Electrical and computer engineering has transformed every single facet of our lives. The minor in electrical and computer engineering (ECE) is a broad program designed to provide non-ECE students with the foundational knowledge to build and analyze analog and digital circuits as well as signals and systems that form the foundations of any electrical device ranging from smart phones to satellites. These foundation courses enable students to then take on higher-level coursework as part of the minor electives, providing them with a deeper understanding and hands-on opportunity to build a diverse range of hardware systems.

The ECE minor is open to any student (except those pursuing the Electrical Engineering, BS or the Computer Engineering, BS degrees) and is especially conducive to those students with a strong mathematics and science background, such as a major in another engineering or science field as well as those pursuing a bachelor’s in computer science. By combining knowledge from their major, students can use the basics and hands-on experiences gained from the ECE minor to design, engineer, build and innovate practical systems to solve real-world problems.

### Admissions & Policies

Eight credits of coursework must be unique to the minor and students must complete all coursework with a minimum GPA of 2.00. For policies governing all minors, see AP.5.3.4 Minors (http://catalog.gmu.edu/policies/academic/undergraduate-policies/#ap-5-3-4).

### Requirements

#### Minor Requirements

Total credits: 18-21

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<tr>
<th>Required Courses</th>
<th>Code</th>
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<td>ECE 101</td>
<td>Introduction to Electrical and Computer</td>
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<td>ECE 201</td>
<td>Introduction to Signals and Systems</td>
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<td>ECE 330</td>
<td>Circuit Theory</td>
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<td>Electric Circuit Analysis I</td>
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<td>ECE 301</td>
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<td>or ECE 231 &amp; ECE</td>
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<td>System Design</td>
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<td>232</td>
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<td>and Digital System Design Lab</td>
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Total Credits: 12-13

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<th>Technical Electives</th>
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<td>C Programming for Engineers</td>
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<tr>
<td>ECE 286</td>
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<td>Electric Circuit Analysis II</td>
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<td>ECE 305</td>
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<td>Electromagnetic Theory</td>
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<td>ECE 311</td>
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<td>Energy Infrastructure, Market, and</td>
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<td>Management</td>
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<tr>
<td>ECE 321</td>
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<td>Continuous-Time Signals and Systems</td>
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<td>ECE 333</td>
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<td>Linear Electronics I (Mason Core) (http://</td>
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<td>catalog.gmu.edu/mason-core/)</td>
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<td>ECE 340</td>
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<td>Embedded Systems and Hardware Interfaces</td>
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<td>Secure RF Communications</td>
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<td>ECE 427</td>
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<td>Introduction to Machine Learning and</td>
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<td>Microcontrollers</td>
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Total Credits: 6-8