“With the approval of the Biology Curriculum Committee, a maximum of 3 credits from BZ487V, BZ495V and/or BZ498V may be applied towards a student’s “SELECTED FIELD” requirement, if the Committee deems the experience appropriate in content for the Selected Field.” Students must complete 12 credits in one of the following "Selected Fields", as well as a minimum of 6 credits in two additional fields.

PRE-HEALTH BIOLOGY

Students who select this field must take one of the following two classes:

* BMS300(4) Principles of Human Physiology
  -OR-
  * BMS360(4) Fundamentals of Physiology

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Notes</th>
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<td>ANEQ310(3)</td>
<td>Animal Reproduction</td>
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<td>BC353(4)</td>
<td>Pre-Health Genetics</td>
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<td>Human Gross Anatomy</td>
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<td>Nerve and Muscle – Toxins, Trauma Disease</td>
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<td>Human &amp; Animal Reproductive Bio</td>
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<td>Genome Evolution</td>
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<td>BZ466(4)</td>
<td>Biological Basis of Animal Behavior</td>
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<td>BZ476(3)</td>
<td>Genetics of Model Organisms</td>
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- BZ479(3) Biology and Behavior of Dogs
- BZ505(3) Cognitive Ecology
- BZ515(3) Physiological Ecology of Marine Vertebrates
- BZ577(2) Computer Analysis in Population Genetics
- BZ578(4) Genetics of Natural Populations
- ERHS332(3) Principles of Epidemiology
- ERHS450(3) Introduction to Radiation Biology
- FSHN350(3) Human Nutrition
- FW300(2) Biology and Diversity of Fishes
- FW301(1) Ichthyology Lab
- FW405(3) Fish Physiology
- HES403(4) Physiology of Exercise
- MIP300(3) General Microbiology
- MIP302(2) General Microbiology Lab
- MIP303(1) General Microbiology – Honors Recitation
- MIP315(3) Human and Animal Disease
- MIP342(4) Immunology
- MIP343(2) Immunology Lab
- MIP351(3) Medical Bacteriology
- MIP352(3) Medical Bacteriology Lab
- MIP420(4) Medical and Molecular Virology
- PSY454(3) Biological Psychology
- VS331(4) Histology (online)
- VS333(4) Domestic Animal Anatomy (online)
CELLULAR, MOLECULAR & GENETIC BIOLOGY

ANEQ330(3)  Principles of Animal Breeding
BC353(4)  Pre-Health Genetics
BC401(3)  Comprehensive Biochemistry I
BC403(3)  Comprehensive Biochemistry II
BC463(3)  Molecular Genetics
BMS325(3)  Cellular Neurobiology
BMS330(4)  Microscopic Anatomy
BMS405(3)  Nerve and Muscle-Toxins, Trauma and Disease
BZ331(4)  Developmental Plant Anatomy
BZ360(3)  Bioinformatics and Genomics
BZ420(3)  Evolutionary Medicine
BZ425(3)  Molecular Ecology
BZ433(4)  Behavioral Genetics
BZ455(3)  Human Heredity and Birth Defects
BZ460(4)  Genome Evolution
BZ476(3)  Genetics of Model Organisms
BZ570(3)  Molecular Aspects of Plant Development
BZ/MIP577(2)  Computer Analysis in Population Genetics
BZ/MIP578(4)  Genetics of Natural Populations
HORT/SCR460(3)  Plant Breeding
MIP300(3)  General Microbiology
MIP302(2)  General Microbiology Lab
MIP342(4)  Immunology
MIP343(2)  Immunology Lab
MIP450(3)  Microbial Genetics
VS331(4)  Histology (online)

