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><strong>Required Core Courses</strong></td>
<td>45 hours of required core courses and electives to total 45 hours.</td>
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<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 5121</td>
<td>Seminar</td>
<td>1</td>
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<tr>
<td>BIOC 5753</td>
<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>
<td>3</td>
</tr>
<tr>
<td>BIOC 6110</td>
<td>Seminar</td>
<td>2</td>
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<tr>
<td>BIOC 6740 (Offered for variable credit, 1-2 credit hours, maximum of 2 credit hours.)</td>
<td>3</td>
<td></td>
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<td>Plus 4 advanced (BIOC 6000-level courses)</td>
<td>12</td>
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**Other Core Courses Listed Below as Required by the Student’s Advisor and Graduate Thesis Advisory Committee:**

- BIOC 5753 | Biochemical Principles |
- BIOC 5853 | Metabolism |
- BIOC 5930 | Advanced Biochemical Techniques (10 credits maximum) |
- BIOC 6110 | Seminar |
- BIOC 6740 | Physical Biochemistry |
- BIOC 6723 | Signal Transduction |
- BIOC 6733 | Functional Genomics |
- BIOC 6740 | Physical Biochemistry |
- BIOC 6753 | Epigenetics |
- BIOC 6773 | Protein Structure and Enzyme Function |
- BIOC 6783 | Biomembranes and Bioenergetics |
- BIOC 6793 | Plant Biochemistry |

**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 6000 (Offered for variable credit, 1-9 credit hours, maximum of 30 credit hours.) | 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 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

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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