ANATOMY AND PHYSIOLOGY CONCENTRATION

BIO 452 Cell Biology 4
CHEM 371 Biochemical Principles 5
or CHEM 313 Survey of Biochemistry and Biotechnology

Biodiversity Courses 1,2
Select from the following: 4
AEPS/BOT 323 Plant Pathology
BIO 321 Mammalogy
BIO 322 Ichthyology
BIO 323 Ornithology
BIO 324 Herpetology
BIO 329 Vertebrate Field Zoology
BIO 335 General Entomology
BIO 336 Invertebrate Zoology
BIO 415 Biogeography
BOT 313 Taxonomy of Vascular Plants
MCRO 224 General Microbiology I 3
MSCI 324 Marine Mammals, Birds and Reptiles
MSCI 437 Marine Botany

Core Anatomy and Physiology Courses 1,2
Select from the following: 16
BIO 406 Advanced Anatomy and Physiology: Neuroscience
BIO 407 Advanced Anatomy and Physiology: Endocrinology
or ASCI 405 Domestic Livestock Endocrinology
BIO 408 Advanced Anatomy and Physiology: Cardiorespiratory and Renal
BIO 409 Advanced Anatomy and Physiology: Muscle and Locomotion
BIO 410 Functional Histology
BIO 426 Immunology

Department Electives 1,2
Select from the following: 3
BIO 321 Mammalogy
BIO 322 Ichthyology
BIO 323 Ornithology
BIO 324 Herpetology
BIO 329 Vertebrate Field Zoology
BIO 335 General Entomology
BIO 336 Invertebrate Zoology
BIO 405 Developmental Biology
BIO 406 Advanced Anatomy and Physiology: Neuroscience
BIO 407 Advanced Anatomy and Physiology: Endocrinology
or ASCI 405 Domestic Livestock Endocrinology
BIO 408 Advanced Anatomy and Physiology: Cardiorespiratory and Renal
BIO 409 Advanced Anatomy and Physiology: Muscle and Locomotion
BIO 410 Functional Histology
BIO 415 Biogeography
BIO 426 Immunology
BIO 428 Hematology
BIO 429 Parasitology
BIO 434 Environmental Physiology
BIO 435 Plant Physiology

BIO 409 Advanced Anatomy and Physiology: Muscle and Locomotion
BIO 410 Functional Histology
BIO 415 Biogeography
BIO 426 Immunology
BIO 428 Hematology
BIO 429 Parasitology
BIO 434 Environmental Physiology
BIO 435 Plant Physiology

Approved Electives 2
Select from the following: 11
AEPS/BOT 323 Plant Pathology
ANT 401 Culture and Health
ASCI 351 Reproductive Physiology
ASCI 406 Applied Animal Embryology and Assisted Reproduction
ASCI 438 Systemic Animal Physiology
BIO 321 Mammalogy
BIO 322 Ichthyology
BIO 323 Ornithology
BIO 324 Herpetology
BIO 329 Vertebrate Field Zoology
BIO 335 General Entomology
BIO 336 Invertebrate Zoology
BIO 400 Special Problems for Advanced Undergraduates 5
BIO 405 Developmental Biology
BIO 406 Advanced Anatomy and Physiology: Neuroscience
BIO 407 Advanced Anatomy and Physiology: Endocrinology
or ASCI 405 Domestic Livestock Endocrinology
BIO 408 Advanced Anatomy and Physiology: Cardiorespiratory and Renal
BIO 409 Advanced Anatomy and Physiology: Muscle and Locomotion
BIO 410 Functional Histology
BIO 415 Biogeography
BIO 426 Immunology
BIO 428 Hematology
BIO 429 Parasitology
BIO 434 Environmental Physiology
BIO 435 Plant Physiology
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BIO 461</td>
<td>Senior Project - Research Proposal 4, 5</td>
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<tr>
<td>BIO 462</td>
<td>Senior Project - Research 4, 5</td>
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<tr>
<td>BIO 463</td>
<td>Honors Research 5</td>
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<tr>
<td>BIO 470</td>
<td>Selected Advanced Topics (for &quot;Gastrointestinal Physiology &amp; Microbiology&quot; topic only)</td>
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<tr>
<td>BIO/CHEM 475</td>
<td>Molecular Biology Laboratory</td>
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<td>BOT 313</td>
<td>Taxonomy of Vascular Plants</td>
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<tr>
<td>CHEM 217</td>
<td>Organic Chemistry II</td>
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<td>CHEM 218</td>
<td>Organic Chemistry III</td>
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<tr>
<td>CHEM 220</td>
<td>Organic Chemistry Laboratory For Life Sciences II</td>
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<td>CHEM 223</td>
<td>Organic Chemistry Laboratory for Life Sciences III</td>
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<td>CHEM 372</td>
<td>Metabolism</td>
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<td>CHEM 418</td>
<td>Neurochemistry</td>
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<td>COMS 418</td>
<td>Health Communication</td>
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<td>ENGR 322/SCM 302</td>
<td>The Learn By Doing Lab Teaching Practicum 5</td>
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<tr>
<td>FSN 310</td>
<td>Maternal and Child Nutrition</td>
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<td>FSN 429</td>
<td>Clinical Nutrition I</td>
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<td>KINE 406</td>
<td>Neuroanatomy</td>
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<td>KINE 445</td>
<td>Electrocardiography</td>
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<td>KINE 446</td>
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<td>MCRO 225</td>
<td>General Microbiology II</td>
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<td>MCRO 320</td>
<td>Emerging Infectious Diseases</td>
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<td>MCRO 342</td>
<td>Public Health Microbiology</td>
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<td>MCRO 402</td>
<td>General Virology</td>
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<td>Medical Microbiology</td>
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<td>MCRO 424</td>
<td>Microbial Physiology</td>
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<td>PHIL 339</td>
<td>Biomedical Ethics</td>
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<td>or PHIL 341</td>
<td>Professional Ethics</td>
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<td>or SCM 451</td>
<td>Ethics in the Sciences</td>
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<td>PSY 320</td>
<td>Health Psychology</td>
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<td>PSY 340</td>
<td>Biopsychology</td>
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<td>WGS/ES 350</td>
<td>Gender, Race, Culture, Science and Technology</td>
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Total units: **43**

1. Excess units will be applied to subsequent concentration Electives.
2. Consultation with advisor is recommended prior to selecting approved electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.
3. Recommended for students interested in health sciences careers.
4. If BIO 461 or BIO 462 is used to meet the Senior Project Requirement, it cannot also be counted as an Approved Elective.
5. Maximum of 6 units may be applied toward Approved Electives from "by arrangement" courses: BIO 400, BIO 461, BIO 462, BIO 463, ENGR 322/SCM 302.