Professional Preparation Curriculum Planning

**Power**

In addition to the required courses in the BSEE curriculum and flowchart, if you are interested in careers in any of the following Electrical Engineering Specialty Areas, we would recommend that you choose from the following Engineering Support Electives and Technical Electives.

### Power Systems Analysis and Design:
- MATH 304  Vector Analysis (4)
- MATH 451  Numerical Analysis I (4)
- EE 406  Power Systems Analysis I (4) [F]
- EE 407  Power Systems Analysis II (4) [W]
- EE 410  Power Electronics I with Lab (4) [F]
- EE 444  Power Systems Lab (1) [S]
- EE 518  Power System Protection (4) [S]
- EE 519  Advanced Analysis of Power Systems (4) [S]
- EE 527  Advanced Topics in Power Electronics (4) [S]

### Sustainable Energy:
- IME 314  Engineering Economics (3)
- CSC 341  Numerical Engineering Analysis (4)
- PHYS 310  Physics of Energy (3)
- EE 420  Sustainable Electric Energy Conversion with Lab (4) [W]
- EE 406  Power Systems Analysis I (4) [F]
- EE 410  Power Electronics I with Lab (4) [F]
- EE 520  Solar Photovoltaic Systems Design (4) [S]
- EE 434  Alternative Energy Vehicles Design (4) [W]

### Power Electronics Design:
- ME 211  Engineering Statics (3)
- ME 212  Engineering Dynamics (3)
- ME 302  Thermodynamics (3)
- ME 343  Heat Transfer (4)
- EE 410  Power Electronics I with Lab (4) [F]
- EE 411  Power Electronics II with Lab (4) [W]
- EE 406  Power Systems Analysis I (4) [F]
- EE 527  Advanced Topics in Power Electronics (4) [S]

### Control Systems:
- MATH 306  Linear Algebra II (4)
- ME 211  Engineering Statics (3)
- ME 212  Engineering Dynamics (3)
- EE 432  Digital Control Systems (3) [F]
- EE 472  Digital Control Systems Lab (1) [F]
- EE 513  Control System Theory (4) [W]
- EE 509  Computational Intelligence (4) [S]
- EE 514  Adv. Topics in Auto. Control (4) [S]

### Magnetic Devices and Machine Design:
- ME 211  Engineering Statics (3)
- ME 212  Engineering Dynamics (3)
- MATE 210  Materials Engineering (3)
- MATE 340  Electronic Materials Systems (3)
- EE 417  Alternating Current Machines with Lab (4) [F]
- EE 433  Intro. to Magnetic Design with Lab (4) [S]
- EE 406  Power Systems Analysis I (4) [F]
- EE 410  Power Electronics I with Lab (4) [F]
- EE 511  Electric Machines Theory (4) [S]