



BIOINFORMATICS ELECTIVES

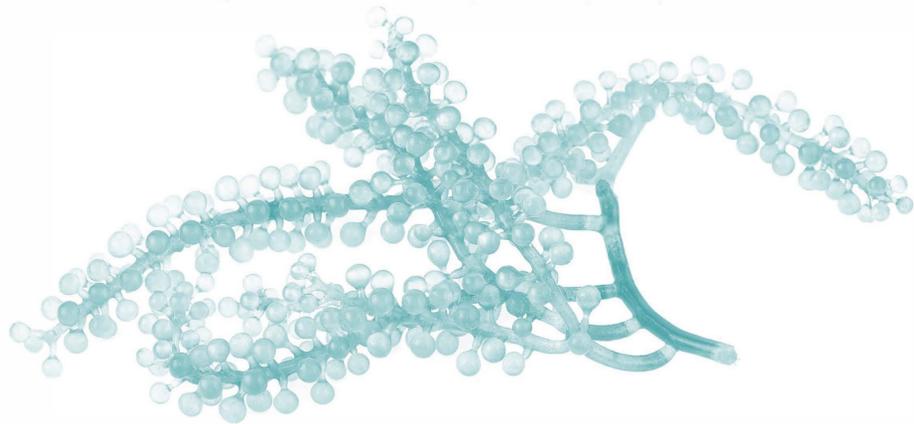
Fall



Courses in **BOLD** satisfy the **WRITING EMPHASIS** requirement. Students may only use a course once within their major electives.

CELL & MOLECULAR BIOLOGY

- ACBS 423 - Mechanisms of Disease
- ECOL 326 - Genomics
- ECOL 345 - Biodiversity and the Tree of Life
- ECOL 465 - Phylogenetic Biology
- ENTO 432 - Comparative Immunology
- ENVS 477 - Principles of Ecotoxicology
- IMB 401 - Medical Microbiology and Immunology
- MCB 325 - The Biology of Cancer
- MCB 410 - Cell Biology
- MCB 422 - Problem Solving with Genetic Tools**
- MCB 480 - Introduction to Systems Biology
- MIC 350 - Core Concepts in Molecular Microbiology
- MIC 420 - Pathogenic Bacteriology
- MIC 452 - Antibiotics - A Biological Perspective
- NROS 307 - Cellular Neurophysiology
- NROS 412 - Molecular Mechanisms of Learning and Memory
- PLP 427R - General Mycology
- PLS 440 - Mechanisms in Plant Development
- PLS 448A - Plant Biochemistry and Metabolic Engineering
- PSIO 303 - Integrative Cellular Physiology



SCIENCE & SOCIETY

- ANTH 307 - Ecological Anthropology**
- ANTH 364 - Natural History of Our Closest Relatives**
- ANTH 369 - Darwinian Medicine
- CHS 421 - Sociology of Drugs and Addiction
- ECOL 409 - Evolution of Infectious Disease
- ECOL 450 - Marine Discovery
- EPID 309 - Introduction to Epidemiology
- HPS 306 - Drugs and Society
- HPS 387 - Health Disparities & Minority Health
- MAS 425 - Latino Health Disparities
- 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 4101 - The Hospital as a Small Society: The Social Organization of Medicine

GENETICS

- ECOL 326 - Genomics
- ECOL 345 - Biodiversity and the Tree of Life
- MCB 422 - Problem Solving with Genetic Tools**
- MIC 452 - Antibiotics - A Biological Perspective
- PLP 428R - Microbial Genetics**
- PLS 340 - Introduction to Biotechnology
- PLS 440 - Mechanisms in Plant Development

