Winter 2026

BIOL 112 - Introduction to Animal Behavior (Online)
3 Hour(s) Credit
Designed to expose non-majors to the broad field of animal behavior. Learn the foundational concepts in animal behavior. Some topics include the evolution of behavior, communication, learning and cognition, reproductive behavior, and sociality. **Meets General Education: Solutions Through Science (STS)**

BIOL 211- Microbiology
4 Hour(s) Credit
Fundamental course in the study of microorganisms and their activity, with emphasis on bacteria. **Meets current General Education HOS and STS. Prior to Fall 2024: Meets General Education IVB. Prerequisites BIOL 101 or BIOL 201 or BIOL 210 or BIOL 215**

BIOL 215 – Human Anatomy & Physiology I
4 Hour(s) Credit
Comprehensive study of the structure and function of the human organism, including the integumentary, skeletal, muscular, nervous, and endocrine systems. **Prior to Fall 2024: Met General Education IVA or IVB. Recommended Prerequisites BIOL 101 or BIOL 213**

BIOL 217 – Nutrition (Online)
3 hour(s) Credit
This course provides a foundation for both majors and non-majors in the science of nutrition, including biological and biochemical backgrounds for the understanding of nutritional requirements.

BIOL 375 – Evolution (Online)
3 hour(s) credit
As the unifying principle of biology, evolution integrates levels of biological organization, focusing on biological changes over time and the evidence of the shared evolutionary history of all living things. Topics include speciation, extinction, population processes of selection and adaptation, genomics, and the molecular basis of evolution, sexual selection, and life history evolution.
Three hours per week. Prerequisites BIOL 202 or BIOL 210.

BIOL 399 – International Field Studies: Tropical Biodiversity in Costa Rica
3 hour(s) credit
Experience a specific aspect of a biological discipline in a foreign country. Pre-tour lectures, post-tour discussion and other activities required. May be taken twice under different subtitles.
Prerequisite: Permission of instructor. Fifteen hours pre-trip experience, at least 50 hours field activities over a minimum of 10 days, two-hour post-trip discussion session. Meets General Education: Experiential Learning (EL).

BIOL 442/542 – Animal Behavior
4 Hour(s) Credit
The study of animal behavior as a set of traits shaped by evolution. Focuses on the integration of how genes, hormones, sensory systems, neurobiology and the environment interact to generate specific behaviors over evolutionary time.
Prerequisites BIOL 213. Recommended Prerequisites BIOL 375.

BIOL 495/595 – Vascular Biology
4 Hour(s) Credit
Familiarizes students with a broad spectrum of vascular biology topics. Discuss recent publications employing cutting edge techniques. Gain hands-on exposure to "classical" approaches used in vascular biology research labs. **Prerequisites BIOL 350 or BIOL 354**

Spring 2026

BIOL 150 – Environmental Science: Concepts and Methods
4 Hour(s) Credit
Explores global and regional environmental processes and systems, as well as the impact of humans on these systems. Addresses current environmental issues such as climate change, habitat loss, and water pollution, emphasizing the role of science in identifying problems and finding solutions. Does not satisfy requirements within the major. **Three hours lecture, two hours lab per week. Meets General Education: Environmental Sustainability (ES), Hands-On Science (HOS). Met General Education Prior to Fall 2024: IVA or IVB**
Cross-Listed With (May Not Receive Credit for Both) GEOG 150

BIOL 201 – Introduction to Biology: Molecular and Cell Biology
4 Hour(s) Credit
Introduction to biological molecules, cellular anatomy, and cellular function. Build fundamental understanding of molecular core concepts and skills that serve as a foundation for all more advanced coursework in biology. Emphasizes the chemistry of biology, properties of biological molecules, cellular composition, cellular function and diversity, metabolism, and genetics. One of two introductory courses (along with BIOL 202) required for biology majors. **Three hours lecture, three hours lab per week. Meets General Education: Hands-on Science (HOS), Solutions Through Science (STS). Met General Education Prior to Fall 2024: IVA and IVB**
Recommended Prerequisites/Corequisites MATH 140 or equivalent

BIOL 202 – Introduction to Biology: Ecology and Evolution
4 Hour(s) Credit
Introduction to the study of evolution and ecology, including practice with the core concepts and skills that biologists use to study and preserve life. Explore several facets of biodiversity: its evolutionary origin, its ecological and societal importance, threats from human impacts, and solutions to preserve and restore biodiversity and ecosystem function to enable environmental sustainability. **Three hours lecture, three hours laboratory per week Meets General Education: Hands-on-Science (HOS), Solutions Through Science (STS), Environmental Sustainability (ES). Met General Education Prior to Fall 2024: IVA and IVB. Recommended Prerequisites/Corequisites MATH 140 or equivalent**

