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>
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</thead>
<tbody>
<tr>
<td><strong>Required Core Courses</strong></td>
<td></td>
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<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>
<td></td>
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</tbody>
</table>

**Nuclear Engineering Electives**  12

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

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

**Engineering Elective**  6

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