“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.

**ANATOMY/PHYSIOLOGY**

Students selecting this field must take one of the following three classes:

BMS360(4) Fundamentals of Physiology  

or  

BMS300*(4) Principles of Human Physiology  

or  

BZ440(3) Plant Physiology  

(*Note: If either BMS360 or BMS300 is taken, only one of these 2 classes may be used to fulfill the 12-credit requirement in this field.)

All BMS courses numbered 300 and above except BMS384 and BMS495.

ANEQ310(3) Animal Reproduction  

BMS230(3) Animal Anatomy & Physio  

BMS305(4) Domestic Animal Gross Anatomy (formerly AY231)  

BZ331(4) Dev Plant Anatomy  

BZ401(3) Comparative Animal Physiology  

BZ403(3) Comparative Endocrinology  

BZ440(3) Plant Physiology  

BZ441(2) Plant Physiology Lab  

BSPM525(3) Insect Physiology  

ERHS300(3) Radiation Biology  

F510(3) Ecophysiology of Trees  

F510(3) FSHN350(3) Human Nutrition  

FW405(3) Fish Physiology  

HES403(4) Physiology of Exercise  

MIP315(3) Human & Animal Disease  

MIP342(4) Immunology  

MIP343(2) Immunology Lab  

PSY454A,B(3) Physiological Psychology  

PSY455A,B(2) Physiological Psychol Lab  

VS331(4) Histology (on line)  

VS333(4) Domestic Animal Anatomy

**AQUATIC BIOLOGY**

BSPM445(4) Aquatic Insects  

BZ315(3) Marine Ecology  

BZ321(3) Aquatic Vascular Plants  

BZ332(4) Introductory Phycology  

BZ471(3) Stream Biology & Ecology  

BZ472(1) Stream Biology & Eco Lab  

BZ474(3) Limnology  

FW300(2) Ichthyology  

FW301(2) Ichthyology Lab  

FW400(3) Fish Ecology  

FW420(2) Water Quality for Fish&Wild  

FW540(4) Fisheries Ecology  

FW544(3) Ecotoxicology

Students are encouraged to consult with their advisor regarding field station classes that may be used to fulfill course requirements in this field.

**BEHAVIORAL BIOLOGY**

Students selecting this field must take BMS325 Cellular Neurobiology and BZ300 Animal Behavior, and complete 6 credits from the following:

