

ELECTRICAL ENGINEERING

Honors Program



NATURE OF THE WORK

Electrical engineers design, develop, test, and supervise the manufacture of electrical equipment. Some of this equipment includes electric motors; machinery controls, lighting, and wiring in buildings; radar and navigation systems; communications systems; and power generation, control, and transmission devices used by electric utilities. Electrical engineers also design the electrical systems of automobiles and aircraft. Although the terms electrical and electronics engineering often are used interchangeably in academia and industry, electrical engineers traditionally have focused on the generation and supply of power, whereas electronics engineers have worked on applications of electricity to control systems or signal processing. Electrical engineers specialize in areas such as power systems engineering or electrical equipment manufacturing.

(compiled from U.S. Dept. of Labor Occupational Outlook Handbook 2010-2011)

USF DEPARTMENT OF ELECTRICAL ENGINEERING EXPERTISE

Energy/Power Systems	Biomedical Systems/Bioengineering
Communications/Networking	RF/Microwave/EM
Signal Processing/Imaging	NanoElectronics
Circuits/Systems/Controls	Materials

The University of South Florida Bachelor of Science degree programs in Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Industrial Engineering and Mechanical Engineering are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology. The Bachelor of Science in Computer Science program at the University of South Florida is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology. ABET 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 telephone: (410) 347-7700.

> EDUCATION REQUIREMENTS > JOB OUTLOOK > SALARY

- A bachelor's degree in electrical engineering is required for most entry-level jobs, but some research positions may require a graduate degree.
- Continuing education is critical for engineers in order to keep up with improvements in technology.
- Overall job opportunities for engineers are expected to be good.
- Average starting salary-\$60,646 *(NACE spring 2011)*

REAL WORLD OPPORTUNITIES

Co-ops and Internships – These programs offer students numerous opportunities to engage with the broader-based engineering, technology and science community.

Engineering EXPO – This student-run event exposes school children to science and engineering principles in a two-day, on campus event.

Research Experiences for Undergraduates – The program gives undergraduate students an opportunity to participate. Students work as Research Assistants with professors and graduate students on a variety of exciting and interdisciplinary research projects.

Scholarships – More than 100 scholarships are awarded to USF engineering students totaling more than \$150,000 to provide financial support and recognizing their exceptional efforts.

STUDENT ORGANIZATIONS

ETA Kappa Nu
IEEE Electrical Engineering Society
Engineers Without Borders
Engineers for Sustainable World
Student Chapter of the Florida Engineering Society
National Society of Black Engineers
Society of Hispanic Engineers
Society of Women Engineers
Tau Beta Pi The Engineering Honor Society
Theta Tau



For more information
<http://outreachrequest.eng.usf.edu>
www.eng.usf.edu

UNIVERSITY OF SOUTH FLORIDA COLLEGE OF ENGINEERING

2011-12 CURRICULUM

REQUIREMENTS FOR THE ELECTRICAL ENGINEERING HONORS PROGRAM

I. ADMISSIONS CRITERIA

- a. Junior status - An invitation to apply will be sent to eligible students at the start of their junior year by the Department of Electrical Engineering and application can be made at that time with decisions made at the end of the first semester, junior year.
- b. Completion of the core courses required for the Electrical Engineering major with a GPA of at least 3.5 through the completion of the first semester, junior year.
- c. An overall GPA of at least 3.5 through the completion of the first semester, junior year.
- d. Recommendation of a committee consisting of Electrical Engineering faculty members and engineering leaders from industry, based upon an application, letters of recommendation, statement of interest, and an interview.

II. REQUIREMENTS FOR COMPLETION OF DEPARTMENTAL HONORS

- a. Completion of requirements for a major in Electrical Engineering with a GPA of at least 3.5 for core courses and an overall GPA of at least 3.5.
- b. Selection of two (2) Technical Electives in conjunction with a program advisor. One of the courses should be a 4000 level Sustainable Engineering / Green Engineering course and the other should be a course at the 5000 / 6000 level.
- c. Nine (9) additional credits (the EE Honors courses) beyond the degree requirements, which include a 4000 level Leadership Forum, 4000 level Internship / Study Abroad / Enrichment Experience, and a 5000 level Honors Thesis. These courses are described in the sequel.

CONTINUATION REQUIREMENTS

- a. Electrical Engineering Leadership Honors Program students failing to complete the EE Honors courses with a grade of "B" or better will not be eligible to continue in the program and will be notified by the Department of Electrical Engineering of their dismissal from the program.
- b. Electrical Engineering Leadership Honors Program students must complete and defend their Honors thesis in the second semester of their senior year. Students who do not complete this requirement may, upon the recommendation of their Honors thesis supervisor and the Department of Electrical Engineering, be allowed to continue in the program until the final semester prior to their graduation. Under no circumstances shall the extension be more more than one academic year.