Program Progression Guide

Disclaimer: The 2022-2023 Purdue West Lafayette catalog is considered the source for academic and programmatic requirements for students entering programs during the Fall 2022, Spring 2023, and Summer 2023 semesters. The Program Progression Guide assists students in the development of an individualized 8-semester plan. Students are encouraged to use this guide, MyPurduePlan* (online degree auditing tool) and the Student Educational Planner (SEP) as they work with their academic advisor towards the completion of their degree requirements.

Notification: Each student is ultimately responsible for knowing, monitoring and completing all degree requirements.

An undergraduate degree in the College of Science requires completion of the following degree requirements.

<table>
<thead>
<tr>
<th>University Degree Requirements</th>
<th>Minimum 2.0 Cumulative GPA</th>
<th>Minimum 120 Credits that fulfill degree requirements</th>
<th>32 Residency Credits (30000 and above) at a Purdue University campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Core Curriculum**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Human Cultures: Behavioral/Social Science</td>
<td></td>
<td>• Quantitative Reasoning</td>
<td></td>
</tr>
<tr>
<td>• Human Cultures: Humanities</td>
<td></td>
<td>• Science</td>
<td></td>
</tr>
<tr>
<td>• Information Literacy</td>
<td></td>
<td>• Science, Technology &amp; Society Selective</td>
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</tr>
<tr>
<td>• Oral Communication</td>
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<td>• Written Communication</td>
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</table>

University Core Curriculum Course Listing

Required Major Program Courses
Departmental specific requirements. 2.0 average GPA in CHEM classes required to graduate.
Minimum 2.0 cumulative GPA

College of Science Core Curriculum

• Freshman Composition – 3 credits
• Technical Writing and Presentation - 3 credits
• Teaming & Collaboration (NC) – 3 credits
• General Education - 9 credits
• Foreign Language & Culture – 9 credits
• Great Issues - 3 credits
• Laboratory Science - 8 credits
• Mathematics - 6-10 credits
• Multidisciplinary - 3 credits
• Statistics - 3 credits
• Computing - 3 credits

Degree Electives
Any Purdue or transfer course approved to meet degree requirements in accordance with individual departmental policies. Consult the No Count course list for courses, which may not be used to meet any College of Science degree requirement.

* This audit is not your academic transcript and it is not official notification of completion of degree or certificate requirements.

** University Core Curriculum Outcomes may be met through completion of the College of Science Core curriculum. Students should consult with their academic advisors and MyPurdue Plan for course selections.
## 2022-23 Biochemistry (Chemistry-ACS) Degree Progression Guide

The Chemistry Department has suggested the following degree progression guide for the Biochemistry (Chemistry-ACS) Degree. Students will work with their academic advisors to determine their best path to degree completion. Course prerequisites are specific to this degree plan.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Fall 1st Year</th>
<th>Prerequisite</th>
<th>Credit</th>
<th>Spring 1st Year</th>
<th>Prerequisite</th>
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<tbody>
<tr>
<td>4-5</td>
<td>CHM 12500 <em>(fall only)</em> or 11500</td>
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<td>4-5</td>
<td>CHM 12600 <em>(spring only)</em> or 11600</td>
<td>CHM 12500</td>
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<tr>
<td>4-5</td>
<td>MA 16100* or 16500</td>
<td>ALEKS 85</td>
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<td>MA 16200 or 16600</td>
<td>MA 16100</td>
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<tr>
<td>1</td>
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<td>3-4</td>
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<td>3 Science Core Option</td>
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<td>3-4</td>
<td>Science Core Option</td>
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<td>14-17</td>
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<table>
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<tr>
<th>Credit</th>
<th>Fall 2nd Year</th>
<th>Prerequisite</th>
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<th>Spring 2nd Year</th>
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<td>MA 16200</td>
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<td>PHYS 17200 &amp; MA 16200</td>
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<td>0-3</td>
<td>Science Core Option</td>
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<th>Prerequisite</th>
<th>Credit</th>
<th>Spring 3rd Year</th>
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<tr>
<td>3</td>
<td>BIOL 23100</td>
<td>CHM 26505</td>
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<td>BIOL 24100 <em>(spring only)</em> or AGRY 32000</td>
<td>BIOL 231/232</td>
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<td>2</td>
<td>BIOL 23200</td>
<td>CHM 26505</td>
<td>1-2</td>
<td>BIOL 24200 <em>(spring only)</em> or AGRY 32100</td>
<td>CHM 53300</td>
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<td>3</td>
<td>CHM 43300</td>
<td>CHM 26505</td>
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<td>CHM 43800</td>
<td>CHM 33901</td>
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<td>CHM 26505</td>
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<td>CHM 33901</td>
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<tr>
<th>Credit</th>
<th>Fall 4th Year</th>
<th>Prerequisite</th>
<th>Credit</th>
<th>Spring 4th Year</th>
<th>Prerequisite</th>
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<tr>
<td>3</td>
<td>CHM 37300</td>
<td>PHYS 27200 &amp; MA 26100</td>
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<td>CHM 37400</td>
<td>CHM 37300</td>
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<td>CHM 37301</td>
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<td>CHM 32100</td>
<td>CHM 12600</td>
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<td>CHM 34200</td>
<td>CHM 37300</td>
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<td>Jr/Sr class</td>
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<td>Science Core Option</td>
<td>CHM 12600</td>
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<td>Science Core Option</td>
<td>Jr/Sr class</td>
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<td>2</td>
<td>CHM 49900</td>
<td>CHM 12600</td>
<td>2</td>
<td>Science Core Option</td>
<td>Jr/Sr class</td>
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<tr>
<td>16</td>
<td></td>
<td></td>
<td>13-16</td>
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<td></td>
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</tbody>
</table>