BSPM507(3) Insect Behavior  

BSPM570(3) Chemical Ecology  

BZ301(1) Animal Behavior Lab  

BZ433(3) Behavioral Genetics  

BZ/VS479 Biology and Behavior of Dogs  

BZ535(3) Behavioral Ecology  

NB501(2) Molecular & Cellular Neurobiology  

NB/CM502(2) Techniques in Molecular & Cellular Biology  

PSY352(3) Psychology of Learning  

PSY454A(3) Physiological Psychology  

PSY455B(2) Physiological Psychology Lab
**CELLULAR, MOLECULAR & GENETIC BIOLOGY**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ANEQ330(3)</td>
<td>Principles of Anim. Breeding</td>
</tr>
<tr>
<td>ANEQ430(2)</td>
<td>Applied Animal Breeding</td>
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<tr>
<td>BC401(3)</td>
<td>Compreh Biochemistry I</td>
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<tr>
<td>BC403(3)</td>
<td>Compreh Biochemistry II</td>
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<tr>
<td>BC406A-C(2)</td>
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<td>BC463(4)</td>
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<td>BC511(3)</td>
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<tr>
<td>BC513(1)</td>
<td>Enzymology</td>
</tr>
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<td>BC517(2)</td>
<td>Metabolism</td>
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<tr>
<td>BMS325(3)</td>
<td>Cellular Neurobiology</td>
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<tr>
<td>BMS365(3)</td>
<td>Nerve &amp; Muscle-Toxins, Trauma &amp; Disease</td>
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<tr>
<td>BZ346(3)</td>
<td>Population &amp; Evol. Genetics</td>
</tr>
<tr>
<td>BZ402(4)</td>
<td>Chromosomes of Eukaryotes</td>
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<tr>
<td>BZ403(3)</td>
<td>Comp. Endocrinology</td>
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<td>BZ433(3)</td>
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<td>BZ455(3)</td>
<td>Human Heredity &amp; Birth Defects</td>
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<tr>
<td>BZ476(3)</td>
<td>Topics in Advanced Genetics</td>
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<tr>
<td>BZ570(3)</td>
<td>Molecular Aspects of Plant Development</td>
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<td>BZ/MIP577(1)</td>
<td>Computer Analysis in Population Genetics</td>
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<td>BZ/MIP578(4)</td>
<td>Genetics of Nat.Populations</td>
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<td>CM501(4)</td>
<td>Advanced Cell Biology</td>
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<tr>
<td>HORT/SOCR460(3)</td>
<td>Plant Breeding</td>
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<td>HORT575(2)</td>
<td>Plant Germplasm Conservation</td>
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<tr>
<td>MIP300(3)</td>
<td>General Microbiology</td>
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<tr>
<td>MIP302(2)</td>
<td>Gen Microbiology Lab</td>
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<tr>
<td>MIP342(4)</td>
<td>Immunology</td>
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<tr>
<td>MIP343(2)</td>
<td>Immunology Lab</td>
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<tr>
<td>MIP450(3)</td>
<td>Microbial Genetics</td>
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<tr>
<td>MIP550(3)</td>
<td>Microbial &amp; Molec. Genetics Lab</td>
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<tr>
<td>NB501(2)</td>
<td>Cellular &amp; Molecular Neurophysiology</td>
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<tr>
<td>NB/CM502(2)</td>
<td>Techniques in Molecular &amp; Cellular Biology</td>
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<td>NB503(3)</td>
<td>Developmental Neurobiology</td>
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<td>VS331(4)</td>
<td>Histology (on line)</td>
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</table>

**ECOLOGY**

Students selecting 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&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) Ichthyology
- FW301(2) Ichthyology Lab
- MIP300(3) Microbiology
- MIP302(2) Gen Microbiology Lab

**List B:**

- ANTH370(3) Primate Behavior & Ecol.
- BSPM570(3) Chemical Ecology
- BMS410(3) Physiological Responses to the Environment
- BZ348/MATH348(3) Theory of Pop. & Evol. Eco
- BZ450(4) Plant Ecology
- BZ471(3) Stream Biology & Ecology
- BZ472(1) Stream Biology&Ecology Lab
- BZ474(3) Limnology
- BZ510(3) Zoophysiological Ecology
- BZ535(3) Behavioral Ecology
- BZ561(3) Landscape Ecology
- BZ/BSPM/MIP562(5) Field Ecology of Disease Vectors
- BZ572(3) Phytoremediation
- ERHS332(3) Prncpls of Epidemiology
- ERHS 532(3) Epidemiologic Methods
- F311(3) Forest Ecology
- FW400(3) Fish Ecology
- FW474(3) Wildlife Ecology
- FW544(3) Ecotoxicology
- ERHS570(2) Radioecology
- RS331(3) Rangeland Ecogeography
- RS351(3) Range Plant Prod & Decomp
- RS478(3) Restoration Ecology
- RS578(3) Ecology of Disturbed Lands

Students are encouraged to consult with their advisor regarding field station classes that may be used to fulfill course requirements in this field.
EVOLUTION, GENETICS & SYSTEMATICS

Students selecting this field must take:
BZ346(3) Population & Evol. Genetics,
and either
BZ325 Plant Systematics or
BSPM/BZ/424 Systematic Zoology, and
complete the remainder of their 12 credits
from the following courses:

