# BIOCHEMISTRY AND MOLECULAR BIOLOGY, PHD

## Requirements for Students Matriculating in or before Academic Year 2019-2020

Learn more about Graduate College Academic Regulation 7.0 (http://catalog.okstate.edu/graduate-college).

### Total Hours: 60 Hours (Beyond the Master's Degree)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOC 5002</td>
<td>Research Compliance and Biochemistry Graduate Colloquium</td>
<td>2</td>
</tr>
<tr>
<td>BIOC 5112</td>
<td>Articulation of Research Logic</td>
<td>2</td>
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<tr>
<td>BIOC 5121 1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>BIOC 5753</td>
<td>Biochemical Principles</td>
<td>3</td>
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<td>Biochemical Principles</td>
<td>3</td>
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<tr>
<td>BIOC 5853</td>
<td>Metabolism</td>
<td>3</td>
</tr>
<tr>
<td>BIOC 5930</td>
<td>Advanced Biochemical Techniques (10 credits maximum)</td>
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<tr>
<td>BIOC 6110</td>
<td>Seminar</td>
<td>2</td>
</tr>
<tr>
<td>BIOC 6740 (Offered for variable credit, 1-2 credit hours, maximum of 2 credit hours.)</td>
<td>3</td>
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<tr>
<td>Plus 4 advanced (BIOC 6000-level courses)</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>BIOC 6000 (Offered for variable credit, 1-9 credit hours, maximum of 30 credit hours.)</td>
<td>15</td>
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### Electives

- Select 15 hours minimum from the following:
  - BIOC 4723 Introduction to Bioinformatics
  - BIOC 5102 Molecular Genetics
  - BIOC 5824 Biochemical Laboratory Methods
  - BIOC 6820 Selected Topics in Biochemistry

### Other Graduate-Level Courses Approved by the Graduate Committee

- BIOC 6723 Signal Transduction
- BIOC 6733 Functional Genomics
- BIOC 6740 Physical Biochemistry
- BIOC 6753 Epigenetics
- BIOC 6763 Nucleic Acids and Protein Synthesis
- BIOC 6773 Protein Structure and Enzyme Function
- BIOC 6783 Biomembranes and Bioenergetics
- BIOC 6793 Plant Biochemistry

### Required Research

- BIOC 6000 (Offered for variable credit, 15 credit hours, maximum of 30 credit hours.)

### Total Hours

60

1 Course to be taken 1 time each year prior to year of graduation.

### Other Biochemistry and Molecular Biology, PhD, Requirements

- Pass PhD Preliminary Examination.
- Pass PhD Candidacy Examination: Present and pass the defense of a written research proposal.
- The student’s Graduate Committee must approve the written thesis, and an oral defense on the content of the thesis must be passed.

### General Graduate College Requirements

- A minimum Grade-Point-Average of 3.00 is required
- A minimum Grade of “C” is required in all degree applicable courses
- No courses utilizing the Pass-No Pass grading system are permitted
• GRAD 5082 or GRAD 5092 may not be used to meet degree requirements

Additional Graduate College Masters Degree Requirements

Plan I (coursework with thesis)

• A minimum of 30 credit hours
  • A minimum of 24 coursework credit hours comprised of:
    • 6 research or creative component credit hours
    • 21 in-residence credit hours (maximum of 9 transfer hours with "B" or better)
    • 21 credit hours at 5000- or 6000-level

Plan II (coursework without thesis)

• A minimum of 32 credit hours
  • A maximum of 3 credit hours of research or creative component
  • A minimum of 23 in-residence credit hours (maximum of 9 transfer credit hours with "B" or better)
  • A minimum of 21 credit hours at the 5000- or 6000-level