



## **EE EMPHASIS AREA OPTIONS**

If you wish to pursue an electrical engineering B.S. degree with a formal emphasis, the following emphasis area options are available:

**Circuits and Electronics**  
**Controls and Systems**  
**Power and Energy**

**Optics and Devices**  
**Communications and Signal Processing**  
**Electromagnetics**

**Computer Engineering**

A declared emphasis area is not required. A student may choose to obtain an Electrical Engineering degree without a formal emphasis or may choose to obtain an Electrical Engineering degree with a declared emphasis in one or more of the emphasis areas of electrical engineering. A major change request is required to add the emphasis area option to the degree program.

For students who seek an Electrical Engineering degree without a formal emphasis, these emphasis areas may guide the choice of their El Eng Electives A, B, C, D, and E as well as their free electives. Students should consult with their advisors on such course selections.

For students who seek an Electrical Engineering degree with a declared emphasis, courses in the declared emphasis area will be applied to El Eng Electives A, D, and E in the degree requirements. For students who choose to have multiple emphasis areas, the additional courses will apply to El Eng Elective B or C and free elective requirements. Students should seek guidance from their advisors on emphasis areas and on courses that are relevant to more than one emphasis area. Students may have an emphasis area or emphasis areas listed on their transcript by completing three three-credit-hour courses in electrical and computer engineering from the designated lists with at least one of the courses being at the 4XXX level or above. This requirement will be satisfied by completing the relevant ABC Elective course, a 4XXX course for Elective D, and another 3XXX or above course for Elective E from the designated listing. The required EE courses El Eng 3100, 3320, 3430, and 3600 and the course used to satisfy the power requirement (EE 3500 or 3540) may not be used to meet the three-course requirement. Transfer courses do not apply to emphasis areas.

A colisted course may count toward both areas. Experimental courses El Eng 3001, El Eng 4001, El Eng 5001, Cp Eng 3001, Cp Eng 4001, or Cp Eng 5001 require departmental approval to apply toward an emphasis area.

**Circuits and Electronics:** El Eng 3120, 41XX, and 51XX Courses

**Optics and Devices:** El Eng 3250, 42XX, and 52XX Courses

**Controls and Systems:** El Eng 3340, 43XX, and 53XX Courses

**Communications and Signal Processing:** El Eng 3410, 3440, 44XX, and 54XX Courses

**Power and Energy:** El Eng 3500 or 3540, 5150, 45XX, and 55XX Courses

**Electromagnetics:** El Eng 46XX and 56XX Courses

**Computer Engineering:** El Eng 3410, Cp Eng 3XXX-level or above Courses (Excluding Cp Eng 3000, 4000, 5000, 3002, 4096, 4097, and 5070 Course)

See the undergraduate secretary for a degree change form to switch to an emphasis area option.

**Associate Chair of EE Undergraduate Studies**

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