### 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>
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<tbody>
<tr>
<td></td>
<td><strong>Required Core Courses</strong></td>
<td></td>
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<tr>
<td></td>
<td>Combined 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>1</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>
</tr>
<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>
</tr>
<tr>
<td>BIOC 6740</td>
<td>Physical Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>BIOC 6740</td>
<td>Physical Biochemistry</td>
<td>2</td>
</tr>
<tr>
<td>BIOC 6753</td>
<td>Epigenetics</td>
<td>1</td>
</tr>
<tr>
<td>BIOC 6773</td>
<td>Biomembranes and Bioenergetics</td>
<td>1</td>
</tr>
<tr>
<td>BIOC 6793</td>
<td>Plant Biochemistry</td>
<td>1</td>
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</tbody>
</table>

**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 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 41 hours of the following:

- BIOC 4723  Introduction to Bioinformatics
- BIOC 5002  Molecular Genetics
- BIOC 5824  Biochemical Laboratory Methods
- BIOC 6820  Selected Topics in Biochemistry

**Hours Subtotal** 34

**Required Research**

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

**Hours Subtotal** 15

**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