

Electrical Engineering (EE) **Electrical Engineering with Computer Option (EEC)**

The Degree

In the dynamic profession of electrical and computer engineering, the Bradley ECE faculty recognizes that each career path is unique based on the individual's particular ambitions, capabilities and interests. By coupling the focus on undergraduate education and depth of faculty expertise with a small student to faculty ratio and an intense design project sequence, the ECE faculty can respond to the needs and interest of each student. Consequently, graduates from the programs possess top end design abilities and are immediately productive.

Curriculum

The lecture sequence consists of many required core courses through which students learn about and acquire problem solving and/or design skills in:

- circuit analysis
- structured programming in C++
- digital system design
- analog and digital electronics
- microprocessors
- signals and systems
- electromagnetic fields

The student also can take electives in many areas including communications, controls, digital circuits and systems, embedded systems, networking, signal processing, software engineering, VLSI and wireless systems. The program also requires 7 progressive design projects culminating in **two** senior projects which require design and documentation at the professional level. This assures that the graduate will be prepared for the workforce or graduate studies. Examples of capstone projects include Cooperative Search and Rescue Robots, Scanning Digital Radar Receiver, and Software Defined Radio.

The EE/EEC program also offers a unique 12 hour professional elective stem which allows the student to design a concentration or take a minor so as to enhance his/her competitiveness in the job market, expand his/her leadership or business capabilities, and/or better prepare him/her for graduate or professional school.

Facilities

The ECE Department houses several modern electronic design labs for instruction and student projects as well as several specialized lab facilities for research and design in autonomous vehicles and robotics, electromechanical systems, embedded systems, image processing, and wireless systems.

Additional opportunities at Bradley

Outside of the classroom, EE and EEC majors have a wealth of co-curricular activities including music performance groups, study abroad programs and theater activities as well as professional and social organizations.

Faculty

NAME	AREAS OF INTEREST
Dr. In Soo Ahn	Communications, controls, navigation
Dr. W. Anakwa	Embedded systems, digital controls, magnetic levitation
Dr. Gary Dempsey	Controls; design and application of neural networks
Mr. Steve Gutschalg	Microprocessor applications; electromechanical systems
Dr. Brian Huggins	Wireless systems; sensor design; systems engineering, engineering education
Dr. James Irwin	Audio and acoustics
Dr. Yufeng Lu	Digital design with applications to signal processing
Dr. Alex Malinowski	Design and application of computer networks; software engineering, telerobotics
Dr. Vinod Prasad	Digital system design
Mr. Jose Sanchez	Audio and acoustics; embedded systems; signal processing (Will be Dr. Sanchez in 2008)
Dr. Don Schertz	Microprocessors and embedded systems; software engineering
Dr. Prasad Shastry	Microwave and wireless engineering
Dr. Tom Stewart	Digital signal processing; medical image processing

Jobs

Bradley's Electrical Engineering and Electrical Engineering with Computer Option graduates enjoy a very robust job outlook and conditions are in place to make the job market even stronger in the years to come. The average starting salary for the seniors graduating in 2007 was about **\$55,800** per year with 100% placement. It was the highest salary compared to all other undergraduate majors on campus for that year. Furthermore, due to increasing demand and shrinking nationwide enrollments, the average salary is likely to significantly increase in the coming years. In addition, there are experiential work opportunities for undergraduates including coop jobs, practicums, and internships.

Employers of Bradley EE and EEC graduates include

Accenture, Alesis Studio Electronics, Belcan Inc., Black and Veatch, Boeing, Burns and McDonald, Caterpillar, Commonwealth Edison, DAXCON Engineering, Epic Systems, Eserv, John Deere, GTE, Hamilton Sundstrand, Harris, Hewlett Packard, Honeywell, Intel, Johnson Controls, Lockheed Martin, Maxim Integrated Products, Motorola, NASA, Northrop Grumman, Rockwell Collins, Sergeant And Lundy, Siemens, Shure, Tellabs, Texas Instruments, Thomson Consumer Electronics, Underwriters Lab, Wind River Systems, and Winegard

Graduate schools attended by Bradley EE and EEC graduates include

Case Western, University of Chicago, Georgia Institute of Technology, John Hopkins, University of Illinois, MIT, Northwestern University, University of Pennsylvania, Stanford, University of Wisconsin

Bradley EE and EEC Graduates are very successful

Many graduates have attained high level management positions, including that of Director, Vice President, and President. Several other graduates started their own companies, claiming the title of founder/owner, and others have earned their PhDs or gone into medicine or law (normally patent law.)

To obtain more information about the programs offered by the ECE Department at Bradley University, point your browser to <http://ee1.bradley.edu/> or contact Dr. B. D. Huggins via email at bdh@bradley.edu or by phone at 309-677-2732.

If you wish to apply, call admissions at 800-447-6460 or apply online at <http://www.bradley.edu/admissions/student/application.html>