### Science Core Curriculum Options

(one course needed for each requirement unless otherwise noted)

<table>
<thead>
<tr>
<th>Options recommended for first- and second-year students</th>
<th>Options recommended for third- and fourth-year students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman Composition(^UC)</td>
<td>Technical Writing and Presentation(^UC) (COM 217 recommended)</td>
</tr>
<tr>
<td>General Education(^UC) (3 courses needed)</td>
<td>Statistics (STAT 30100 or 35000)</td>
</tr>
<tr>
<td>Foreign Language and Culture(^UC) (3 courses needed)</td>
<td>Computing (CS 17700 or CS 15900)</td>
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<tr>
<td>Multidisciplinary Experience(^UC)</td>
<td>Great Issues</td>
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</tbody>
</table>

\(^UC\) Select courses may also satisfy a University Core Curriculum requirement; see the University Core Requirement course list for approved courses.
### 2022-2023 Biochemistry (ACS) Major Courses

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHM 12500</td>
<td>Introduction to Chemistry I or CHM11500 (4 cr)</td>
<td>5</td>
</tr>
<tr>
<td>CHM 12600</td>
<td>Introduction to Chemistry II or CHM 11600 (4 cr)</td>
<td>5</td>
</tr>
<tr>
<td>CHM 26505</td>
<td>Organic Chemistry <em>(fall only)</em></td>
<td>3</td>
</tr>
<tr>
<td>CHM 26500</td>
<td>Organic Chemistry Lab or CHM 26700 (Honors Lab) <em>(fall only)</em></td>
<td>2</td>
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<tr>
<td>CHM 26605</td>
<td>Organic Chemistry <em>(spring only)</em></td>
<td>3</td>
</tr>
<tr>
<td>CHM 26600</td>
<td>Organic Chemistry Lab or CHM26800 (Honors Lab) <em>(spring only)</em></td>
<td>2</td>
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<tr>
<td>CHM 32100</td>
<td>Analytical Chemistry I or CHM32300 (Honors) <em>(fall only)</em></td>
<td>4</td>
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<tr>
<td>CHM 24100</td>
<td>Introduction to Inorganic Chemistry <em>(spring only)</em></td>
<td>4</td>
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<tr>
<td>CHM 34200</td>
<td>Inorganic Chemistry <em>(spring only)</em></td>
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<tr>
<td>CHM 37300</td>
<td>Physical Chemistry <em>(fall only)</em></td>
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<td>CHM 37400</td>
<td>Physical Chemistry <em>(spring only)</em></td>
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<tr>
<td>CHM37301</td>
<td>Physical Chemistry Lab <em>(fall only)</em></td>
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<tr>
<td>CHM37401</td>
<td>Physical Chemistry Lab <em>(spring only)</em></td>
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<tr>
<td>BIOL 23100</td>
<td>Cell Structure and Function <em>(summer and fall only)</em></td>
<td>3</td>
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<tr>
<td>BIOL 23200</td>
<td>Lab Biology III: Cell Function <em>(fall only)</em></td>
<td>2</td>
</tr>
<tr>
<td>BIOL 24100</td>
<td>Genetics and Molecular Biology <em>(spring only)</em> or AGRY 32000</td>
<td>3</td>
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<tr>
<td>BIOL 24200</td>
<td>Lab Biology IV: Genetics and Molecular Biology <em>(spring only)</em> or AGRY 32100 (co-req AGRY 32000) <em>(1 cr)</em></td>