EVOLUTION, GENETICS & SYSTEMATICS

ANTH373(3)  Human Evolution
ANTH374(3)  Human Biological Variation
BC463(3)  Molecular Genetics
BSPM302(2)  Applied and General Entomology
BSPM303A(2)  Entomology Lab: General
BSPM423(3)  Evolution and Classification of Insects
BZ300(3)  Animal Behavior
BZ325(4)  Plant Systematics
BZ329(3)  Herpetology
BZ330(3)  Mammalogy
BZ332(4)  Introductory Phycology
BZ333(4)  Introductory Mycology
BZ335(3)  Ornithology
BZ338(4)  Comp. Morph. of Vasc. Plants
BZ/MATH348(4)  Theory of Pop. & Evol. Ecology
BZ349(3)  Tropical Ecology and Evolution
BZ360(3)  Bioinformatics and Genomics
BZ418(4)  Ecology of Infectious Diseases
BZ420(3)  Evolutionary Medicine
BZ/BSPM424(3)  Principles of Systematic Zoology
BZ425(3)  Molecular Ecology
BZ430(3)  Animal Behavior and Conservation
BZ433(4)  Behavioral Genetics
BZ449A(4)  Ecology, Evolution & Conservation of Ecuadorian Biodiversity
BZ455(3)  Human Heredity and Birth Defects
BZ460(4)  Genome Evolution
BZ/BSPM/MIP462(5)  Parasitology and Vector Biology
BZ476(3)  Genetics of Model Organisms
BZ/BSPM520(3)  Advanced Systematics
BZ530(2)  Ecological Plant Morphology
BZ535(3)  Behavioral Ecology
BZ/MIP577(2)  Computer Analysis in Population Genetics
BZ/MIP578(4)  Genetics of Natural Populations
ERHS332(3)  Principles of Epidemiology
FW300(2)  Biology and Diversity of Fishes
FW301(1)  Ichthyology Lab
GEOL342(3)  Paleontology
MIP300(3)  General Microbiology
MIP302(2)  General Microbiology Lab
MIP303(1)  General Microbiology – Honors Recitation
MIP450(3)  Microbial Genetics
INTEGRATIVE ORGANISMAL BIOLOGY

Students who select this field must include at least one course from each of the following lists:

List A (Botany):

- BZ223(3) Plant Identification
- BZ325(4) Plant Systematics
- BZ331(4) Developmental Plant Anatomy
- BZ332(4) Introductory Phycology
- BZ333(4) Introductory Mycology
- BZ388(4) Comp. Morph. of Vasc. Plants
- BZ360(3) Bioinformatics and Genomics
- BZ440(3) Plant Physiology
- BZ441(2) Plant Physiology Lab
- BZ450(4) Plant Ecology
- BZ476(3) Genetics of Model Organisms
- BZ570(3) Molecular Aspects of Plant Development
- BZ572(3) Phytoremediation

List B (Zoology):

- BSPM302(2) Applied and General Entomology
- BSPM303A(2) Entomology Lab: General
- BZ212(4) Animal Biology - Invertebrates
- BZ214(4) Animal Biology - Vertebrates
- BZ300(3) Animal Behavior
- BZ329(3) Herpetology
- BZ330(3) Mammalogy
- BZ332(4) Introductory Phycology
- BZ333(4) Introductory Mycology
- BZ335(3) Ornithology
- BZ338(4) Comp. Morph. of Vasc. Plants

ECOLOGY

Students who select this field must complete one class from List A below; Classes in List B must be used to fulfill the remainder of the 12 credits:

List A:

- BSPM302(2) Applied and General Entomology
- BZ325(4) Plant Systematics
- BZ329(3) Herpetology
- BZ330(3) Mammalogy
- BZ332(4) Introductory Phycology
- BZ333(4) Introductory Mycology
- BZ335(3) Ornithology
- BZ338(4) Comp. Morph. of Vasc. Plants
- FW300(2) Biology and Diversity of Fishes
- MIP300(3) General Microbiology

List B:

