# M.S. in Chemical Engineering

## Degree Requirements

A minimum of 30 credits is required. Students must attain a minimum GPA of 3.0 in the core courses listed below, and a minimum overall GPA of 3.0.

## Degree Options

### M.S. in Chemical Engineering (courses only)

<table>
<thead>
<tr>
<th>Core Courses</th>
<th></th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 611</td>
<td>Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>CHE 612</td>
<td>Kinetics of Reactions and Reactor Design</td>
<td>3</td>
</tr>
<tr>
<td>CHE 624</td>
<td>Transport Phenomena I</td>
<td>3</td>
</tr>
<tr>
<td>CHE 626</td>
<td>Mathematical Methods in Chemical Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

### Elective Courses

- Three 600 or 700-level Chemical Engineering courses: 9
- Chemical Engineering, Pharmaceutical Engineering, or Chemistry course: 3
- Two Elective courses: 6

**Total Credits: 30**

1. 500-level courses offered in the department do not count toward degree requirements.

### M.S. in Chemical Engineering (students receiving departmental or research-based support)

<table>
<thead>
<tr>
<th>Core Courses</th>
<th></th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CHE 611</td>
<td>Thermodynamics</td>
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<td>CHE 624</td>
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<tr>
<td>CHE 626</td>
<td>Mathematical Methods in Chemical Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Thesis 1</th>
<th></th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 791</td>
<td>Graduate Seminar</td>
<td>0</td>
</tr>
</tbody>
</table>

### Elective Courses

- 600 or 700-level Chemical Engineering course: 3
- Chemical Engineering, Pharmaceutical Engineering, or Chemistry course: 3
- Two Elective courses: 6

**Total Credits: 30**

1. Before deciding on a thesis topic and advisor, students must discuss thesis topics with at least three faculty members and get their signature on a form provided by the department. The signed form with the name of advisor selected and tentative title of thesis topic must be returned to the department for approval. Change of advisor requires consent of the previous advisor and departmental approval. The completed thesis must be examined and signed by three faculty members at least two of which must be on the department faculty. An oral presentation is also required. The MS thesis committee must be formed and submitted to the department for approval at least one semester before the expected graduation date. The department provides a form for the formation of the MS thesis committee.

2. All students who receive departmental or research-based support must enroll each semester in CHE 791 Graduate Seminar.

3. 500-level courses offered in the department do not count toward degree requirements.

### M.S. in Chemical Engineering (Master’s thesis)

<table>
<thead>
<tr>
<th>Core Courses</th>
<th></th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 611</td>
<td>Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>CHE 612</td>
<td>Kinetics of Reactions and Reactor Design</td>
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</tr>
<tr>
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<td>Transport Phenomena I</td>
<td>3</td>
</tr>
<tr>
<td>CHE 626</td>
<td>Mathematical Methods in Chemical Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Thesis 1</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 701</td>
<td>Master’s Thesis</td>
<td>6</td>
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</tbody>
</table>
### Elective Courses

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>600 or 700-level course(s) in Chemical Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Chemical Engineering, Pharmaceutical Engineering, or Chemistry course</td>
<td>3</td>
</tr>
<tr>
<td>Two elective courses</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credits**: 30

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1. Before deciding on a thesis topic and advisor, students must discuss thesis topics with at least three faculty members and get their signature on a form provided by the department. The signed form with the name of advisor selected and tentative title of thesis topic must be returned to the department for approval. Change of advisor requires consent of the previous advisor and departmental approval. The completed thesis must be examined and signed by three faculty members at least two of which must be on the department faculty. An oral presentation is also required. The MS thesis committee must be formed and submitted to the department for approval at least one semester before the expected graduation date. The department provides a form for the formation of the MS thesis committee.

2. 500-level courses offered in the department do not count toward degree requirements.