CHEMISTRY B.S. - PHARMACOLOGY

Bachelor of Science - Chemistry; Pharmacology Concentration
College of Humanities & Sciences

Degree Specific Credits: 87

Required Cumulative GPA: 2.0

Catalog Year: 2018-2019

General Education Requirements

Information regarding these requirements can be found in the General Education Section (http://catalog.umt.edu/academics/general-education-requirements) of the catalog.

Summary

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Lower-Division Core Courses</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>General Chemistry</td>
<td>5</td>
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<tr>
<td></td>
<td>Organic Chemistry</td>
<td>1</td>
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<tr>
<td></td>
<td>Biochemistry and Biology</td>
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<tr>
<td></td>
<td>Physics</td>
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<tr>
<td></td>
<td>Mathematics</td>
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<td></td>
<td>Upper-Division Core Courses</td>
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<tr>
<td></td>
<td>Analytical Chemistry</td>
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<tr>
<td></td>
<td>Physical Chemistry</td>
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<tr>
<td></td>
<td>Inorganic Chemistry</td>
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<td></td>
<td>Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Pharmacology</td>
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<td>Advanced Electives</td>
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<td>Ethics</td>
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Lower-Division Core Courses

General Chemistry

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CHMY 141N &amp; CHMY 142N</td>
<td>College Chemistry I and College Chemistry I Lab</td>
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</tr>
<tr>
<td>CHMY 143N &amp; CHMY 144N</td>
<td>College Chemistry II and College Chemistry II Lab</td>
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Minimum Required Grade: C-

Organic Chemistry

<table>
<thead>
<tr>
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<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CHMY 221</td>
<td>Organic Chemistry I</td>
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Minimum Required Grade: C-

Biochemistry and Biology

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BCH 110</td>
<td>Intro Biology for Biochemists</td>
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<tr>
<td>BCH 111</td>
<td>Intro Biol for Biochemists Lab</td>
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<td>BIOB 260</td>
<td>Cellular and Molecular Biology</td>
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Minimum Required Grade: C-

Physics

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<tbody>
<tr>
<td>PHSX 215N &amp; PHSX 216N</td>
<td>Fund of Physics w/Calc I and Physics Laboratory I w/Calc</td>
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<tr>
<td>PHSX 217N &amp; PHSX 218N</td>
<td>Fund of Physics w/Calc II and Physics Laboratory II w/Calc</td>
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Minimum Required Grade: C-

Mathematics

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<tr>
<td>M 171</td>
<td>Calculus I</td>
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<tr>
<td>M 172</td>
<td>Calculus II</td>
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Minimum Required Grade: C-

Upper-Division Core Courses

Rule: All courses in all subcategories listed are required.

Analytical Chemistry

<table>
<thead>
<tr>
<th>Code</th>
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<th>Hours</th>
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<tbody>
<tr>
<td>CHMY 311</td>
<td>Analytical Chem-Quant Analysis</td>
<td>4</td>
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<tr>
<td>CHMY 421</td>
<td>Advanced Instrument Analysis</td>
<td>4</td>
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<tr>
<td>Total Hours</td>
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Minimum Required Grade: C-

Physical Chemistry

<table>
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<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CHMY 373</td>
<td>Phys Chem-Kntcs &amp; Thrmdynmcs</td>
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Minimum Required Grade: C-
Inorganic Chemistry

<table>
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<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CHMY 401</td>
<td>Advanced Inorganic Chemistry</td>
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Total Hours: 3

Minimum Required Grade: C-

Biochemistry

<table>
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<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BCH 480</td>
<td>Advanced Biochemistry I</td>
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<tr>
<td>BCH 482</td>
<td>Advanced Biochemistry II</td>
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Total Hours: 6

Minimum Required Grade: C-

Pharmacology

<table>
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<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>PHAR 421</td>
<td>Medicinal Chem I</td>
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</tr>
<tr>
<td>PHAR 422</td>
<td>Medicinal Chem II</td>
<td>3</td>
</tr>
<tr>
<td>PHAR 443</td>
<td>Pharmacol &amp; Toxicol I</td>
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<tr>
<td>PHAR 444</td>
<td>Pharmacology &amp; Toxicol II</td>
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Total Hours: 14

Minimum Required Grade: C-

Advanced Electives

Note: 3 credits maximum of CHMY 492 may be applied toward degree requirements. 3 credits maximum of BIOB 490 may be applied toward degree requirements.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIOB 490</td>
<td>Adv Undergrad Research</td>
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<tr>
<td>CHMY 373</td>
<td>Phys Chem-Kntcs &amp; Thrdynmcs</td>
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<td>CHMY 402</td>
<td>Advanced Inorganic Chem Lab</td>
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<td>CHMY 403</td>
<td>Descriptive Inorganic Chem</td>
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<td>CHMY 442</td>
<td>Aquatic Chemistry</td>
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<td>CHMY 465</td>
<td>Organic Spectroscopy</td>
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<td>CHMY 466</td>
<td>FT-NMR Optn for Undrgrd Rsrch</td>
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<td>CHMY 492</td>
<td>Independent Study</td>
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Total Hours: 3

Minimum Required Grade: C-

Ethics

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<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td>CHMY 305E</td>
<td>Ethics, Literature and Writing in the Sciences</td>
<td>3</td>
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Total Hours: 3

Minimum Required Grade: C-