**MS ELECTRICAL ENGINEERING**

**Program Learning Objectives**

Our goal is to create a graduate degree program and a learning environment that result in graduates who possess the following:

1. Technical competency in their chosen disciplines;
2. Effective communication skills;
3. Awareness of the impacts of technology on society and the environment;
4. Understanding of ethics and responsible professional conduct;
5. Strong interpersonal and teamwork skills;
6. Appreciation of the need for life-long learning;
7. Leadership/planning/decision-making skills;
8. Critical thinking/complex problem-solving skills.

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>EE 525</td>
<td>Stochastic Processes</td>
<td>4</td>
</tr>
<tr>
<td>or EE 513</td>
<td>Control Systems Theory</td>
<td></td>
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<tr>
<td>EE 563</td>
<td>Graduate Seminar (1, 1, 1)</td>
<td>3</td>
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<tr>
<td>EE 599</td>
<td>Design Project (Thesis) (or 9 units of approved Technical Electives and a comprehensive written examination)</td>
<td>9</td>
</tr>
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**Additional Electrical Engineering Graduate Courses**

Select from the following:

- EE 502: Microwave Engineering
- EE 509: Computational Intelligence
- EE 511: Electric Machines Theory
- EE 513: Control Systems Theory
- EE 514: Advanced Topics in Automatic Control
- EE 515: Discrete Time Filters
- EE 518: Power System Protection
- EE 519: Advanced Analysis of Power Systems
- EE 520: Advanced Solar-Photovoltaic Systems Design
- EE 521: Computer Systems
- EE 522: Advanced Real-Time Operating Systems Design
- EE 523: Digital Systems Design
- EE 524: Solid State Electronics
- EE 526: Advanced Digital Communications
- EE 527: Advanced Topics in Power Electronics
- EE 528: Digital Image Processing
- EE 529: Microwave Device Electronics
- EE 530: Fourier Optics
- EE 533: Antennas
- EE 541: Advanced Microwave Laboratory
- EE 544: Solid-state Electronics and VLSI Laboratory

**Approved Technical Electives (400-500 level)**

May be selected from the course list above and other advisor approved technical electives.

<table>
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<tr>
<th>Units</th>
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<tr>
<td>17</td>
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**Total units**

| 45 |

1. At least 8 units of approved Technical Electives must be at 500 level.
2. Not all courses listed are offered each academic year. Consult the EE Department for current information on course offerings.