M.S. in Chemical Engineering - Thesis Option (Plan A)

General Requirements
- 30 credits total (including thesis credits)
- 10 credits (minimum) of ECHM 590 Master’s Thesis
- 21 or more credits required for degree must be at 5xx level
- 3xx level courses are not allowed
- 4xx level courses may be used
- Courses with grades below C- cannot be used to satisfy degree requirements
- Three credits (min.) registration required during term of:
  - Comprehensive Examination and Thesis defense
  - Graduation (1 credit with in absentee graduation request on file)

Course Requirements
The following courses are required of each MS student

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECHM 594</td>
<td>Seminar (can be taken twice)</td>
<td>1</td>
</tr>
<tr>
<td>ECHM 503</td>
<td>Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>ECHM 533</td>
<td>Transport Phenomena</td>
<td>3</td>
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Plus, a course in each of the following areas:

**Reaction Engineering**
- ECHM 510 Reaction Engineering/Modeling 3
- or EBIO 566 Fundamentals of Biofilm Engr

**Advanced Mathematics**
- EGEN 505 Advanced Engineering Analysis 3
- or EGEN 506 Numerical Sol to Engr Problems

Each student’s graduate advisor and committee are to work with the student to prepare a Program of Study listing the courses the student is required to take.

Examinations
For Thesis Option (Plan A) students, the thesis defense and comprehensive examination are combined.