

# BIOLOGY ELECTIVES

## Spring

Courses in **BOLD** satisfy the **WRITING EMPHASIS** requirement. Courses marked with \* satisfy the \***LAB COMPONENT**. Courses marked with ^ satisfy the ^**FIELD COMPONENT**. Students may only use a course once within their major electives.

## **PHYSIOLOGY**

ACBS 400B - Animal Anatomy and Physiology

ACBS 401L - Domestic Animal Anatomy & Physiology Laboratory \*

ANTH 431 - Primate Sexuality

**ECOL 330 - Evolution of Animal Form and Function** 

**ECOL 437 - Vertebrate Physiology \*** 

IMB 406 - Human Immunology

MIC 328R - Microbial Physiology

NROS 307 - Cellular Neurophysiology

NROS 420 - Neuroscience of Survival

PLS 360 - Plant Growth and Physiology

PLS 361 - Principles of Plant Physiology Laboratory \*

PSIO 201 - Human Anatomy & Physiology I \*

PSIO 202 - Human Anatomy & Physiology II \*

PSIO 380 - Fundamentals of Human Physiology

PSIO 404 - Advanced Topics in Cellular Physiology

PSIO 420 - Exercise and Environmental Physiology

PSIO 425 - Measurement and Evaluation of Physiological Function \*

PSIO 431 - Physiology of the Immune System

PSIO 450 - Respiratory Physiology

PSIO 469 - Human Reproductive Physiology

PSIO 484 - Cardiovascular Muscle Biology and Disease

Courses in the PSIO department are reserved for majors only. Please contact the PSIO department to determine if seats are available to non-majors.

PSIO 201 & 202 are only available to students in the BS Biology-Biomedical Sciences subplan. Both courses must be taken to satisfy the Physiology and Lab requirements for this track.

