## CHEMICAL ENGINEERING

Courses Available at Newberry College
Biomolecular Engineering Concentration
2018-2019 Curriculum

### FRESHMAN YEAR

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>4 CH 1010</td>
<td>General Chemistry</td>
</tr>
<tr>
<td></td>
<td>3 ENGL 1030</td>
<td>Accelerated Composition</td>
</tr>
<tr>
<td></td>
<td>2 ENGR 1020</td>
<td>Engineering Discipline and Skills</td>
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<tr>
<td></td>
<td>4 MATH 1060</td>
<td>Calculus of One Variable I</td>
</tr>
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<td>3 Gen Ed(^4)</td>
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### SOPHOMORE YEAR

<table>
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<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Description</th>
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<tbody>
<tr>
<td>17</td>
<td>5 BIOL 1100</td>
<td>Principles of Biology I</td>
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<td>3 CH 2230</td>
<td>Organic Chemistry</td>
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<tr>
<td></td>
<td>4 CHE 2110</td>
<td>Mass and Energy Balances</td>
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<td></td>
<td>4 MATH 2060</td>
<td>Calculus of Several Variables</td>
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<td>3 Gen Ed(^4)</td>
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### JUNIOR YEAR

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<tr>
<td>19</td>
<td>3 CHE 3210</td>
<td>Chemical Engr. Thermodynamics II</td>
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<tr>
<td></td>
<td>4 CHE 3300</td>
<td>Mass Transfer and Separation Proc.</td>
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<tr>
<td></td>
<td>3 PHYS 2210</td>
<td>Physics with Calculus II</td>
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<td></td>
<td>3 STAT 4110</td>
<td>Statistical Methods for Process Dev. and Control</td>
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<td>3 Biochemistry Requirement(^4)</td>
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### SENIOR YEAR

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<th>Semester</th>
<th>Course Code</th>
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<tr>
<td>17</td>
<td>3 BCHM 4310</td>
<td>Physical Approach to Biochem.</td>
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<td>3 CHE 4070</td>
<td>Unit Operations Lab. II</td>
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<tr>
<td></td>
<td>3 CHE 4310</td>
<td>Chemical Process Design I</td>
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<td>2 CHE 4430</td>
<td>Safety, Environ &amp; Prof. Practice I</td>
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<tr>
<td></td>
<td>3 CHE 4500</td>
<td>Chemical Reaction Engineering</td>
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<tr>
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<td>3 Gen Ed(^4)</td>
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</table>

**133 Total Semester Hours**

**Footnotes:**

1. See Policy on Humanities and Social Sciences for Engineering Curricula. Six of these credit hours must also satisfy the Cross-Cultural Awareness and Science and Technology in Society Requirements.
2. Select from BCHM 3010, BCHM 3050, BCHM 4230 or CH 3600
3. Select from BE 4280, BE 4350, BIOE 4400, BIOE 4490, BIOE 4760, BMOL 4030, BMOL 4270, CHE 4010 or MICR 4130
4. ENGR 1050 and ENGR 1060 may be substituted for ENGR 1020

- CHE 1300 is only taught in the Spring and Summer.
- CHE 2000 level classes are taught ONCE per year and NOT in the summer.

### General Education Requirements

<table>
<thead>
<tr>
<th>LIT</th>
<th>Non-Lit</th>
<th>SS1</th>
<th>SS2</th>
<th>CCA</th>
<th>STS</th>
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<tbody>
<tr>
<td>LIFE</td>
<td>Palmetto Fellows</td>
<td>Honors</td>
<td>Athlete</td>
<td>RiSE</td>
<td>ROTC</td>
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**Comments:**