This sample schedule is intended for informational purposes only. Math placement, transfer courses, AP credit, minors, options, second majors, etc., may alter each individual student’s academic plan. Students should consult with their academic advisor to create a personalized degree plan. Students must select one of the following options: Advanced Biophysics, Neuroscience, Pre-medicine. Courses in **Bold** are offered in specified term. Consult the OSU Academic Catalog [https://catalog.oregonstate.edu/] for more information.

### B.S. in Biochemistry and Biophysics-sample 4-year plan

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Year</strong></td>
<td>CH 231 General Chemistry</td>
<td>CH 232 General Chemistry</td>
<td>CH 233 General Chemistry</td>
<td>Work Experience, Volunteer,</td>
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<tr>
<td></td>
<td>CH 261 General Chemistry lab</td>
<td>CH 262 General Chemistry Lab</td>
<td>CH 263 General Chemistry Lab</td>
<td>or Internship</td>
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<tr>
<td></td>
<td>BI 211 Principles of Biology</td>
<td><strong>BI 212 Principles of Biology</strong></td>
<td>BI 213 Principles of Biology</td>
<td>Join the club connected to</td>
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<tr>
<td></td>
<td>MTH 251 Differential Calculus</td>
<td>MTH 252 Integral Calculus</td>
<td>MTH 254 Vector Calculus</td>
<td>your major</td>
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<tr>
<td></td>
<td><strong>BB 111 Introduction to BB Research</strong></td>
<td>WR 121 English Composition</td>
<td>COMM 111 Public Speaking</td>
<td>Join a social club</td>
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<tr>
<td><strong>Total Credits</strong></td>
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<td>16</td>
<td>16</td>
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<tr>
<td><strong>Second Year</strong></td>
<td>CH 334 Organic Chemistry</td>
<td>CH 335 Organic Chemistry</td>
<td>CH 336 Organic Chemistry</td>
<td>Study Abroad</td>
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<tr>
<td></td>
<td>BB 314 Cell and Molecular Biology</td>
<td><strong>PH 212 General Physics with Calculus</strong></td>
<td>PH 213 General Physics with Calculus</td>
<td>Work Experience, Volunteer,</td>
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<td></td>
<td>PH 211 General Physics with Calculus</td>
<td>ST 351 Introduction to Statistical Methods</td>
<td>BB 317 Scientific Theory</td>
<td>or Internship</td>
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<td></td>
<td>Bacc Core (Diff, Power, &amp; Discrimination)</td>
<td>PAC Physical Activity Class</td>
<td>HHS 231 Lifetime Fitness for Health</td>
<td>Join a research/lab team</td>
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<tr>
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<tr>
<td><strong>Third Year</strong></td>
<td><strong>BB 490 Biochemistry 1: Structure &amp; Function</strong></td>
<td><strong>BB 491 Biochemistry 2: Metabolism</strong></td>
<td><strong>BB 492 Biochemistry 3: Genetic Biochemistry</strong></td>
<td>Study Abroad</td>
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<tr>
<td></td>
<td>BB 490 Biochemistry 1: Structure &amp; Function</td>
<td><strong>CH 362 Experimental Chemistry</strong></td>
<td><strong>BB 492 Biochemistry 3: Genetic Biochemistry</strong></td>
<td>(summer only)</td>
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<tr>
<td></td>
<td>BB 345 Introduction to Biological Sequence Analysis</td>
<td>Bacc Core (Contemporary Global Issues)</td>
<td>Bacc Core (Science, Tech. &amp; Society)</td>
<td>Work Experience, Volunteer,</td>
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<tr>
<td></td>
<td><strong>CH 440 Physical Chemistry</strong></td>
<td>Bacc Core (Literature and the Arts)</td>
<td>Bacc Core (Western Culture)</td>
<td>or Internship</td>
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<td><strong>CH 361 Experimental Chemistry</strong></td>
<td>Elective/Option</td>
<td>Elective/Option</td>
<td>Join a research/lab team</td>
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<td>Bacc Core (Cultural Diversity)</td>
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<td><strong>Fourth Year</strong></td>
<td>BB 481 Macromolecular Structure</td>
<td><strong>BB 482 Molecular Biophysics</strong></td>
<td>BB 483 Advanced Biochemistry and Biophysics: Capstone</td>
<td>Work Experience, Volunteer,</td>
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<tr>
<td></td>
<td>BB 493 Biochemistry Lab Molecular Techniques</td>
<td><strong>BB 484 Biochem Lab Molec.Tecn. 2</strong></td>
<td>**BB 483 Advanced Biochemistry and Biophysics: Capstone</td>
<td>or Internship</td>
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<tr>
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<td>BB 481 Macromolecular Structure</td>
<td><strong>BB 488 ASBMB Certification Exam</strong></td>
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<tr>
<td></td>
<td>BB 493 Biochemistry Lab Molecular Techniques</td>
<td><strong>BB 488 ASBMB Certification Exam</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bacc Core (Social Processes &amp; Ins.)</td>
<td>Elective/Option</td>
<td>Bacc Core (Contemporary Global Issues)</td>
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<tr>
<td></td>
<td>Elective/Option</td>
<td></td>
<td>Electives/Option</td>
<td></td>
</tr>
<tr>
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</tbody>
</table>
**Advanced Biophysics Option**

