## Fall 2023 Offerings
### EEB, Biology, & Bioinformatics Major Electives

Courses in **bold** satisfy the Writing Emphasis requirement. Courses in *italics* satisfy the Field Component. Courses marked with a * satisfy the lab component. Courses with a ^ might be offered as an iCourse. Students may only use a course once within their major electives. All prerequisites must be met prior to enrolling.

### ORGANISMAL
**MACRO–**
- ACBS 315R – Physiology of Animal Reproduction Lecture
- ACBS 315L – Physiology of Animal Reproduction Lab*
- ACBS 400A – Animal Anatomy & PSIO

**ECOL 340 – Evolution of Plant Form & Function**

**ECOL 482 – Ichthyology**

**ECOL 485 – Mammalogy**

**ECOL 487R – Animal Behavior**

**ECOL 487L – Animal Behavior Lab**

**ENTO 415R – Insect Behavior**

**ENVS 474 – Aquatic Plants and the Environment**

**MATH 481 – Mathematical Modeling of Fluid Flow Through and Around Organs and Organisms***

**PSIO 467 – Endocrine Physiology**

### MICRO–
- ACBS 449 – Diseases of Wildlife
- MIC 420 – Pathogenic Bacteriology
- MIC 421B – Microbiological Techniques*
- ENVS 425 – Environmental Microbiology Lecture*
- ENVS 426 – Environmental Microbiology Lab*

**MATH 481 – Mathematical Modeling of Fluid Flow Through and Around Organs and Organisms***

**PLP 305 – Plant Pathology**

**PLP 329A – Microbial Diversity**

**PLP 427R – General Mycology Lecture**

**PLS 448A – Plant Biochemistry and Metabolic Engineering**

### ECOLOGY, EVOLUTION & BEHAVIOR (EEB)

**ANTH 470 – Primate Behavior**

**ECOL 326 – Genomics**

**ECOL 340 – Evolution of Plant Form & Function**

**ECOL 409 – Evolution of Infectious Disease**

**ECOL 450 – Marine Discovery**

**ECOL 487R – Animal Behavior**

**ECOL 487L – Animal Behavior Lab**

**ENTO 415R – Insect Biology**

**ENVS 442 – Limnology**

**ENVS 474 – Aquatic Plants and the Environment**

**GEOS 439A – Intro to Dendrochronology**

**GEOS 478 – Global Change**

**PLP 305 – Introductory Plant Pathology**

**PLP 329A – Microbial Diversity**

**RNR 316 – Natural Resource Ecology**

**WFSC 444 – Wildlife Ecology, Conservation, and Management**

### MOLECULAR & CELLULAR BIOLOGY (MCB)

**MCB 304 – Molecular Genetics**

**MCB 325 – Biology of Cancer**

**MCB 410 – Cell Biology**

**MCB 422 – Problem Solving with Genetic Tools**

**MCB 480 – Introduction to Systems Biology**

**MIC 350 – Molecular Microbiology**

**MIC 419 – Immunology**

**MIC 420 – Pathogenic Bacteriology**

**MIC 432 – Comparative Immunology**

**NROS 412 – Molecular Mechanisms of Learning & Memory**

**PLP 427R – General Mycology Lecture**

**PLS 359 – Plant Cell Structure & Function**

**PLS 448A – Plant Biochemistry and Metabolic Engineering**

**PSIO 303 – Integrative Cellular Physiology**

**PSIO 472 – Quantitative Modeling of Biological Systems**
GENETICS
MCB 304 – Molecular Genetics
MCB 422 – Problem Solving with Genetic Tools*
PLS 340 – Intro to Biotechnology
WFSC 430 – Conservation Genetics^

PHYSIOLOGY**
ACBS 315R – Physiology of Animal Reproduction Lecture
ACBS 315L – Physiology of Animal Reproduction Lab*
ACBS 400A – Animal Anatomy & Physiology
ECOL 340 – Evolution of Plant Form & Function
MIC 350 – Molecular Microbiology
MIC 432 – Comparative Immunology
NROS 307 – Cellular Neurophysiology
PSIO 303 – Integrative Cellular Physiology
PSIO 420 – Exercise & Environmental Physiology
PSIO 431 – Physiology of the Immune System
PSIO 467 – Endocrine Physiology
PSIO 485 – Cardiovascular Physiology

SCIENCE & SOCIETY
ECOL 220 – Evolutionary Medicine
EPID 309 – Intro to Epidemiology^
HPS 387 – Health Disparities & Minority Health^
MCB 404 – Bioethics
PHP 305 – Population Health in the Digital Age^
PHP 308 – Com Health Ed for Disease Outbreaks^

COMPUTER SCIENCE
ESOC 414 – Computational Social Science
CSC 401A – Symbolic Logic
GAME 310 – Gamification in Society
ISTA 321 – Data Mining and Discovery
ISTA 331 – Principles and Practice of Data Science
ISTA 421 – Introduction to Machine Learning
ISTA 431 – Data Warehousing and Analytics in the Cloud
MATH 313 – Introduction to Linear Algebra
MATH 355 – Analysis of Ordinary Differential Equations
MATH 413 – Linear Algebra
MATH 481 – Mathematical Modeling of Fluid Flow Through and Around Organs and Organisms

Notes
Bioinformatics majors may select Major Electives in any category above EXCEPT Science and Society.
EEB and Biology majors must select Major Electives in categories as laid out in their Advisement Reports.
**PSIO 201 & PSIO 202 is only available to students in the Biology: Biomedical Sciences sub-plan. Both PSIO 201 & 202 must be taken to satisfy the Physiology and lab requirement.
**PSIO 404, 411, 420, 425, 450, 468, and 484 are for PSIO majors and minors only. Please contact the PSIO department to determine if seats are available to non-majors.
***MATH 481 requires vector calculus and cannot satisfy both Micro and Macro–organismal requirement.