- ANTH370(3) Primate Behavior and Ecology
- BZ/MATH348(4) Theory of Pop. & Evol. Ecology
- BZ349(3) Tropical Ecology and Evolution
- BZ415(4) Marine Biology
- BZ418(4) Ecology of Infectious Diseases
- BZ425(3) Molecular Ecology
- BZ430(3) Animal Behavior and Conservation
- BZ449A(4) Ecology, Evolution & Conservation of Ecuadorian Biodiversity
- BZ450(4) Plant Ecology
- BZ466(4) Biological Basis of Animal Behavior
- BZ471(3) Stream Biology and Ecology
- BZ472(1) Stream Biology and Ecology Lab
- BZ474(3) Limnology
- BZ505(3) Cognitive Ecology
- BZ510(3) Zoophysiological Ecology
- BZ535(3) Behavioral Ecology
- BZ561(3) Landscape Ecology
- BZ572(3) Phytoremediation
- ERHS332(3) Principles of Epidemiology
- F311(3) Forest Ecology
- FW400(3) Cons. of Fish in Aquatic Ecosystems
- MIP432(3) Microbial Ecology
- MIP433(1) Microbial Ecology Lab
- NR370(3) Coastal Environmental Ecology
- RS331(3) Wildland Plants & Plant Communities
- RS351(3) Wildland Ecosystems in a Changing World
- RS478(3) Ecological Restoration
### MICROBIOLOGY

- BSPM361(3) Elements of Plant Pathology
- BZ332(4) Introductory Phycology
- BZ333(4) Introductory Mycology
- BZ418(4) Ecology of Infectious Diseases
- BZ420(3) Evolutionary Medicine
- BZ/BSPM/MIP462(5) Parasitology and Vector Biology
- BZ537(3) Topics in Mycology
- BZ/MIP577(2) Computer Analysis in Population Genetics
- BZ/MIP578(4) Genetics of Natural Populations
- MIP300(3) General Microbiology
- MIP302(2) General Microbiology Lab
- MIP303(1) General Microbiology – Honors Recitation
- MIP315(3) Human and Animal Disease
- MIP334(3) Food Microbiology
- MIP335(2) Food Microbiology Lab
- MIP342(4) Immunology
- MIP343(2) Immunology Lab
- MIP351(3) Medical Bacteriology
- MIP352(3) Medical Bacteriology Lab
- MIP420(4) Medical and Molecular Virology
- MIP425(2) Virology and Cell Culture Laboratory
- MIP432(3) Microbial Ecology
- MIP433(1) Microbial Ecology Lab
- MIP436(4) Industrial Microbiology
- MIP443(4) Microbial Physiology
- MIP450(3) Microbial Genetics
- SOCR455(3) Soil Microbiology
- SOCR456(1) Soil Microbiology Lab

### AQUATIC BIOLOGY

- BSPM445(4) Aquatic Insects
- BZ332(4) Introductory Phycology
- BZ415(4) Marine Biology
- BZ471(3) Stream Biology and Ecology
- BZ472(1) Stream Biology and Ecology Lab
- BZ474(3) Limnology
- BZ515(3) Physiological Ecology of Marine Vertebrates
- FW300(2) Biology and Diversity of Fishes
- FW301(1) Ichthyology Lab
- FW400(3) Cons. of Fish in Aquatic Ecosystems
- FW405(3) Fish Physiology
- NR370(3) Coastal Environmental Ecology

### BEHAVIORAL BIOLOGY

Students who select this field must take:
- BMS325(3) Cellular Neurobiology
  - AND -
- BZ300(3) Animal Behavior

- BZ420(3) Evolutionary Medicine
- BZ430(3) Animal Behavior and Conservation
- BZ433(4) Behavioral Genetics
- BZ466(4) Biological Basis of Animal Behavior
- BZ479(3) Biology and Behavior of Dogs (online)
- BZ505(3) Cognitive Ecology
- BZ535(3) Behavioral Ecology
- PSY352(3) Learning and Memory
- PSY454(3) Biological Psychology

### SELF DESIGNATED FIELD

A student may define their own selected field with the approval of the Biology Department Curriculum Committee. Students should consult with their advisor to develop a proposal for a self-designated field. Include a description of the field of interest, the student's rationale for wishing to pursue a self-designated field, and a list of relevant classes (totaling 12 credits). Included courses must be upper-division classes that are primarily biological in content. A student's request for a self-designated field must be submitted to the Biology Curriculum Committee for approval before the end of the sophomore year.