ELECTRICAL ENGINEERING

Mission Statement
The mission of the Electrical Engineering Department at the University of South Florida is to provide internationally recognized educational programs; to conduct and disseminate internationally recognized research benefiting humanity; to provide service to society; and to emphasize the need for lifelong learning, ethical conduct and an understanding of the diverse social context in which engineering is practiced.

Objectives
The Department objectives are to produce graduates
1. with the knowledge and skills necessary to practice Electrical Engineering successfully.
2. who can pursue advanced topics through graduate or professional studies.

Students pursuing the Bachelor of Science in Electrical Engineering program take designated coursework in network analysis, electronics, communications, electromagnetic theory, control systems, microelectronics and microprocessors. This coursework is supplemented by electives in many specialized areas of electrical engineering.

Students completing this program normally pursue industrial careers in electronic, communications, power and controls, digital systems, microelectronics and information systems. The electrical graduate may apply his/her knowledge to such diverse areas as wireless and satellite communications, remote guidance, MEMS, sensing technology, systems integration, automation, computer and information systems, electronic power generation and transmission, electrically propelled transportation, etc. The graduate may do this by performing needed engineering functions related to research and development (often requires an advanced degree), design, production, operation, sales, or management of these products/services.

The schedule which follows indicates how a serious, well-prepared student who can devote full time to coursework can satisfy degree requirements in four academic years. Students without a solid foundation and those who cannot devote full time to academics should plan on a slower pace. A minimum departmental GPA of 2.0 is required for graduation. In addition, students must pass all required BSEE courses, except humanities and social sciences, with a grade of "C" or better.

Four-Year Curriculum in Electrical Engineering
Courses indicated with XXXX had not yet been assigned a number when the catalog went to print. See your academic advisor for additional information.

Prerequisites (State Mandated Common Prerequisites) for Students Transferring from a Community College: If a student wishes to transfer without an A.A. degree and has fewer than 60 semester hours of acceptable credit, the student must meet the university’s entering freshman requirements including ACT or SAT test scores, GPA, and course requirements.

Students should complete the following prerequisite courses listed below at the lower level prior to entering the University. If these courses are not taken at the community college, they must be completed before the degree is granted.

Some courses required for the major may also meet General Education Requirements thereby transferring maximum hours to the university.

Communications:
- ENC 1101/1102 English I and II (6)

Humanities & Social Sciences:
- Humanities Courses (6)
- Social Science Courses (6)
- Humanities or Social Sciences (3)

Mathematics:
- MAC 2281 MAC 2311* (4)
- MAC 2282 MAC 2312* (4)
- MAC 2283 MAC 2313* (4)
- MAP 2302 MAP 2302 (3)

*or MAC 2281, MAC 2282, MAC 2283

Natural Sciences:
- USF C/C
- CHM 2045 CHM 1045* (3)
- CHM 2045L CHM 1045L* (1)
- PHY 2048 PHY 2048 (3)
- PHY 2048L PHY 2048L (1)
- PHY 2049 PHY 2049 (3)
- PHY 2049L PHY 2049L (1)

*or CHS 1440 Chemistry for Engineers Please be aware of the immunization, foreign language, continuous enrollment policies of the university, and qualitative standards required.

Engineering Admissions Requirements
Transfer students must have completed the equivalent USF Engineering Calculus sequence with a 2.0 GPA; must have completed one year of equivalent USF General Physics and Chemistry courses with a minimum of 2.0 GPA; must have an overall GPA of 2.0 or better.

Semester 1
- ENC 1101 Composition I 3
- MAC 2281 Eng. Calculus I 4
- Social Science Elective 3
- Fine Arts Elective 3
- EGN 2082 History of Electrotechnology 3
- Total 16

Semester 2
- ENC 1102 Composition II 3
- MAC 2282 Eng. Calculus II 4
- PHY 2048 Physics I 3
- PHY 2048L Physics Lab I 1
- CHM 2045 Chemistry I 3
- CHM 2045L Chemistry Lab I 1
- EGN 3000 Foundations of Engineering 1
- Total 16

Semester 3
- MAC 2283 Eng. Calculus III 4
- PHY 2049 Physics II 3
- PHY 2049L Physics Lab II 1
- EGN 3443 Eng. Prob. and Statistics 3
- EGN 3613 Eng. Econ. 3
- Total 14

Semester 4
- MAP 2302 Differential Equations 3
- EGN XXX Engineering Analysis 3
- EGN 3373 Electrical Systems I 3
- EEL 2161 EE Computing Methods 3
- EGN XXX Eng. Electronic Materials 3
- Total 15

Summer Term
- EGN 2031 History of Technology 3
- EEL XXX Elec. Systems Environments 3
- ENC 3211 Comm. for Engineers 3
- Total 9

Semester 5
- EEL 3100 Network Analysis 3
- EEL 4705 Logic Design 3
- EEL 4705L Logic Lab 1
- EEL 3301L Lab I (Circuits) 1
- EEL 4472 Electromagnetics 3
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<td>Semiconductor Devices</td>
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<td>Semester 6</td>
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<td>EEL 4102</td>
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<td>EEL XXXX</td>
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<td>EEL 4906</td>
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<td>EEL 4512</td>
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