Students must **pick one Depth** to complete the EE Major requirements.

Due to six different college requirements, only **major** requirements are listed below. Students must speak to their college advisor for questions regarding General Education requirements.

ALL courses used to satisfy major requirements must be taken for a **letter grade and passed with a C– or better**.

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**ELECTRONIC CIRCUITS AND SYSTEMS**

<table>
<thead>
<tr>
<th>Lower Division Courses [72 units]</th>
<th>Upper Division Courses [68 units]</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 18, 20A-B-C-D-E</td>
<td><strong>Breadth:</strong> ECE 100, 101, 102, 103, 107, 109</td>
</tr>
<tr>
<td>PHYS 2A-B-C-D</td>
<td><strong>Depth:</strong> ECE 164, 165, 166</td>
</tr>
<tr>
<td>CHEM 6A</td>
<td><strong>Technical Electives:</strong> five upper division engineering, math, or physics courses</td>
</tr>
<tr>
<td>ECE 5, 15, 25, 30, 35, 45, 65</td>
<td><strong>Professional Electives:</strong> two upper division courses</td>
</tr>
<tr>
<td></td>
<td><strong>Design:</strong> one of ECE 111, 115, 140B, 190, or 191</td>
</tr>
</tbody>
</table>

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**ELECTRONIC DEVICES AND MATERIALS**

<table>
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<tr>
<th>Lower Division Courses [72 units]</th>
<th>Upper Division Courses [68 units]</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 18, 20A-B-C-D-E</td>
<td><strong>Breadth:</strong> ECE 100, 101, 102, 103, 107, 109</td>
</tr>
<tr>
<td>PHYS 2A-B-C-D</td>
<td><strong>Depth:</strong> ECE 135A-B, 136L, 183</td>
</tr>
<tr>
<td>CHEM 6A</td>
<td><strong>Technical Electives:</strong> four upper division engineering, math, or physics courses</td>
</tr>
<tr>
<td>ECE 5, 15, 25, 30, 35, 45, 65</td>
<td><strong>Professional Electives:</strong> two upper division courses</td>
</tr>
<tr>
<td></td>
<td><strong>Design:</strong> one of ECE 111, 115, 140B, 190, or 191</td>
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</tbody>
</table>

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**PHOTONICS**

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</thead>
<tbody>
<tr>
<td>MATH 18, 20A-B-C-D-E</td>
<td><strong>Breadth:</strong> ECE 100, 101, 103, 107, 109</td>
</tr>
<tr>
<td>PHYS 2A-B-C-D</td>
<td><strong>Depth:</strong> ECE 181, 182, 183 and either ECE 184 or 185</td>
</tr>
<tr>
<td>CHEM 6A</td>
<td><strong>Technical Electives:</strong> five upper division engineering, math, or physics courses</td>
</tr>
<tr>
<td>ECE 5, 15, 25, 30, 35, 45, 65</td>
<td><strong>Professional Electives:</strong> two upper division courses</td>
</tr>
<tr>
<td></td>
<td><strong>Design:</strong> one of ECE 111, 115, 140B, 190, or 191</td>
</tr>
</tbody>
</table>

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2018-2019 DEPTH REQUIREMENTS CONTINUED ON NEXT PAGE →
## COMMUNICATION SYSTEMS

**Lower Division Courses [68 units]**
- MATH 18, 20A-B-C-D-E
- PHYS 2A-B-C
- CHEM 6A
- ECE 5, 15, 25, 30, 35, 45, 65

**Upper Division Courses [72 units]**
- **Breadth:** ECE 100, 101, 102, 107, 109
- **Depth:** ECE 153, 154A-B-C, 158A
- **Technical Electives:** five upper division engineering, math, or physics courses
- **Professional Electives:** two upper division courses
- **Design:** one of ECE 111, 115, 140B, 190, or 191

## MACHINE LEARNING AND CONTROLS

**Lower Division Courses [68 units]**
- MATH 18, 20A-B-C-D-E
- PHYS 2A-B-C
- CHEM 6A
- ECE 5, 15, 25, 30, 35, 45, 65

**Upper Division Courses [72 units]**
- **Breadth:** ECE 100, 101, 107, 109
- **Depth:** ECE 171A, 174, 175A and one of ECE 171B, 172A, or 175B
- **Technical Electives:** seven upper division engineering, math, or physics courses
- **Professional Electives:** two upper division courses
- **Design:** one of ECE 111, 115, 140B, 190, or 191

## SIGNAL AND IMAGE PROCESSING

**Lower Division Courses [68 units]**
- MATH 18, 20A-B-C-D-E
- PHYS 2A-B-C
- CHEM 6A
- ECE 5, 15, 25, 30, 35, 45, 65

**Upper Division Courses [72 units]**
- **Breadth:** ECE 100, 101, 107, 109
- **Depth:** ECE 153, 161A-B-C
- **Technical Electives:** seven upper division engineering, math, or physics courses
- **Professional Electives:** two upper division courses
- **Design:** one of ECE 111, 115, 140B, 190, or 191

## COMPUTER SYSTEM DESIGN

**Lower Division Courses [72 units]**
- MATH 18, 20A-B-C-D-E
- PHYS 2A-B-C
- CHEM 6A
- ECE 5, 15, 16, 25, 30, 35, 45, 65

**Upper Division Courses [68 units]**
- **Breadth:** ECE 100, 101, 109
- **Depth:** any five of ECE 102, 103, 111*, 140A-B, 141A-B, 143, 158A, 158B or 165
- **Technical Electives:** six upper division engineering, math, or physics courses
- **Professional Electives:** two upper division courses
- **Design:** one of ECE 111*, 115, 140B, 190, or 191

*ECE 111 MUST be taken as either a depth/technical elective, or design course.

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2018-2019 DEPTH REQUIREMENTS CONTINUED ON NEXT PAGE →