

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 Biology

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.