BIOL 205 – Fundamentals of Anatomy and Physiology
4 Hour(s) Credit
Intended for health education and physical education majors, emphasizes the musculoskeletal, nervous, cardiovascular and respiratory systems. Does not satisfy requirements within the biology major. **Three hours lecture, three hours laboratory per week. Met General Education Prior to Fall 2024: IVA or IVB**

BIOL 211 – Microbiology
4 Hour(s) Credit
Fundamental course in the study of microorganisms and their activity, with emphasis on bacteria. **Two hours lecture, four hours laboratory per week. Meets General Education Prior to Fall 2024: IVB. Prerequisites BIOL 101 or BIOL 201 or BIOL 210 or BIOL 215**

BIOL 212 – Introduction to Plant Biology
4 Hour(s) Credit
Fundamental course exploring the diversity of plant life from an evolutionary perspective, the unique strategies that enable plants to grow, survive, and reproduce in different environments, and the interactions between plants and other organisms. Designed for biology majors and other science students. **Three hours lecture, three hours laboratory per week. Met General Education Prior to Fall 2024: IVB. Prerequisites BIOL 201 or BIOL 202 or BIOL 210**

BIOL 213 – Zoology
4 Hour(s) Credit
Study of the biodiversity, structure and functions of animals and animal-like protists with emphasis on their evolutionary relationships. Designed for biology majors and minors and other science majors. **Three hours lecture, three hours laboratory per week.**
Met General Education Prior to Fall 2024: IVA or IVB Prerequisites BIOL 202 or BIOL 210

BIOL 215 – Human Anatomy & Physiology I
4 Hour(s) Credit
Comprehensive study of the structure and function of the human organism, including the integumentary, skeletal, muscle, nervous, and endocrine systems. **Three hours lecture, three hours laboratory per week. Met General Education Prior to Fall 2024: IVA or IVB. Recommended Prerequisites BIOL 101or BIOL 213**

BIOL 216 – Human Anatomy and Physiology II
4 Hour(s) Credit
Comprehensive study of the structure and function of the human organism, including the circulatory, respiratory, digestive, urinary, immune, and reproductive systems.
Three hours lecture, three hours laboratory per week.
Met General Education Prior to Fall 2024: IVB
Prerequisites C or better in BIOL 215

BIOL 303 – Conservation Biology
3 Hour(s) Credit
Study of human-induced threats to species and the ecosystems they depend on, and of the efforts to counteract these threats to protect and restore biological diversity across the globe. **Three hours per week. Prerequisites BIOL 150 or BIOL 202 or BIOL 210 or permission of instructor**

BIOL 310 – Ecology
4 Hour(s) Credit
Introduction to the interactions between organisms and their environment. Biotic and abiotic factors affecting individuals, populations, communities and ecosystems emphasized. **Three hours lecture, three hours laboratory per week. Prerequisites BIOL 202 or BIOL 210**

BIOL 320 – Biology of Vertebrates
4 Hour(s) Credit
Study of vertebrate animal life, including evolution of the major vertebrate groups, zoogeography, behavior, reproduction, thermoregulation, migration, population dynamics, ecology and conservation. Field trips emphasize wildlife biology, and identification and natural history of local species. **Three hours lecture, three hours laboratory per week.**
Prerequisites BIOL 213

BIOL 322 – Parasitology - Spring of odd years only
4 Hour(s) Credit
An introduction to parasites of medical importance for humans and agricultural and domestic animals. Materials emphasize parasite life cycles, infection pathways, impacts on hosts, diagnosis and whether there is currently an effective treatment.
Three hours lecture, three hours laboratory per week. Prerequisites BIOL 213

BIOL 323 - Medical Microbiology
4 Hour(s) Credit
Study of the medically important microorganisms, including methodology and techniques of identification. **Two hours lecture, four hours laboratory per week. Prerequisites** BIOL 211

BIOL 350 – Cell Biology
4 Hour(s) Credit
Focuses on the structure and function of eukaryotic cells. Topics covered include enzyme kinetics, membrane transport, cell signaling, intercellular protein trafficking, cellular respiration, mitosis and meiosis, the cell cycle, and cancer. **Three hours lecture, three hours laboratory per week. Prerequisites BIOL 201 or BIOL 210, and CHEM 122**