**Option Core**
- CH 441 Physical Chemistry
  and CH 442 Physical Chemistry

or

- PH 423 Paradigms in Physics: Energy & Entropy
  and PH 425 Paradigms in Physics: Quantum Fundamentals

**Electives select 15 or more credits from:**
- BB 401 Undergraduate Research
- BB 485 Applied Bioinformatics
- BOT 460 Functional Genomics
  or BOT 476 Introduction to Computing in the Life Sciences
- CS 161 Introduction to Computer Science
- MTH 256 Applied Differential Equations
  or MTH 253 Infinite Series and Sequences
  or MTH 264 Introduction to Matrix Algebra
- PH 591 Biological Physics
- ST 352 Introduction to Statistical Methods
  or ST 411, ST 412 Methods of Data Analysis

**Neuroscience Option**

**Option Core**
- BB 360 Introduction to Neuroscience
- BB 361 Neuroscience of Sensory and Motor Systems
- PSY 201 *General Psychology
- PSY 202 *General Psychology

**Electives select 12 or more from:**
- BB 486. Advanced Molecular Genetics
- BB 401 Undergraduate Research or BB 410
- BI 331 Advanced Human Anatomy and Physiology
  and BI 341 Advanced Human Anatomy and Physiology Laboratory
  or Z 431 Vertebrate Physiology
- CH 441 Physical Chemistry
  or PH 423 Paradigms in Physics: Energy and Entropy
- CH 442 Physical Chemistry
  or PH 425 Paradigms in Physics: Quantum Fundamentals
- MTH 253 Infinite Series and Sequences
  or MTH 256 Applied Differential Equations
  or MTH 264 Introduction to Matrix Algebra
- PSY 330 Brain and Behavior
- PSY 433 Psychopharmacology

**Pre-medicine Option**

**Option Core**
- BI 109 Health Professions: Medical

**Electives-select 20 or more credits from the following:**
- Psychology - select 3 or more credits:
  - PSY 201 * General Psychology
  - PSY 202 * General Psychology

- Ethics - select 3 or more credits:
  - PHL 205 *Ethics
  - PHL/REL 444 *Biomedical Ethics

- Social Science - select 3 or more credits:
  - SOC 204 *Introduction to Sociology
  - ANTH 383 *Introduction to Medical Anthropology

- Genetics - select 3 or more credits:
  - BB 486 Advanced Molecular Genetics
  - BI 311 Genetics

**Science Electives - select 12 or more credits:**
- BB 332 *Molecular Medicine
- BB 360 Introduction to Neuroscience
- BB 361 Neuroscience of Sensory and Motor Systems
- BB 401 Undergraduate Research
  or BB 410 Internship
- BI 331 Advanced Anatomy and Physiology
  and BI 341 Advanced Anatomy & Physiology Lab
  or Z 431 Vertebrate Physiology I
  or Z 437 Vertebrate Endocrinology
- CH 441 Physical Chemistry
  or PH 423 Paradigms in Physics: Energy and Entropy
  or PH 425 Paradigms in Physics: Quantum Fundamentals
- MB 302 General Microbiology
- MB 303 General Microbiology Laboratory
- MB 310 Bacterial Molecular Genetics
- MB 416 Immunology
- MB 430 Bacterial Pathogenesis
- MB 434 Virology
- MB 436 Human Microbiome