## CELL & MOLECULAR BIOLOGY

ACBS 433 - Medical and Molecular Virology

ECOL 345 - Biodiversity and the Tree of Life

ECOL 496G - Complex Systems: Networks & Self-organization in Biology

ENVS 477 - Principles of Ecotoxicology ^

IMB 401 - Medical Microbiology and Immunology

MCB 305 - Cell and Developmental Biology

MCB 411 - Molecular Biology

MCB 416A - Bioinformatics and Functional Genomic Analysis

MCB 473 - Recombinant DNA Methods and Applications \*

NROS 307 - Cellular Neurophysiology

NROS 310 - Molecular and Cellular Biology of Neurons

NROS 412 - Molecular Mechanisms of Learning and Memory

NROS 430 - Neurogenetics

PLP 428L - Microbial Genetics Laboratory \*

PLP 428R - Microbial Genetics

PSIO 404 - Advanced Topics in Cellular Physiology

PSIO 484 - Cardiovascular Muscle Biology and Disease

## **GENETICS**

ECOL 345 - Biodiversity and the Tree of Life

ECOL 346 - Bioinformatics \*

ECOL 426 - Population Genetics

ECOL 480 - Mathematical Models in Biology

ECOL 496G - Complex Systems: Networks & Self-organization in Biology

MCB 416A - Bioinformatics and Functional Genomic Analysis

MCB 473 - Recombinant DNA Methods and Applications \*

NROS 430 - Neurogenetics

PLP 428L - Microbial Genetics Laboratory \*

PLP 428R - Microbial Genetics

PLS 312 - Animal and Plant Genetics \*

PLS 340 - Introduction to Biotechnology

PLS 340L - Biotechnology Laboratory \*

PLS 440 - Mechanisms in Plant Development

PLS 449A - Plant Genetics and Genomics

## **SCIENCE & SOCIETY**

#### BS Biology-Biomedical Sciences track only

CHS 421 - Sociology of Drugs and Addiction

ECOL 360 - Marine Ecology & Conservation

ECOL 406R - Conservation Biology

ECOL 409 - Evolution of Infectious Disease

ENTO 407 - Insect Discovery \*

ENTO 457 - Medical-Veterinary Entomology

EPID 309 - Introduction to Epidemiology

HIST 311 - History of Epidemics

LIDC 20C Davies and Conjety

HPS 306 - Drugs and Society

HPS 387 - Health Disparities & Minority Health

LAW 459 - Public International Environmental Law

MAS 405 - Traditional Indian Medicine: Health, Healing and Well Being

MCB 404 - Bioethics

**PCOL 305 - Scientific Writing for Health Science Students** 

PCOL 320 - What's Your Poison? Toxicology of Substances that Surround Us

PHIL 321 - Medical Ethics

PHIL 323 - Environmental Ethics

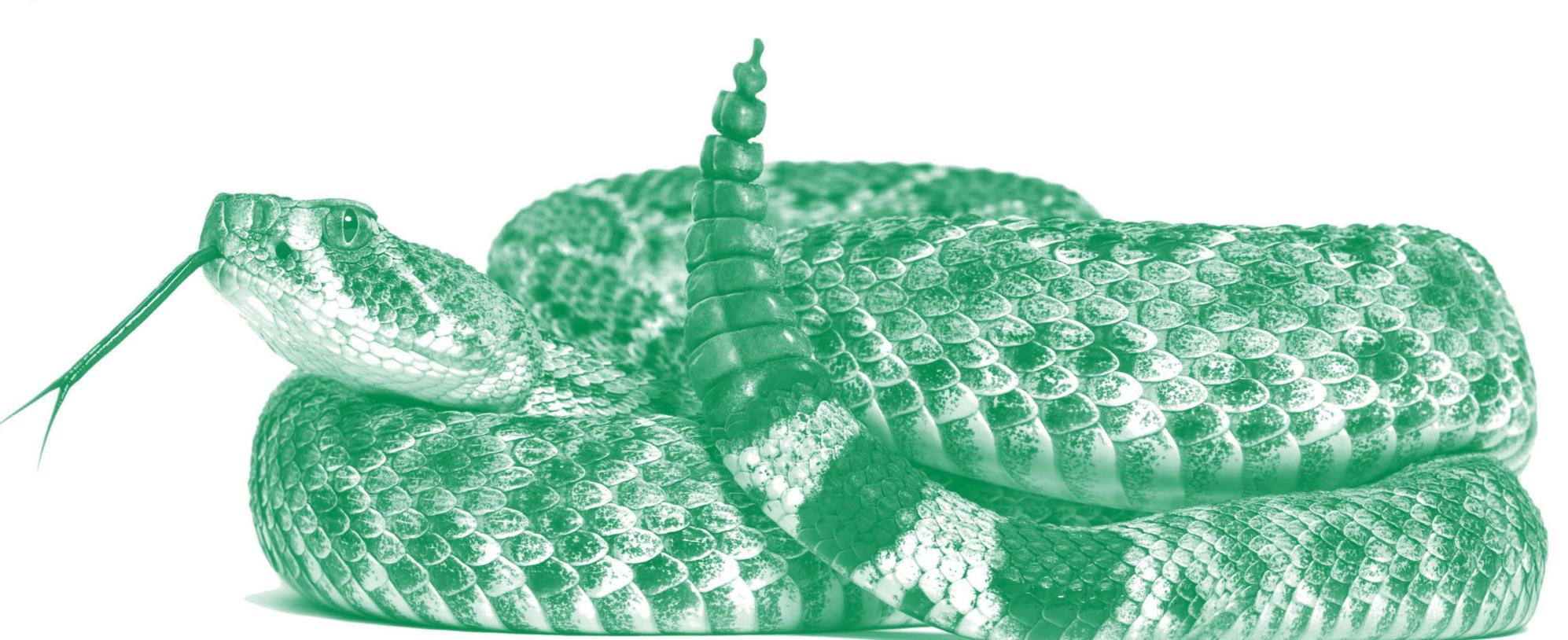
PHIL 347 - Neuroethics

PHP 305 - Population Health in the Digital Age

PHP 308 - Community Health Education for Disease Outbreaks

SOC 410 - The Hospital as a Small Society: The Social Organization of Medicine





Courses in **BOLD** satisfy the **WRITING EMPHASIS** requirement. Courses marked with \* satisfy the \***LAB COMPONENT**. Courses marked with ^ satisfy the ^**FIELD COMPONENT**. Students may only use a course once within their major electives.

