desirable.

Notice of Nondiscrimination:

Wichita State University does not discriminate on the basis of race, religion, color, national origin, gender, age, marital status, sexual orientation, status as a Vietnam-era veteran, or disability. Any person having inquiries concerning this may contact the Office of Equal Employment Opportunity, Wichita State University, 1845 Fairmount, Wichita, Kansas 67260-0145; telephone (316) 978-3001.