# CELLULAR, MOLECULAR, AND MICROBIAL BIOLOGY PH.D.

## DOCTOR OF PHILOSOPHY - CELLULAR, MOLECULAR, AND MICROBIAL BIOLOGY

**Degree Specific Credits:** 60  

**Required Cumulative GPA:** 3.0

- All CMMB PhD students have a common set of requirements: students must take a total of 60 semester credits, including 20 semester credits of courses (includes any course other than Dissertation and Research).
- At least three 3-credit (or more) graduate courses at the 500 or 600 level.
- In addition to coursework, all PhD students must teach at least one semester (typically as a Graduate Teaching Assistant) and must rotate in at least two research laboratories.
- The following credit limitations apply:  
  - A maximum of 6 credits of Special Topics (BCH 595, BIOB 595 and BIOM 595).  
  - A maximum of 6 credits of Independent Study (BIOB 596, and BIOM 596).  

## Required Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCH 570</td>
<td>Intro to Research</td>
<td>2</td>
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<tr>
<td>or BIOM 570</td>
<td>Intro to Research</td>
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<tr>
<td>BIOB 547</td>
<td>Experimental Molecular, Cellular, and Chemical Biology</td>
<td>4</td>
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<tr>
<td>BIOM 594</td>
<td>Molecular and Biomedical Sciences Seminar</td>
<td>4</td>
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## Electives, Research, and Dissertation

Complete 50 credits of elective courses.

- Elective courses can include any graduate-level course in General Biology (BIOB), Microbiology (BIOM), and Biochemistry (BCH). Suggested courses include:
  - BCH 581 Physical Biochemistry
  - BCH 582 Proteins and Enzymes
  - BCH 584 Nucleic Acids
  - BCH 595 Special Topics
    - or BIOM 595 Special Topics
  - BCH 597 Research
    - or BIOM 597 Research
  - BCH 600 Cell Organization & Mechanisms
  - BCH 699 Dissertation
    - or BIOM 699 Dissertation
  - BIOB 567 Molecular Analysis of Development
  - BIOM 502 Advanced Immunology
  - BIOM 535 Advanced Virology

| Total Hours | 60 |