

**“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  
 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**

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

## **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  
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.  
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

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

## **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.