# MASTER OF ENGINEERING IN ENERGY SYSTEMS, ENERGY TRANSMISSION AND MARKETS TRACK

## Curriculum

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Courses</strong> (9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHE 543</td>
<td>Energy Envir Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECE 418</td>
<td>Power Systems Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MMAE 522</td>
<td>Nuclear F-F &amp; Sust Energy Sys</td>
<td>3</td>
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<tr>
<td><strong>Energy Transmission and Markets Courses</strong> (12-14)</td>
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<tr>
<td>Select 12-14 credit hours from the following courses:</td>
<td></td>
<td>12-14</td>
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<tr>
<td>ECE 411</td>
<td>Power Electronics</td>
<td>4</td>
</tr>
<tr>
<td>ECE 412</td>
<td>Hybrid Electric Vehicle Drives</td>
<td>4</td>
</tr>
<tr>
<td>ECE 551</td>
<td>Advanced Power Electronics</td>
<td>3</td>
</tr>
<tr>
<td>ECE 555</td>
<td>Power Mkt Operations</td>
<td>3</td>
</tr>
<tr>
<td>ECE 566</td>
<td>Power Mkt Ecnmcs Security</td>
<td>3</td>
</tr>
<tr>
<td>ECE 597</td>
<td>Special Problems</td>
<td>1-3</td>
</tr>
<tr>
<td><strong>Elective Courses</strong> (7-9)</td>
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<td>7-9</td>
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<td>Select seven to nine credit hours from the following courses:</td>
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<tr>
<td>CAE 513</td>
<td>Building Science</td>
<td>3</td>
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<tr>
<td>CAE 515</td>
<td>BIM Applications for Bldg Perf</td>
<td>3</td>
</tr>
<tr>
<td>CAE 526</td>
<td>Energy Conservation Dsgn:Bldgs</td>
<td>3</td>
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<tr>
<td>CHE 541</td>
<td>Renwble Enrgy Technologies</td>
<td>3</td>
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<tr>
<td>ECE 411</td>
<td>Power Electronics</td>
<td>4</td>
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<tr>
<td>ECE 412</td>
<td>Hybrid Electric Vehicle Drives</td>
<td>4</td>
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<tr>
<td>ECE 442</td>
<td>Internet of Things/Cyber Phys</td>
<td>3</td>
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<tr>
<td>or ECE 510</td>
<td>IoT and Cyber Physical Systems</td>
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<tr>
<td>ECE 537</td>
<td>Next Generation Smart Grid</td>
<td>3</td>
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<tr>
<td>ECE 539</td>
<td>Cmpt Aided Dsgn Elec Machines</td>
<td>3</td>
</tr>
<tr>
<td>ECE 551</td>
<td>Advanced Power Electronics</td>
<td>3</td>
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<tr>
<td>ECE 552</td>
<td>Adjustable Speed Drives</td>
<td>3</td>
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<tr>
<td>ECE 555</td>
<td>Power Market Operations</td>
<td>3</td>
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<td>ECE 566</td>
<td>Power Mkt Ecnmcs Security</td>
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<tr>
<td>ECE 561</td>
<td>Deregulated Power Systems</td>
<td>3</td>
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<tr>
<td>ECE 562</td>
<td>Power Syst Tran Management</td>
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<tr>
<td>ECE 564</td>
<td>Cntrl Oprtn Elect Power Systs</td>
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<tr>
<td>ECE 597</td>
<td>Special Problems</td>
<td>1-3</td>
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<tr>
<td>MMAE 425</td>
<td>Direct Energy Conversion</td>
<td>3</td>
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<tr>
<td>MMAE 433</td>
<td>Design of Thermal Systems</td>
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<tr>
<td>MMAE 453</td>
<td>Electrified Vehicle Powertrain</td>
<td>3</td>
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<tr>
<td>MMAE 523</td>
<td>Fundamentals Power Generation</td>
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</tr>
<tr>
<td>MMAE 525</td>
<td>Fundamentals of Heat Transfer</td>
<td>3</td>
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</table>
Master of Engineering in Energy Systems, Energy Transmission and Markets Track

Minimum degree credits required: 30

Course must not have been used to fulfill specialization course requirement.