BIOL 354 – Pathophysiology
4 Hour(s) Credit
The study of mechanisms that contribute to altered physiology in human disease.
Three hours lecture, two hours laboratory per week
Prerequisites C or better in BIOL 216 and BIOL 350

BIOL 360 – Genetic Analysis
4 Hour(s) Credit
Introduction to genetic analysis including Mendelian principles, population and quantitative genetics, cytogenetics and contributions to molecular biology. Satisfies Biology Department core requirements for genetics. **Three hours lecture, three hours laboratory per week.**
Prerequisites BIOL 201 or BIOL 202 or BIOL 210. **Recommended Prerequisites MATH 155**

BIOL 375 – Evolution
3 Hour(s) Credit
As the unifying principle of biology, evolution integrates levels of biological organization, with a focus on biological changes over time and the evidence of the shared evolutionary history of all living things. Topics include speciation; extinction; population processes of selection and adaptation, genomics, and the molecular basis of evolution; sexual selection; life history evolution; and the application of evolution to medicine.
Three hours per week. Prerequisites BIOL 202 or BIOL 210

BIOL 400 – Translating Science: Storytelling for Science Communication
4 Hour(s) Credit
Become a better science communicator - translating complex topics learned in core and elective courses for different audiences and culminating in a public outreach activity that partners with local organizations, providing a real-world experience to students. Have a sustained experience that is mentored and can function as a capstone, integrating the knowledge and skills acquired in an applied pre-professional context. **Two hours lecture with a 2-hour supervised online component. Meets General Education: Experiential Learning (EL). Prerequisites BIOL 201 or BIOL 202, junior standing, one 300- or 400-level Henson School course or an equivalent transfer course**

BIOL 405/505 – Biology of Birds
4 Hour(s) Credit
Study of birds. Topics include form and function, behavior and communication, reproduction, migration, population dynamics, ecology and conservation. Field trips emphasize identification and natural history of local species. **Three hours lecture, three hours laboratory per week. Prerequisites** BIOL 202 or BIOL 213.

BIOL 421/521 – Mammalogy
4 Hour(s) Credit
Study of living and extinct mammals, emphasizing their origin, evolution, systematics, behavior, ecology and morphological adaptations. Labs focus on the structure and identification of modern mammals, with periodic field trips exploring the natural history of local species. Three hours lecture, three hours laboratory per week. **Prerequisites** BIOL 202 or BIOL 213. **May Not Receive Credit for Both** BIOL 421 and BIOL 305. **Three hours lecture, three hours laboratory per week. Prerequisites BIOL 202 or BIOL 213.**

BIOL 432/532 – Immunology
3 Hour(s) Credit
Study of the cellular and soluble aspects of immunology, focusing on the human immune response to pathogens and diseases of immune origin. **Three hours per week. Prerequisites BIOL 350. May Not Receive Credit for Both BIOL 333 and BIOL 432**

BIOL 441/541 – Bioinformatics II
3 Hour(s) Credit
Exploration of viral, prokaryotic and eukaryotic genomes. Emphasis on computational techniques for assessing the genome and manipulating genomic data. Four hours lecture/laboratory per week. **Prerequisites** BIOL 302

BIOL 445/555 – Virology
3 Hour(s) Credit
Study of structure, replication and pathogenesis of viruses with emphasis on animal viruses and the role of viruses in our current understanding of cell and molecular biology. Three hours per week. **Prerequisites BIOL 350.**

BIOL 415, 416 – Research in Biology
1-3 Hour(s) Credit
Independent student research under the supervision of a faculty member. Schedule to be arranged individually. **Forty-five contact hours per credit hour**. **Prerequisites: Permission of instructor. May be repeatable and receive credit within the major for up to six credits combined of BIOL 415, BIOL 416, and BIOL 420.**

BIOL 420 – Readings in Biology
1-3 Hour(s) Credit
Readings designed to permit in-depth study of selected topics. Students submit written reports of their findings at the end of the semester. Specific topics are indicated on students' transcripts. Only three credits may count toward the major.
Prerequisites: Sixteen credits in biology, permission of instructor. May be repeatable and receive up to three credits within the major with a maximum of six credits combined of BIOL 415, BIOL 416, and BIOL 420.

BIOL 450 – Internship in Biology
1-3 Hour(s) Credit
Experiences in biology-related work provide students with an opportunity to use acquired biological knowledge in a professional way and to investigate potential career options. Under special circumstances this course may be taken a second time for credit, but only with permission of the internship coordinator. Does not satisfy requirements within the major. **Forty-five student contact hours per credit hour. Prerequisites Junior standing, biology major and approval of Internship Coordinator. (P/F)**
