# 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>6000 (Offered for variable credit, 1-15 credit hours, maximum of 45 credit hours)</td>
<td>30</td>
</tr>
<tr>
<td>BIOM</td>
<td>6662 Research Ethics and Survival Skills for the Biomedical Sciences</td>
<td>2</td>
</tr>
<tr>
<td>BIOM</td>
<td>6922 Scientific Communication in Biomedical Sciences</td>
<td>2</td>
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<td></td>
<td><strong>Hours Subtotal</strong></td>
<td><strong>34</strong></td>
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## Optional Electives

Select 26 hours from the following: 26

- 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 6880 Biomedical Perspectives on Psychiatry
<table>
<thead>
<tr>
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<th>Course Title</th>
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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**

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<tr>
<td>Research Proposal</td>
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<tr>
<td>Qualifying Exam</td>
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<tr>
<td>Dissertation Defense</td>
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**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