## **BIOLOGY OF ORGANISMS**

#### **MICROORGANISMAL**

ACBS 403R - Biology of Animal Parasites

ACBS 406 - Diseases of Companion Animals

ACBS 433 - Medical and Molecular Virology

ECOL 409 - Evolution of Infectious Disease

ECOL 427 - Ecology and Evolution of the Mammalian Microbiome

ENTO 457 - Medical-Veterinary Entomology

ENVS 425 - Environmental Microbiology

ENVS 426 - Environmental Microbiology Laboratory \*

IMB 401 - Medical Microbiology and Immunology

IMB 402 - Medical Microbiology Basics

IMB 404 - Medical Virology Basics

IMB 406 - Human Immunology

MCB 437 - Life in Extreme Environments

MIC 328R - Microbial Physiology

PLP 320 - Microbiomes

PLP 428L - Microbial Genetics Laboratory \*

**PLP 428R - Microbial Genetics** 

WFSC 453 - Wildlife and Zoonotic Disease Ecology

### MACROORGANISMAL

ACBS 400B - Animal Anatomy and Physiology

ACBS 401L - Domestic Animal Anatomy & Physiology Laboratory \*

ACBS 443 - Research Animal Methods \*

ACBS 456 - Aquaculture

ANTH 472 - Zooarchaeology and Taphonomy: Laboratory Methods \*

**ECOL 330 - Evolution of Animal Form and Function** 

**ECOL 404R - Biology of the Oceans** 

**ECOL 437 - Vertebrate Physiology \*** 

ECOL 483 - Herpetology ^ \*

ECOL 484 - Ornithology ^ \*

ECOL 488 - Arizona Mammals ^ \*

ECOL 496G - Complex Systems: Networks & Self-organization in Biology

ENTO 405 - Aquatic Entomology \*

ENTO 407 - Insect Discovery \*

ENVS 475 - Freshwater and Marine Algae ^ \*

NROS 381 - Animal Brains, Signals, Sex, and Social Behaviors

NROS 420 - Neuroscience of Survival

PLS 360 - Plant Growth and Physiology

PLS 361 - Principles of Plant Physiology Laboratory \*

## ECOLOGY, EVOLUTION, & BEHAVIOR

BS Biology-Organismal Biology track only

ANTH 431 - Primate Sexuality

ANTH 472 - Zooarchaeology and Taphonomy: Laboratory Methods \*

ANTH 495D - Special Topics in Biological Anthropology

**ECOL 330 - Evolution of Animal Form and Function** 

ECOL 345 - Biodiversity and the Tree of Life

ECOL 360 - Marine Ecology & Conservation

**ECOL 404R - Biology of the Oceans** 

ECOL 406R - Conservation Biology

ECOL 409 - Evolution of Infectious Disease

ECOL 426 - Population Genetics

ECOL 427 - Ecology and Evolution of the Mammalian Microbiome

ECOL 473 - Topics in Behavioral Ecology

ECOL 480 - Mathematical Models in Biology

ECOL 488 - Arizona Mammals ^ \*

ECOL 496G - Complex Systems: Networks & Self-organization in Biology

ENTO 405 - Aquatic Entomology \*

ENTO 407 - Insect Discovery \*

ENVS 475 - Freshwater and Marine Algae ^ \*

ENVS 477 - Principles of Ecotoxicology ^

GEOS 308 - Paleontology

GEOS 330 - Introduction to Remote Sensing

GEOS 497C - Dendrochronology

MCB 437 - Life in Extreme Environments

NROS 381 - Animal Brains, Signals, Sex, and Social Behaviors

NROS 420 - Neuroscience of Survival

RNR 316 - Natural Resources Ecology

RNR 355 - Introduction to Wildland Fire

RNR 417 - Geographic Information Systems for Natural and Social Sciences

WFSC 445 - Population Ecology \*

WFSC 453 - Wildlife and Zoonotic Disease Ecology

