<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
<th>Noted Prerequisites</th>
<th>Terms</th>
</tr>
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<tbody>
<tr>
<td>ECE312</td>
<td>Linear System Analysis II</td>
<td>3</td>
<td>ECE311 with a minimum grade of C</td>
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<td>ECE/MATH430</td>
<td>Fourier and Wavelet Analysis with Applications</td>
<td>3</td>
<td>MATH340 or MATH345</td>
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<td>ECE471A</td>
<td>Semiconductor Physics</td>
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<td>ECE471B</td>
<td>Semiconductor Junctions</td>
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<td>ECE331 with a minimum grade of C; ECE 471A, may be taken concurrently</td>
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<td>ECE48X</td>
<td>Experimental Courses in Topics of Lasers/Optics</td>
<td>1-4</td>
<td>Varies - check course for details. Verify experimental course approval with ECE Academic Advisor</td>
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<td>ECE4951,2</td>
<td>Independent Study</td>
<td>1-3</td>
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<td>F, S, SS</td>
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<tr>
<td>ECE503</td>
<td>Ultrafast Optics</td>
<td>3</td>
<td>ECE341; ECE342</td>
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<td>Physical Optics</td>
<td>3</td>
<td>ECE341; ECE342</td>
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<td>ECE505</td>
<td>Nanostructures Fundamentals and Applications</td>
<td>3</td>
<td>ECE342; PH353</td>
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<td>ECE506</td>
<td>Optical Interferometry and Laser Metrology</td>
<td>3</td>
<td>ECE341; ECE342; ECE441</td>
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<td>ECE507</td>
<td>Plasma Physics and Applications</td>
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<td>ECE342</td>
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<tr>
<td>ECE/BIO517</td>
<td>Advanced Optical Imaging</td>
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<td>ECE342 or MATH340 or MATH345</td>
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<td>Biophotonics</td>
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<td>ECE 342 or ECE 457 or MATH 340 or MATH 345</td>
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<td>Laser Fundamentals and Devices</td>
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<td>ECE/BIO581B2</td>
<td>Signals and Noise in Biosensors</td>
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<td>Intro to Quantum Mechanics II</td>
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<td>PH462</td>
<td>Statistical Physics</td>
<td>3</td>
<td>MATH340; PH314; PH361</td>
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¹ A total of 3 credits of Independent Study may apply towards degree requirements. This includes credits awarded for ECE395 and ECE495 combined.
² Biomedical Engineering - Lasers & Optics (L&O) double degree students may apply a total of up to 3 credits of independent study (ECE395 and ECE495) towards their L&O degree