ANTH373(3) Human Evolution
ANTH374(3) Human Biological Variation
BC465(4) Molecular Genetics
BSPM302(2) Applied & Gen. Entomology
BSPM303A(2) Applied & Gen. Entomology Lab
BSPM423(4) Evol. & Class. of Insects
BSPM/BZ/MIP462(5) Parasitology & Vector Bio
BSPM507(3) Insect Behavior
BSPM/BZ520(3) Advanced Systematics
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. Pl.
BZ348/MATH348(3) Theory of Pop. & Evol Eco
BZ402(4) Chromosomes of Eukaryotes
BZ433(3) Behavioral Genetics
BZ455(3) Human Heredity & Birth Defects
BZ/BSPM/MIP462(5) Parasitology & Vector Bio
BZ/BSPM520(3) Advanced Systematics
BZ530(2) Ecol. Plant Morphology
BZ535(3) Behavioral Ecology
BZ/MIP577(1) Computer Analysis in Population Genetics
BZ/MIP578(4) Genetics of Natural Populations
FW300(2) Ichthyology
FW301(2) Ichthyology Lab
GEOL342(3) Paleontology
MIP300(3) Microbiology
MIP302(2) Gen Microbiology Lab
MIP450(3) Microbial Genetics
MIP550(3) Microbial & Molec Gen Lab
SOCR535(3) Orig & Evol of Cultv Plants

MICROBIOLOGY

All MB courses numbered 300 or above except MIP342, MIP343, MIP384, MIP495

BSPM361(3) Elements of Plant Pathology
BSPM550(3) Molecular Plant-Microbe Inter (old name Phytobacteriology)
BZ332(4) Introductory Phycology
BZ333(4) Introductory Mycology
BZ537(3) Topics in Mycology
SOCR455(3) Soil Microbiology
SOCR456(1) Soil Microbiology Lab (old name Phytobacteriology)
**INTEGRATIVE ORGANISMAL BIOLOGY**

Students selecting this field must include in their 12 credits at least one course from each of the following lists:

**List A (Botany):**
- BZ223(3) Plant Identification
- BZ302(3) Poisonous Plants
- BZ321(3) Aquatic Vascular Plants
- BZ325(4) Plant Systematics
- BZ332(4) Introductory Phycology
- BZ333(4) Introductory Mycology
- BZ338(4) Comp. Morph. of Vasc. Pl.
- BZ450(4) Plant Ecology
- BZ572(3) Phytoremediation

**List B (Zoology):**
- BSPM302(2) Appld & Gen Entomology
- BSPM303A(2) Appld & Gen Entomology Lab
- BSPM/BZ424(3) Princ of Systematic Zoo
- BSPM/BZ/MIP462 (5) Parasitology & Vector Bio
- BZ/VS479 Biology and Behavior of Dogs
- BZ212(4) Invertebrate Biology
- BZ214(4) Vertebrate Biology
- BZ300(3) Animal Behavior
- BZ315(3) Marine Ecology
- BZ329(3) Herpetology
- BZ330(3) Mammalogy
- BZ335(3) Ornithology
- BZ/BSPM424(3) Princ of Systematic Zoo
- BZ/BSPM/MIP462 (5) Parasitology & Vector Bio
- BZ471(3) Stream Biology & Ecology
- BZ472(1) Stream Biology & Ecology Lab
- BZ474(3) Limnology
- FW300(2) Ichthyology
- FW301(2) Ichthyology Lab
- FW400(3) Fish Ecology
- GEOL342(3) Paleontology

**SELF DESIGNATED FIELD**

A student may, with the approval of their advisor and the Biology Curriculum Committee, define their own individual selected field. Students wishing to pursue this option should consult with their advisor to develop a proposal for a self-designated field. The proposal should include a description of the field of interest, the student's reasons or rationale for wishing to pursue a self-designated field, and a list of relevant classes (totaling 12 credits) to be completed. To be included, courses should be upper-division classes that are primarily biological in content. Once approved by the advisor, a student's request for a self-designated field must be submitted to the Biology Curriculum Committee for approval. The Curriculum Committee's approval for a self-designated field should be obtained before the end of the sophomore year.

Students are encouraged to consult with their advisor regarding field station classes that may be used to fulfill course requirements in this field.