“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
- BMS300*(4) Principles of Human Physiology
- 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, BMS495, and BMS310.

- ANEQ310(3) Animal Reproduction
- BMS301(5) Human Gross Anatomy
- 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
- 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(1) 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/CN502(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>ANE330(3)</td>
<td>Principles of Anim. Breeding</td>
</tr>
<tr>
<td>BC401(3)</td>
<td>Compreh Biochemistry I</td>
</tr>
<tr>
<td>BC403(3)</td>
<td>Compreh Biochemistry II</td>
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<tr>
<td>BC406A-C(2)</td>
<td>Investigative Biochem.</td>
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<tr>
<td>BC463(4)</td>
<td>Molecular Genetics</td>
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<tr>
<td>BC511(3)</td>
<td>Structural Biology I</td>
</tr>
<tr>
<td>BC513(1)</td>
<td>Enzymology</td>
</tr>
<tr>
<td>BC517(2)</td>
<td>Metabolism</td>
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<tr>
<td>BMS325(3)</td>
<td>Cellular Neurobiology</td>
</tr>
<tr>
<td>BMS405 (3)</td>
<td>(previously BMS365) Nerve &amp; Muscle-Toxins, Trauma &amp; Disease</td>
</tr>
<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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<tr>
<td>BZ433(3)</td>
<td>Behavioral Genetics</td>
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<tr>
<td>BZ455(3)</td>
<td>Human Heredity &amp; Birth</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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<tr>
<td>BZ/MIP577(1)</td>
<td>Computer Analysis in Population Genetics</td>
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<tr>
<td>BZ/MIP578(4)</td>
<td>Genetics of Nat.Populations</td>
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<tr>
<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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<tr>
<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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<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 Neuropathiology</td>
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<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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<td>BMS 330 (4)</td>
<td>Microscopic Anatomy</td>
</tr>
</tbody>
</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(1) 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
- BZ315(3) Marine Ecology
- BZ/MATH348(3) Theory of Pop. & Evol. Eco Impacts & Mitigation
- BZ/NR353 (3) Global Change Ecology
- 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/BZ424 Systematic Zoology, and
- complete the remainder of their 12 credits from the following courses:

- ANTH373(3)  Human Evolution
- ANTH374(3)  Human Biological Variation
- BC463(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.
- BZ/MATH348(3)  Theory of Pop. & Evol Eco
- BZ402(4)  Chromosomes of Euakaryotes
- 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(1)  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 MIP courses numbered 300 or above except MIP342, MIP343, MIP384, MIP495, and MIP 315

- 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(1) 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.