<td>2</td>
</tr>
<tr>
<td>CHM 33901</td>
<td>Biochemistry Lab</td>
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<tr>
<td>CHM 43300</td>
<td>Intro to Biochemistry <em>(fall only)</em></td>
<td>3</td>
</tr>
<tr>
<td>CHM 43800</td>
<td>Molecular Biotechnology <em>(spring only)</em></td>
<td>3</td>
</tr>
<tr>
<td>CHM 49900</td>
<td>Undergraduate research related to Biochemistry</td>
<td>5</td>
</tr>
<tr>
<td>CHM 19400</td>
<td>Freshman Chemistry Seminar <em>(1 cr)</em></td>
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<tr>
<td>CHM 29400</td>
<td>Sophomore Chemistry Seminar <em>(fall only)</em></td>
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<tr>
<td>CHM 49400</td>
<td>Junior/Senior Seminar</td>
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</tr>
<tr>
<td>MA 16100</td>
<td>Plane Analytical Geometry Calculus or MA16500 (4 cr)</td>
<td>5</td>
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<tr>
<td>MA 16200</td>
<td>Plane Analytical Geometry Calculus II or MA16600 (4 cr)</td>
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<tr>
<td>MA 26100</td>
<td>Multivariate Calculus</td>
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<tr>
<td>PHYS 17200</td>
<td>Modern Mechanics</td>
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<tr>
<td>PHYS 27200</td>
<td>Electricity and Magnetism</td>
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## Differences Between Chemistry Majors 2022-2023

### Required Chemistry, Math, and Biology Courses

<table>
<thead>
<tr>
<th>Major</th>
<th>Chemistry (CHEM)</th>
<th>Chemistry (ACS) (CHMA)</th>
<th>Biochemistry (ACS) (BICH)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Math Courses</strong></td>
<td>MA16100, 16200, 26100</td>
<td>MA 16100, 16200, 26100, MA 26200 (Linear/Differential Equations)</td>
<td>MA16100, 16200, 26100</td>
</tr>
<tr>
<td><strong>General, Organic, and Physical Chemistry Courses</strong></td>
<td>CHM 12500, 12600 (General Chemistry)</td>
<td>CHM 26505/26500, CHM 26605/26600 (Organic Chemistry with lab 2x/wk)</td>
<td>CHM 37300/37301, CHM 37400/37401 (Physical Chemistry with Lab)</td>
</tr>
<tr>
<td><strong>Analytical Courses</strong></td>
<td>CHM 32100</td>
<td>CHM 32100 and <strong>CHM 42400</strong> (Instrumental Analysis)</td>
<td>CHM 32100</td>
</tr>
<tr>
<td><strong>Inorganic Courses</strong></td>
<td>CHM 24100 and CHM 34200</td>
<td>CHM 24100, CHM 34200, and CHM 34201 (lab)</td>
<td>CHM 24100 and CHM 34200</td>
</tr>
<tr>
<td><strong>Additional CHM Courses</strong></td>
<td>n/a</td>
<td><strong>CHM elective</strong> (class or research)</td>
<td><strong>CHM 49900</strong> (5 cr. research), <strong>CHM 43300</strong> (Biochemistry), <strong>CHM 33901</strong> (Biochem lab) and <strong>CHM 43800</strong> (Biotechnology)</td>
</tr>
<tr>
<td><strong>Biology Courses</strong></td>
<td>n/a</td>
<td>n/a</td>
<td>BIOL 23100 and BIOL 23200 (Cell Biology with lab), BIOL 24100 and BIOL 24200 (Genetics with lab)</td>
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<tr>
<td><strong>Seminar Courses</strong></td>
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<td>CHM 19400, 29400, 49400</td>
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