CHEMICAL ENGINEERING OPTION

This option is offered within the following major(s):

- Chemistry - College of Science (http://catalog.oregonstate.edu/college-departments/science/chemistry/chemistry-ba-bs-hba-hbs)

The Chemical Engineering option offers selected chemical engineering concepts that may enhance career opportunities in areas such as electronics, polymers, and biotechnology, or prepare students for graduate studies in chemistry or related fields. Students can earn a BS degree in Chemistry in four years while targeting a career direction. This option includes nine courses in basic engineering and chemical engineering including mass and fluid transport, reaction engineering, and separations processes.

The Chemical Engineering option is designed for the Track-Two BS degree in Chemistry.

The track-two core requirements are slightly modified for the Chemical Engineering option:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH 211 &amp; PH 212 &amp; PH 213</td>
<td>GENERAL PHYSICS WITH CALCULUS and GENERAL PHYSICS WITH CALCULUS and GENERAL PHYSICS WITH CALCULUS (Required)</td>
<td></td>
</tr>
<tr>
<td>CH 462</td>
<td>EXPERIMENTAL CHEMISTRY II (Recommended)</td>
<td></td>
</tr>
</tbody>
</table>

### Chemical Engineering Option Requirements

CHE 211 (Terminated 201101)        4
CHE 212 (Terminated 201101)        4
CHE 411 MASS TRANSFER OPERATIONS   4
CHE 412 (Terminated 200901)        3
CHE 443 CHEMICAL REACTION ENGINEERING   4
ME 331 INTRODUCTORY FLUID MECHANICS  4
ME 332 HEAT TRANSFER                4
MTH 256 APPLIED DIFFERENTIAL EQUATIONS 4

Select one of the following: 3-4

CH 401 RESEARCH

or CHE 401 RESEARCH

CHE 213 (Terminated 200901)
CHE 311 THERMODYNAMICS
CHE 312 CHEMICAL ENGINEERING THERMODYNAMICS
CHE 331 TRANSPORT PHENOMENA I
CHE 332 TRANSPORT PHENOMENA II
CHE 361 CHEMICAL PROCESS DYNAMICS AND SIMULATION
CHE 444 THIN FILM MATERIALS PROCESSING
CHE 445 POLYMER ENGINEERING AND SCIENCE or ENGR 213 STRENGTH OF MATERIALS
CHE 461 PROCESS CONTROL
ENGR 321 INTRODUCTION TO MATERIALS SCIENCE

Total Hours 34-35