B.S. in Chemistry
Concentration III: American Chemical Society Certified – Materials Chemistry Program*

Core Requirements for All Concentrations¹:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Schedule</th>
<th>Lab Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 131</td>
<td>General Chemistry I</td>
<td>3</td>
<td>F,Sp</td>
<td></td>
</tr>
<tr>
<td>CHEM 132</td>
<td>General Chemistry II</td>
<td>3</td>
<td>Sp,Su,F</td>
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<tr>
<td>CHEM 135L²</td>
<td>Special General Chemistry Lab I</td>
<td>1</td>
<td>F</td>
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<tr>
<td>CHEM 136L²</td>
<td>Special General Chemistry Lab II</td>
<td>2</td>
<td>Sp</td>
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<tr>
<td>CHEM 241</td>
<td>Organic Chemistry I</td>
<td>3</td>
<td>F</td>
<td></td>
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<tr>
<td>CHEM 242</td>
<td>Organic Chemistry II</td>
<td>3</td>
<td>Sp</td>
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<tr>
<td>CHEM 270</td>
<td>Inorganic Chemistry I</td>
<td>3</td>
<td>F</td>
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</tr>
<tr>
<td>CHEM 287L</td>
<td>Integrated Inorganic/Organic Lab I</td>
<td>2</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>CHEM 288L</td>
<td>Integrated Inorganic/Organic Lab II</td>
<td>2</td>
<td>Sp</td>
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<tr>
<td>CHEM 331</td>
<td>Physical Chemistry I</td>
<td>3</td>
<td>F</td>
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<td>CHEM 351</td>
<td>Analytical Chemistry</td>
<td>4</td>
<td>F</td>
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<tr>
<td>CHEM 361</td>
<td>Biochemistry I</td>
<td>3</td>
<td>F</td>
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<tr>
<td>CHEM 481</td>
<td>Literature and Seminar I</td>
<td>1</td>
<td>F</td>
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<tr>
<td>CHEM 482</td>
<td>Literature and Seminar II</td>
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<td>Sp</td>
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<tr>
<td>MATH 235³</td>
<td>Calculus I</td>
<td>4</td>
<td>F,Sp</td>
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<tr>
<td>MATH 236</td>
<td>Calculus II</td>
<td>4</td>
<td>F,Sp</td>
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<tr>
<td>PHYS 240</td>
<td>University Physics I</td>
<td>3</td>
<td>F,Sp</td>
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<td>PHYS 250</td>
<td>University Physics II</td>
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<td>Sp,F</td>
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<td>PHYS 240L</td>
<td>General Physic Lab I</td>
<td>1</td>
<td>F</td>
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<td>PHYS 250L</td>
<td>General Physics Lab II</td>
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</table>

Additional ACS Materials Chemistry Program Requirements¹:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Schedule</th>
<th>Lab Hours</th>
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</thead>
<tbody>
<tr>
<td>CHEM 336L</td>
<td>Physical Chemistry I Laboratory</td>
<td>2</td>
<td>Sp</td>
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<tr>
<td>CHEM 352</td>
<td>Instrumental Analysis</td>
<td>3</td>
<td>Sp</td>
<td></td>
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<tr>
<td>CHEM 352L</td>
<td>Instrumental Analysis Laboratory</td>
<td>2</td>
<td>Sp</td>
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<tr>
<td>CHEM 375</td>
<td>Intro to Material Science</td>
<td>3</td>
<td>F</td>
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<tr>
<td>CHEM 432</td>
<td>Physical Chemistry II</td>
<td>3</td>
<td>F</td>
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<tr>
<td>CHEM 445</td>
<td>Polymer Chemistry</td>
<td>3</td>
<td>Fodd</td>
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<tr>
<td>CHEM 445L</td>
<td>Polymer Chemistry Lab</td>
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</table>

(continued from previous column)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Schedule</th>
<th>Lab Hours</th>
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</thead>
<tbody>
<tr>
<td>MATH 237</td>
<td>Calculus III</td>
<td>4</td>
<td>F,Sp</td>
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<tr>
<td>MATH 238</td>
<td>Linear Algebra/Diff. Eqns</td>
<td>4</td>
<td>F,Sp</td>
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<tr>
<td>Choose One:</td>
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<tr>
<td>CHEM 485</td>
<td>Science of the Small</td>
<td>4</td>
<td>Sp</td>
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<td>ENGR 314</td>
<td>Materials and Mechanics</td>
<td>4</td>
<td>F,Sp</td>
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<td>ENGR 498</td>
<td>Adv – Gipson section only</td>
<td>3</td>
<td>Sp</td>
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<tr>
<td>GEOL 390</td>
<td>Laboratory Techniques in Geol</td>
<td>3</td>
<td>F,Sp</td>
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</table>

Electives

The well-prepared student is encouraged to take as many of the additional departmental offerings as possible as electives with particular attention being given to junior and/or senior research projects.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Schedule</th>
<th>Lab Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 280</td>
<td>Alt Lower-Div Chem Experience</td>
<td>1-4</td>
<td>V</td>
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<td>CHEM 325</td>
<td>Chemical Hazards and Lab Safety</td>
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<td>CHEM 353</td>
<td>Environmental Chemistry</td>
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<td>Sp,odd</td>
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<tr>
<td>CHEM 354</td>
<td>Environmental Chemistry Field Camp(Su)</td>
<td>3</td>
<td>50</td>
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<td>CHEM 355</td>
<td>Geochemistry of Natural Waters</td>
<td>3</td>
<td>F</td>
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<td>CHEM 362</td>
<td>Biochemistry II</td>
<td>3</td>
<td>F,Sp</td>
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<tr>
<td>CHEM 366L</td>
<td>Biochemistry Laboratory</td>
<td>2</td>
<td>Sp</td>
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<tr>
<td>CHEM 390</td>
<td>Problems in Chemistry</td>
<td>1-3</td>
<td>F,Sp</td>
<td>45-135</td>
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<td>CHEM 395</td>
<td>Perspectives in Chemistry</td>
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<td>CHEM 440</td>
<td>Intermediate Organic Chemistry</td>
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<td>F,Sp</td>
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<td>CHEM 450</td>
<td>Nuclear and Radiation Chemistry</td>
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<tr>
<td>CHEM 450L</td>
<td>Nuclear &amp; Radiation Chemistry Lab(Sp even)</td>
<td>1</td>
<td>45</td>
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<td>CHEM 455</td>
<td>Lasers &amp; Applications to Phys Sci (V)</td>
<td>3</td>
<td>22</td>
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<td>CHEM 470</td>
<td>Inorganic Chemistry II</td>
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<td>F</td>
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<td>CHEM 480</td>
<td>Selected Topics in Chemistry(V)</td>
<td>1-4</td>
<td>F</td>
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<tr>
<td>CHEM 497</td>
<td>Undergrad Chemical Research (F,Sp)</td>
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<td>90-180</td>
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<tr>
<td>CHEM 499</td>
<td>Honors</td>
<td>6</td>
<td>F,Sp</td>
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</tbody>
</table>

(F = Fall, Sp = Spring, Su = Summer, V = varied, all are subject to change)

¹These courses may NOT be taken credit / no credit
²CHEM 131L and 132L (2 credits) may substitute for 135L and 136L
³MATH 231 and 232 (6 credits) may substitute for MATH 235
⁴or PHYS 140L-150L prior to Fall 2018

*It is the student’s responsibility to meet any required co- or pre- requisites.

Updated Jan 2018