### CHEMICAL ENGINEERING - MASTER OF SCIENCE (MS)

The Master of Science degree in chemical engineering requires 30 hours of approved course work and successful completion of a comprehensive final exam or thesis defense.

For more information, visit the department's Why ChBE for Graduate School? (http://www.colorado.edu/chbe/academics/why-chbe-graduate-school) webpage.

**Note:** The department does not accept students interested in a terminal master's degree except under special circumstances. Students generally obtain a master's degree in the course of fulfilling the requirements for the chemical engineering PhD (catalog.colorado.edu/graduate/colleges-schools/engineering-applied-science/programs-study/chemical-engineering/chemical-engineering-doctor-philosophy-phd) degree.

### Concurrent Degree Program

**BS/MS in Chemical Engineering or Chemical and Biological Engineering**

The concurrent BS/MS program in the Department of Chemical and Biological Engineering enables especially well qualified students to work concurrently towards a BS in chemical engineering or chemical and biological engineering and an MS degree in chemical engineering. Students are admitted into the program during the spring of their junior year and begin planning a graduate program. This program allows for early planning of the MS portion of the student's education, taking graduate courses as part of their BS degree requirements.

### Requirements

#### Admission Requirements

General criteria for regular admission to the master’s program include a bachelor's degree with a 3.25/4.00 or better overall GPA from a college or university of recognized standing, equivalent to the degree given at this university (or college work equivalent to that required for such a degree, at least 96 credit hours of which must be acceptable toward a degree at this university)# promise of ability to pursue advanced study and research, as judged by previous scholastic record or otherwise# and adequate preparation to begin graduate study in the chosen field.

#### General Degree Requirements

The following course requirements are subject to change; for the most current information, visit the department’s Why ChBE for Graduate School? (http://www.colorado.edu/chbe/academics/why-chbe-graduate-school) webpage.

A candidate for the Master of Science degree in chemical engineering must complete at least 30 credit hours, including at least 24 credit hours of course work and 4–6 credits of MS thesis.

Only courses 5000-level and above may be applied towards the MS degree. Moreover, only courses at the 5000-level and above in any department count toward the PhD degree. An advisor must approve all courses.

#### Required Courses and Semester Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEN 5090</td>
<td>Seminar in Chemical Engineering</td>
<td>1</td>
</tr>
<tr>
<td>CHEN 5210</td>
<td>Transport Phenomena</td>
<td>3</td>
</tr>
<tr>
<td>CHEN 5740</td>
<td>Analytical Methods in Chemical Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Choose one of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEN 5370</td>
<td>Intermediate Chemical Engineering Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>CHEN 5390</td>
<td>Chemical Reactor Engineering</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours: 10

Additionally, 15 of the total required credit hours must be chemical and biological engineering courses, and pass/fail courses do not count toward the degree.

A degree plan must be prepared at the beginning of the academic program in consultation with an advisory committee. The student is urged to maintain close contact with this advisory committee during the entire course of study.

#### Residence and Time Limit

It is expected that a qualified student can complete the MS degree in two years or less. All work, including the thesis defense and filing of the thesis with the Graduate School, must be completed in the two year requirement.