**Department of Electrical Engineering and Computer Science**

**Electrical- Power & Energy Systems Concentration Catalog 2021**

<table>
<thead>
<tr>
<th>Fall 14 hours</th>
<th>Math 141 or 147 (4) FA, SP, SU</th>
<th>Preaxe Math 28 ACT or Math SAT 860</th>
<th>EF 131 or EF 137 (4) FA, SP</th>
<th>COSC 101 (3) FA, SP</th>
<th>English 101 (3) 101 or 108 or 131 (3) FA, SP, SU</th>
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<tr>
<td>Spring 15 hours</td>
<td>Math 142 or 148 (4) FA, SP, SU</td>
<td>Preaxe Math 132 or 147 with a grade of C or better</td>
<td>EF 152 or EF 158 (4) FA, SP, SU</td>
<td>Preaxe EF 142/151/152 with C or higher</td>
<td>Preaxe Math 132 or 141 or 147 with C or better</td>
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**Progression**

The department requires at least a C in every computer engineering, computer science, electrical engineering, and mathematics course used for the undergraduate degrees. ECE 201 requires a C or better in EF 152/158 and Math 142/148.

Students also have opportunities for an Honors Concentration and/or a five year BS/MS program. See the Undergraduate Catalog for details and requirements.

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**Senior ECE electives:** Choose 6 credit hours of ECE senior elective with Advisor’s consent. Up to 2 COSC 5XX or ECE 5XX courses may count as upper division electives. Acceptable senior electives are ECE 4XX courses that are not otherwise required for the degree.

**Power & Energy System Electives:** Choose from IE 405, IE 457 (or ME 457), IE 518, IE 567 (or ME 569), MGT 562, or MGT 560.

**Technical Electives:** COSC 140, COSC 311 or MATH 360 or 367, COSC 370, COSC 420, COSC 428, CHEM 138A/138B, ECE 256; ECE 391; EF 203, 303; IE 406; MISE 201/207, MSE 410, MSE 480; ME 231, ME 321, ME 331, ME 342 or ME 347, Physics 250.

**Economic, Entrepreneurship, and Innovation Elective:** Choose from IE 405, IE 457 (or ME 457), IE 518, IE 567 (or ME 569), MGT 562, or MGT 560.

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*Beginning students who have had high school computer science and/or who have had significant programming experience (e.g. summer institute study, special research projects, home laboratory) are invited to apply during the summer to the head of the EECS department for permission to take a proficiency exam for COSC 101. The EECS department also grants credit for COSC 101 to students who receive a score of 3 or better on the Computer Science A AP Exam.*

**Progression**

Progression of departmental undergraduate students to the upper division programs of the department is competitive and is based on the space available in the department. Factors considered in the decision include overall grade point average, grades earned in courses required in the lower division curricula of the department and College of Engineering, and seriousness of purpose and interest in departmental programs as exemplified by regular and orderly progress through the prescribed curriculum without abuse of withdrawal and course repeat privileges.

Students also have opportunities for an Honors Concentration and/or a five year BS/MS program. See the Undergraduate Catalog for details and requirements.