## BIOMEDICAL SCIENCES, PHD

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

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

**Total Hours:** 60 Hours

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOM 6000</td>
<td>(Offered for variable credit, 1-15 credit hours, maximum of 45 credit hours)</td>
<td>30</td>
</tr>
<tr>
<td>BIOM 6662</td>
<td>Research Ethics and Survival Skills for the Biomedical Sciences</td>
<td>2</td>
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<tr>
<td>BIOM 6922</td>
<td>Scientific Communication in Biomedical Sciences</td>
<td>2</td>
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</tbody>
</table>

**Hours Subtotal:** 34

### Optional Electives

Select 26 hours from the following:

- BIOM 5010  Special Topics in Biomedical Sciences
- BIOM 5020  Biomedical Sciences Seminar
- BIOM 5116  Clinical Anatomy
- BIOM 5122  Clinical Anatomy for Allied Healthcare
- BIOM 5133  Neuroanatomy
- BIOM 5215  Medical Biochemistry
- BIOM 5316  Medical Microbiology and Immunology
- BIOM 5616  Graduate Biomedical Physiology
- BIOM 5621  Introduction to Translational Research
- BIOM 5631  Disease Research in Medicine
- BIOM 5641  Cornerstones of Vertebrate Paleontology
- BIOM 5653  Evolutionary Physiology
- BIOM 5663  Graduate Pharmacology
- BIOM 5672  Scientific Outreach Training for Graduate Students
- BIOM 5683  Chronic Inflammation and Cancer Development
- BIOM 5693  Principle Concepts of Cellular and Molecular Immunology
- BIOM 5703  Applied Multivariate and Evolutionary Analysis of Paleontological Data
- BIOM 6175  Molecular and Cellular Biology
- BIOM 6183  Cellular and Molecular Biology of Pain
- BIOM 6193  Paleommalogy
- BIOM 6214  Advanced Topics in Medical Biochemistry
- BIOM 6233  Enzyme Analysis
- BIOM 6243  Human Nutrition
- BIOM 6263  Techniques in Molecular Biology
- BIOM 6333  Immunology
- BIOM 6343  Microbial Physiology
- BIOM 6353  Molecular Virology
- BIOM 6363  Immunobiology of Infectious Disease
- BIOM 6413  Graduate General Pathology and Laboratory Medicine
- BIOM 6523  Cardiovascular Physiology and Pharmacology
- BIOM 6543  Environmental Toxins in the Brain
- BIOM 6583  Neuroinflammation
- BIOM 6613  Environmental Physiology
- BIOM 6643  Neurophysiology
- BIOM 6653  Graduate Seminar in Signal Transduction
- BIOM 6663  Neuroethology
- BIOM 6673  Genomics
- BIOM 6705  Advanced Gross Anatomy
- BIOM 6723  Field Techniques in Vertebrate Paleontology
- BIOM 6733  Microbial Pathogenesis
- BIOM 6743  Foundations in Medical Genetics, Molecular Biology and Development
- BIOM 6752  Foundations in Medical Cell and Tissue Biology
- BIOM 6762  Foundations in Medical Biochemistry
- BIOM 6771  Foundations in Medical Pharmacology
- BIOM 6781  Foundations in Medical Immunology
- BIOM 6791  
- BIOM 6800  Critical Readings in Biomedical Sciences
- BIOM 6810  Structure and Function of the Human Cardiovascular System
- BIOM 6820  Structure and Function of the Human Gastrointestinal/Hepatic System
- BIOM 6830  Biomedical Perspectives on Human Hematology
- BIOM 6840  Structure and Function of the Human Musculoskeletal System
- BIOM 6850  Structure and Function of the Human Renal System
- BIOM 6860  Structure and Function of the Human Reproductive Systems and Reproductive Biology
- BIOM 6870  Structure and Function of the Human Respiratory System
- BIOM 6880  Biomedical Perspectives on Psychiatry
- BIOM 6890  
- BIOM 6810  Structure and Function of the Human Cardiovascular System
- BIOM 6820  Structure and Function of the Human Gastrointestinal/Hepatic System
- BIOM 6830  Biomedical Perspectives on Human Hematology
- BIOM 6840  Structure and Function of the Human Musculoskeletal System
- BIOM 6850  Structure and Function of the Human Renal System
- BIOM 6860  Structure and Function of the Human Reproductive Systems and Reproductive Biology
- BIOM 6870  Structure and Function of the Human Respiratory System
- BIOM 6880  Biomedical Perspectives on Psychiatry
| BIOM 6900 | Structure and Function of the Human Endocrine System |
| BIOM 6910 | Structure and Function of the Human Nervous System |
| BIOM 6933 | Cornerstones of Graduate Biomedical Sciences |
| BIOM 6943 | Advanced Vertebrate Paleontology |
| BIOM 6952 | Paleohistology Techniques |
| BIOM 6962 | Evolutionary Biomechanics |

**Hours Subtotal**

26

**Other Requirements**

Research Proposal

Qualifying Exam

Dissertation Defense

**Total Hours**

60

**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 Doctor of Philosophy (PhD.) Requirements**

- 90 credits beyond the Bachelor’s degree, 60 credits beyond the Master’s degree are required
- At least seventy-five percent of coursework on the Plan of Study must include 5000 and 6000 level courses
- A minimum of 15 hours at the 6000 level with a grade of SR for the doctoral dissertation must be complete. The maximum number of dissertation hours (6000 with a grade of SR) permissible on a Plan of Study must not exceed three-fourths of the total credit hours in the approved graduate degree program
- Credit for all courses on a graduate Plan of Study must have been awarded within 10 years of completion of all degree requirements
- A minimum of 30 in-residence credit hours are required
- Non-Course requirements:
  - Doctoral Candidacy
  - Dissertation Defense
  - Dissertation Submission/Approval