**BIOCHEMISTRY AND MOLECULAR BIOLOGY, PHD**

Requirements for Students Matriculating in or before Academic Year 2023-2024. Learn more about Graduate College Academic Regulation 7.0 (http://catalog.okstate.edu/graduate-college/#70).

**Total Hours:** 90 (Beyond the Bachelor's Degree)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIOC 5002</td>
<td>Research Compliance and Biochemistry Graduate Colloquium</td>
<td>2</td>
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<tr>
<td>BIOC 5112</td>
<td>Articulation of Research Logic</td>
<td>2</td>
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<tr>
<td>BIOC 5120</td>
<td>Biochemistry and Molecular Biology Graduate Research Colloquium</td>
<td>1</td>
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<tr>
<td>BIOC 5753</td>
<td>Biochemical Principles</td>
<td>3</td>
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<td>3</td>
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<tr>
<td>BIOC 5853</td>
<td>Molecular and Integrative Metabolism</td>
<td>3</td>
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<tr>
<td>BIOC 5930</td>
<td>Advanced Biochemical Techniques</td>
<td>3</td>
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<tr>
<td>BIOC 6110</td>
<td>Seminar</td>
<td>2</td>
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</tbody>
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Three hours from:

- BIOC 6723 | Signal Transduction
- BIOC 6733 | Functional Genomics
- BIOC 6740 | Physical Biochemistry
- BIOC 6753 | Epigenetics
- BIOC 6773 | Protein Structure and Enzyme Function
- BIOC 6793 | Plant Biochemistry

**Hours Subtotal:** 34

**Electives**

Select 41 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

**Hours Subtotal:** 45

**Required Research**

- BIOC 6000 | Research

**Hours Subtotal:** 15

**Total Hours:** 60

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

2 Course to be taken 2 times at one credit each.

**Other Core Courses Listed Below as Required by the Student’s Advisor and Graduate Thesis Advisory Committee**:

- BIOC 5723 | Introduction to Bioinformatics
- BIOC 5753 | Biochemical Principles
- BIOC 5853 | Molecular and Integrative Metabolism
- BIOC 5930 | Advanced Biochemical Techniques (10 credits maximum)
- BIOC 6110 | Seminar
- BIOC 6740 | Physical Biochemistry
- BIOC 6753 | Epigenetics
- BIOC 6773 | Protein Structure and Enzyme Function
- BIOC 6793 | Plant Biochemistry

**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.

**Graduate College Doctor of Philosophy (PhD) Requirements**

Learn more about Graduate College 2023-2024 Doctor of Philosophy (PhD) Degree Program Requirements (http://catalog.okstate.edu/graduate-college/). Check the General Graduate College academic regulations for minimal GPA, language proficiency and other general requirements.