# BIOMEDICAL SCIENCES, 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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOM</td>
<td><strong>Degree Core</strong></td>
<td></td>
</tr>
<tr>
<td>BIOM 6600</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>
</tr>
<tr>
<td>BIOM 6922</td>
<td>Scientific Communication in Biomedical Sciences</td>
<td>2</td>
</tr>
<tr>
<td><strong>Hours Subtotal</strong></td>
<td></td>
<td><strong>34</strong></td>
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## 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 | Paleomammalogy
- 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 6763 | Foundations in Medical Pharmacology
- BIOM 6781 | Foundations in Medical Immunology
- BIOM 6791 | Foundations in Medical Neuroscience
- 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 6910 | Structure and Function of the Human Cardiovascular System
- BIOM 6920 | Structure and Function of the Human Gastrointestinal/Hepatic System
- BIOM 6930 | Biomedical Perspectives on Human Hematology
- BIOM 6940 | Structure and Function of the Human Musculoskeletal System
- BIOM 6950 | Structure and Function of the Human Renal System
- BIOM 6960 | Structure and Function of the Human Reproductive Systems and Reproductive Biology
- BIOM 6970 | Structure and Function of the Human Respiratory System
- BIOM 6980 | Biomedical Perspectives on Psychiatry
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<tr>
<td>BIOM 6900</td>
<td>Structure and Function of the Human Endocrine System</td>
</tr>
<tr>
<td>BIOM 6910</td>
<td>Structure and Function of the Human Nervous System</td>
</tr>
<tr>
<td>BIOM 6933</td>
<td>Cornerstones of Graduate Biomedical Sciences</td>
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<tr>
<td>BIOM 6943</td>
<td>Advanced Vertebrate Paleontology</td>
</tr>
<tr>
<td>BIOM 6952</td>
<td>Paleohistology Techniques</td>
</tr>
<tr>
<td>BIOM 6962</td>
<td>Evolutionary Biomechanics</td>
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**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