# BIOCHEMISTRY AND BIOPHYSICS PH.D.

**Doctor of Philosophy - Biochemistry and Biophysics**

Degree Specific Credits: 60

Required Cumulative GPA: 3.0

- The Biochemistry and Biophysics doctoral program provides a dynamic environment where students engage in cutting-edge research in close collaboration with faculty.
- Students will learn to apply the tools of physical biochemistry and structural biology to exciting problems through research projects with Biochemistry Program Faculty Members.
- The Center for Biomolecular Structure and Dynamics and related research provide a rich context for graduate studies in Biochemistry & Biophysics at the University of Montana.
- Other courses that may be useful but do not count for the elective requirement are:
  - BCH 561
  - BIOB 596
  - CHMY 580
- Additional requirements include a proficiency exam, comprehensive exams, an original research proposal & out-of-field proposal exam, a dissertation proposal & exam, and a dissertation.

## COURSES

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BCH 581</td>
<td>Physical Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>BCH 582</td>
<td>Proteins and Enzymes</td>
<td>3</td>
</tr>
<tr>
<td>BCH 584</td>
<td>Nucleic Acids</td>
<td>3</td>
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<tr>
<td>BMED 605</td>
<td>Biomedical Research Ethics</td>
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### Core Requirements - Complete all of the following courses:

- BCH 570 Intro to Research 1

### Lab Rotations - Complete the following course:

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<tr>
<td>BCH 547</td>
<td>Experimental Molecular, Cellular, and Chemical Biology</td>
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<tr>
<td>BCH 694</td>
<td>Biochemistry &amp; Biophysics Seminar</td>
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### Seminar/Data Club - complete at least 24 credits of the following courses:

- BCH 486 Biochemistry Research Lab
- BCH 595 Special Topics
- BCH 597 Research 2
- BCH 600 Cell Organization & Mechanisms
- BIOM 502 Advanced Immunology
- BIOM 535 Advanced Virology
- BMED 615 Molecular Pharmacology
- BMED 621 Drug Design
- CHMY 562 Organic Structure and Mechanisms
- CHMY 595 Special Topics
- CSCI 558 Intro to Bioinformatics

Minimum Required Grade: C

1 Course work for Biochemistry & Biophysics graduate students is determined by the Advisory Committee. Other electives may be substituted, if appropriate, with the approval of the student’s Advisory Committee. All course work will normally be completed during the first two years of graduate study.

2 Students are limited to counting only 3 credits of BCH 597.