NUCLEAR ENGINEERING, M.E.

Degree Requirements (30 Hours)
A Nuclear Engineering M.E. student must complete 30 hours of graded graduate courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Core Courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMCH 552</td>
<td>Introduction to Nuclear Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EMCH 553</td>
<td>Nuclear Fuel Cycles</td>
<td>3</td>
</tr>
<tr>
<td>EMCH 757</td>
<td>Radiation Shielding</td>
<td>3</td>
</tr>
<tr>
<td>or EMCH 557</td>
<td>Introduction to Radiation Shielding and Sources</td>
<td></td>
</tr>
<tr>
<td>EMCH 758</td>
<td>Nuclear Reactor Systems</td>
<td>3</td>
</tr>
<tr>
<td>or EMCH 558</td>
<td>Introduction to Nuclear Reactor Systems</td>
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</table>

**Nuclear Engineering Electives**

Nuclear engineering electives must be approved by a student’s advisor and include the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>EMCH 555</td>
<td>Instrumentation for Nuclear Engineering</td>
</tr>
<tr>
<td>EMCH 550</td>
<td>Introduction to Nuclear Safeguards</td>
</tr>
<tr>
<td>EMCH 573</td>
<td>Introduction to Nuclear Materials</td>
</tr>
<tr>
<td>EMCH 753</td>
<td>Chemical Thermodynamic Calculations and Modeling with Applications</td>
</tr>
<tr>
<td>EMCH 754</td>
<td>Thermal Hydraulic Design of Nuclear Reactors</td>
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<tr>
<td>EMCH 755</td>
<td>Advanced Nuclear Engineering</td>
</tr>
<tr>
<td>EMCH 756</td>
<td>Safety Analysis for Energy Systems</td>
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<tr>
<td>EMCH 759</td>
<td>Waste Management in the Nuclear Industry</td>
</tr>
<tr>
<td>EMCH 770</td>
<td>Predictive Modeling: Combining Experiments with Computations</td>
</tr>
<tr>
<td>EMCH 772</td>
<td>Nuclear Materials</td>
</tr>
<tr>
<td>EMCH 774</td>
<td>Radiation Damage</td>
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</tbody>
</table>

**Engineering Elective**

Engineering electives must be approved by a student’s advisor and include the following:

- Any Nuclear Engineering Elective (from above)
- Any Engineering course at 500 level or higher
- Other courses as approved by the student’s advisor and graduate director

**Total Credit Hours**

30