## USF BS in Electrical Engineering (B.S.E.E.)

### Fall 2017 Catalog, 128 hours

<table>
<thead>
<tr>
<th>Pre-Major Status</th>
<th>Major Status</th>
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<tbody>
<tr>
<td><strong>Year 1</strong></td>
<td><strong>Year 2</strong></td>
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<tr>
<td>Fall 15 hrs</td>
<td>Spring 14 hrs</td>
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<tr>
<td>Spring 15 hrs</td>
<td>Fall 14 hrs</td>
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</tbody>
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### General Requirements

- A cumulative GPA of 2.75 is required in bold-bordered courses to be eligible for Major Status, min grade C in ea., best attempt used for calculation
- Requires Major Status, max two classes may be taken as pre-major
- Max 2 attempts allowed. Unless noted, min grade C in math, science, engineering, and major/specialization courses.
- Course requires a min grade B
- Elective Core Class
- Track Elective Class (complete 2 tracks, each has a lab)

### Course Notes

- FKL/GenEd Class req. closed with a Bachelor’s or FL Public AA degree
- 6A = Gordon Rule Comm.  G = must also be Gordon 6A
- CD = Capstone Design Exit  H = must also be HHCP
- WI = Writing Intensive Exit

### Flowchart for Pre-Majors

- **Course Codes:**
  - EGN 3000: Foundations of Engineering (Required F, S)
  - MAC 2281: Calculus I (4 hrs F, S, Su)
  - CHS 2440L: Chemistry for Engineers or ChM 2045 (3 hrs F, S)
  - CHS 2440L: Fund. Of Digital Circuits (3 hrs F, S, Su)
  - EEL 3705: Logic Design (1 hr F, S)
  - ENC 1101: Composition I (3 hrs F, S, Su)
  - ENC 1102: Composition II (3 hrs F, S, Su)
  - FKL Humanities Elective (3 hrs F, S, Su)
  - FKL Fine Arts Elective (3 hrs F, S, Su)
  - St. GenEd Social Science Elective (3 hrs F, S, Su)
  - EGN 3615: Eng Economics (FKL Soc/Beh) (3 hrs F, S, Su)
  - St. GenEd Humanities Elective (3 hrs F, S, Su)
  - FKL/GenEd Class req. closed with a Bachelor’s or FL Public AA degree
  - 6A = Gordon Rule Comm.  G = must also be Gordon 6A
  - CD = Capstone Design Exit  H = must also be HHCP
  - WI = Writing Intensive Exit

### Admission

- A cumulative GPA of 2.75 is required in bold-bordered courses to be eligible for Major Status, min grade C in ea., best attempt used for calculation

### Term & Sequence

- F = Fall  S = Spring  Su = Summer (tentative)
- Pre-requisite
- Pre/Co-requisite
- Co-requisite

### Updated 6/12/2017
TRACK ELECTIVES

1. Bioelectrical Systems
   a. EEE 4506 Biomedical Image Processing (3)
   b. EEL 4935 Modern BioMed Technologies (3)
   c. EEL 4935 Bioelectronics (3)
   d. EEL 4935 Biomedical Image Processing (3)

2. Communication Systems
   a. EEE 4305 Communications Electronics (3)
   b. EEL 4935 Mobile and Personal Communication (3)
   c. EEL 4727C Digital Signal Processing with Field Programmable (3)
   d. EEL 4756 Digital Signal Processing (3)
   e. EEL 4936 Wireless Communications Lab

3. Energy, Power and Sustainability
   a. EEL 4283 Sustainable Energy (3)
   b. EEL 4935 Power Quality (3)
   c. EEL 4925 Power System Analysis (3)
   d. EEL 4935 Energy Delivery Systems (3)
   e. EEL 4936 Power Electronics (3)
   f. EEE 3302 Electronics I (3)
   g. EEL 4936 Power Systems II (3)

4. Mechatronics, Robotics and Embedded Systems
   a. EEL 4744 Microprocessor Principles and Applications (3)
   b. EEE ### Mechatronics for Innovation (3)
   c. EEE ### Embedded Systems (3)
   d. EEL 4657 Linear Control Systems Laboratory (1)
   e. EEL 4743L Microprocessor Laboratory (1)

5. Micro and Nano-scale Systems
   a. EEE 3302 Electronics I (3)
   b. EEE 4301 Electronics II (3)
   c. EEL 4567 Electro-Optics (3)
   d. EEE 4274 MEMS I: Chemical/Biomedical Sensors and Microfabrication (3)
   e. EEE 5356 Integrated Circuit Technology (3)
   f. EEE 4935 Analog CMOS/VLSI Design
   g. EEE 5344C Digital CMOS/VLSI Design (3)
   h. EEE 5382 Physical Basis of Microelectronics (3)

6. Wireless Circuits and Systems
   a. EEL 4420 RF & Microwave Measurements (3)
   b. EEL 4421 RF/Microwave Circuits I (3)
   c. EEL 4422 RF/Microwave Circuits II (3)
   d. EEL 4461 Antenna Theory (3)