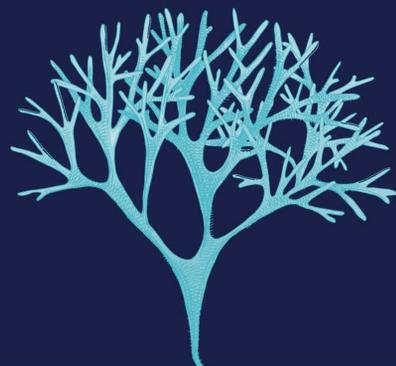
ORGANISMAL BIOLOGY

- ACBS 315L - Physiology of Reproduction Laboratory
- ACBS 315R - Physiology of Reproduction
- ACBS 400A - Animal Anatomy and Physiology A
- ACBS 423 - Mechanisms of Disease
- ACBS 449 - Diseases of Wildlife
- ECOL 340 - Evolution of Plant Form and Function**
- ECOL 409 - Evolution of Infectious Disease
- ECOL 485 - Mammalogy
- ECOL 487L - Animal Behavior Lab
- ECOL 487R - Animal Behavior**
- ENTO 415R - Insect Biology
- ENTO 432 - Comparative Immunology
- ENVS 410 - Microbial Biogeochemistry and Global Change
- ENVS 425 - Environmental Microbiology
- ENVS 426 - Environmental Microbiology Laboratory
- ENVS 474 - Aquatic Plants and the Environment
- IMB 401 - Medical Microbiology and Immunology
- IMB 402 - Medical Microbiology Basics
- IMB 404 - Medical Virology Basics
- IMB 406 - Human Immunology
- MATH 481 - Mathematical modeling of fluid flow through and around organs and organisms**
- MCB 437 - Life in Extreme Environments
- MIC 420 - Pathogenic Bacteriology
- MIC 421B - Microbiological Techniques
- NROS 420 - Neuroscience of Survival
- PLP 305 - Introductory Plant Pathology
- PLP 329A - Microbial Diversity
- PLP 427R - General Mycology
- PLS 333 - General Virology
- PLS 448A - Plant Biochemistry and Metabolic Engineering
- PSIO 467 - Endocrine Physiology





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ECOLOGY, EVOLUTION, & BEHAVIOR

- ANTH 307 - Ecological Anthropology**
- ANTH 364 - Natural History of Our Closest Relatives**
- ANTH 359 - Darwinian Medicine
- ANTH 470 - Primate Sexuality
- ANTH 472 - Zooarchaeology and Taphonomy
- ECOL 326 - Genomics
- ECOL 340 - Evolution of Plant Form and Function**
- ECOL 345 - Biodiversity and the Tree of Life
- ECOL 404R - Biology of the Oceans**
- ECOL 409 - Evolution of Infectious Disease
- ECOL 427 - Ecology and Evolution of the Mammalian Microbiome
- ECOL 450 - Marine Discovery
- ECOL 487L - Animal Behavior Lab
- ECOL 487R - Animal Behavior**
- ENTO 415R - Insect Biology
- ENTO 432 - Comparative Immunology
- ENVS 474 - Aquatic Plants and the Environment
- ENVS 477 - Principles of Ecotoxicology
- GEOS 330 - Introduction to Remote Sensing
- GEOS 478 - Global Change
- MCB 437 - Life in Extreme Environments
- NROS 420 - Neuroscience of Survival
- PLP 305 - Introductory Plant Pathology
- PLP 329A - Microbial Diversity
- RNR 316 - Natural Resources Ecology
- RNR 417 - Geographic Information Systems for Natural and Social Sciences
- RNR 433 - Forest Ecology
- WFSC 385 - Zoo and Aquarium Conservation
- WFSC 442 - Limnology
- WFSC 444 - Wildlife Ecology, Conservation, and Management**
- WSM 452 - Climate Change and Dryland Ecosystem Ecology

PHYSICAL SCIENCE

- ASTR 475 - Planetary Astrobiology
- ENVS 200 - Introduction to Soil Science
- ENVS 201 - Soils Laboratory
- ENVS 275 - Data analysis for life and environmental sciences
- ENVS 340 - Environmental Chemistry
- ENVS 410 - Microbial Biogeochemistry and Global Change
- ENVS 477 - Principles of Ecotoxicology
- GEOS 212 - Introduction to Oceanography
- GEOS 251 - Physical Geology
- GEOS 302 - Principles of Stratigraphy and Sedimentation**
- GEOS 330 - Introduction to Remote Sensing
- GEOS 342 - The History of Earth's Climate
- GEOS 478 - Global Change
- HWRS 350 - Principles of Hydrology
- MATH 481 - Mathematical modeling of fluid flow through and around organs and organisms**
- RNR 417 - Geographic Information Systems for Natural and Social Sciences
- RNR 433 - Forest Ecology
- WSM 452 - Climate Change and Dryland Ecosystem Ecology

BIOINFORMATICS

- BE 310 - Introduction to Biosystems Analytics
- BE 487 - Metagenomics: From Genes to Ecosystems
- BIOC 384 - Fundamentals of Biochemistry
- BIOC 385 - Metabolic Biochemistry
- ECOL 302 - Ecology
- GAME 310 - Gamification in Society
- GAME 452 - Advanced Game Development
- ISTA 321 - Data Mining and Discovery
- ISTA 322 - Data Engineering
- ISTA 410 - Bayesian Modeling and Inference
- ISTA 421 - Machine Learning
- MCB 447 - Big Data in Molecular Biology and Biomedicine

