## 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 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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**Hours Subtotal:** 34

### 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 Foundations in Medical Microbiology
- 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 Structure and Function of the Human Cardiovascular System
- BIOM 6900 Structure and Function of the Human Gastrointestinal/Hepatic System
- BIOM 6910 Structure and Function of the Human Musculoskeletal System
- BIOM 6920 Structure and Function of the Human Reproductive Systems and Reproductive Biology
- BIOM 6930 Biomedical Perspectives on Human Hematology
- BIOM 6940 Structure and Function of the Human Respiratory 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
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