BIOLOGY (BIOL)

**BIOL 102. Introduction to Aquarium Keeping**
Credits: 1
Typically Offered: FALL SPR
Introduction to Aquarium Keeping will explore the types of aquaria, aquarium equipment and maintenance, plants and animals for the aquarium and how to troubleshoot problems aquarium keepers may face.

**BIOL 108. Beginning Birding**
Credits: 1
Prerequisite: Students must be able to walk over uneven terrain.
Typically Offered: SPRING
This course is an introduction to the fascinating world of birds. Students will become familiar with the tools of birding such as binoculars, spotting scopes, field guides, and multimedia references. The course will also focus on characteristics of bird families and the identification of individual species before we go out in the field. The last portion of the class will concentrate on locating and identifying birds in their natural habitats.

**BIOL 109. The Living World**
Credits: 3
Typically Offered: FALL SPR
This course will cover basic concepts in biology, natural history, sociobiology and human biosocial interaction. The course is not intended for students pursuing careers in the biological sciences or students requiring a full year of general biology. This course does not meet the lab science requirement.

**BIOL 111. Concepts of Biology**
Credits: 3
Corequisite: Concurrent registration in, or previous successful completion of BIOL 111L.
Typically Offered: FASPSU
BIOL111, in conjunction with BIOL 111L, is designed to fulfill the lab science requirement of the student planning a non-science major. Included are discussions on the nature of living things, genetics, DNA, biotechnology, evolution, the diversity of living things, and ecology.

**BIOL 111L. Concepts of Biology Lab**
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, BIOL 111.
Typically Offered: FASPSU
BIOL 111L, in conjunction with BIOL 111, is designed to fulfill the lab science requirement of the student planning a non-science major. Included are laboratory activities on the nature of scientific thinking, genetics, biotechnology, evolution and ecology.

**BIOL 115. Concepts of Anatomy & Physiology**
Credits: 3
Typically Offered: FALL SPR
BIOL 115, in conjunction with BIOL 115L, is designed to be an introduction for students planning on taking higher level anatomy and physiology courses. The course will include a wide range of topics associated with the human body and human life. This course, when taken with the associated lab, will fulfill the lab science requirements for the student planning a non-science major.

**BIOL 115L. Concepts of Anatomy & Physiology Lab**
Credits: 1
Typically Offered: FALL SPR
BIOL 115L, in conjunction with BIOL 115, is designed to introduce students to the study of human anatomy and physiology. Included are laboratory activities on structure and function of the human body.

**BIOL 124. Environmental Science**
Credits: 3
Prerequisite: ENGL 110.
Typically Offered: FALL SPR
An introduction to the basic concepts of ecology will provide the framework for investigating current and potential environmental problems. Over-population, air and water pollution, contamination of food, accumulation of medical and other biohazardous wastes, and depletion and exploitation of natural resources will be discussed. The role of individuals, businesses, and professions in limiting environmental problems will be stressed. This course does not meet the lab science requirement, but it counts as a science course.

**BIOL 125. Introduction to Ecology**
Credits: 3
Corequisite: Concurrent registration in, or previous successful completion of, BIOL 125L.
Typically Offered: FALL
This course will introduce basic ecological concepts; describe the ecological structure, patterns, processes, and interactions of selected ecological communities and their organisms; and discuss human influences to these communities. Travel to specific ecological communities may be required.
BIOL 125L. Introduction to Ecology Lab
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, BIOL 125.
Typically Offered: FALL
The laboratory includes fieldwork in selected ecological communities. Students will measure and analyze various biotic and abiotic factors and relate these to observed differences in community structure.

BIOL 126. Human Biology
Credits: 3
Corequisite: Concurrent registration in, or previous successful completion of, BIOL 126L.
Typically Offered: FALL SPR
BIOL 126 is designed to be a student directed exploration of topics directly dealing with humans and the human condition. Topics will come from scientific disciplines including, but not limited to anthropology, archaeology, evolution, anatomy and physiology. This course is suggested for non-science majors with artistic interests.

BIOL 126L. Human Biology Lab
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, BIOL 126.
Typically Offered: FALL SPR
BIOL 126L is designed to complement topics covered in BIOL 126.

BIOL 150. General Biology I
Credits: 3
Typically Offered: FALL SPR
BIOL 150 will cover the fundamental concepts of biology. Included will be discussions of the cellular nature of living things, cell anatomy and basic cell physiology. Special emphasis will be placed on DNA and protein synthesis, cellular respiration, photosynthesis, and the cell cycle. Instruction in Mendelian inheritance and molecular genetics will complete the semester.

BIOL 150L. General Biology I Lab
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, BIOL 150.
Typically Offered: FALL SPR
BIOL 150L is designed to complement topics covered in BIOL 150. Included are lab activities focusing on molecular and cellular biology.

BIOL 151. General Biology II
Credits: 3
Corequisite: Concurrent registration in, or previous successful completion of, BIOL 151L.
Typically Offered: SPRING
BIOL 151 introduces theories of the origins of life on earth, evolution and describes current biological diversity. An overview of prokaryotes, protists, fungi, animals and plants will be included. The final segment of the course will include discussions on biogeography, population dynamics and community ecology.

BIOL 151L. General Biology II Lab
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, BIOL 151.
Typically Offered: SPRING
BIOL 151L is designed to complement topics covered in BIOL 151. Included are lab activities focusing on evolution and the diversity of life.

BIOL 170. General Zoology
Credits: 3
Corequisite: BIOL 170L.
Typically Offered: SPRING
The purpose of this course is to give students a basic understanding of the diversity of animal life. Specifically, this course will explore the classification, anatomy, physiology, behavior, and ecology of major invertebrate and vertebrate Phyla. Topics covered include: Protozoa, Porifera, Cnidaria, Ctenophora, Acoelomorpha, Platyhelminthes, Rotifera, Mollusca, Annelida, Nematoda, Arthropoda, Echinodermata, and Chordata.

BIOL 170L. General Zoology Lab
Credits: 1
Corequisite: BIOL 170.
Typically Offered: SPRING
This lab serves to complement General Zoology lecture (BIOL 170). This lab will reinforce lecture material through hands on procedures including observation and dissection to allow students to study comparative anatomy and animal behavior. Topics covered include: Protozoa, Porifera, Cnidaria, Ctenophora, Acoelomorpha, Platyhelminthes, Rotifera, Mollusca, Annelida, Nematoda, Arthropoda, Echinodermata, and Chordata.
BIOL 213. General Pathology
Credits: 2
Typically Offered: FALL
This course will give students a basic introduction to the human disease process. It will encompass an overview of normal anatomy and physiology followed by discussions relating to diagnoses, signs, symptoms and treatment options for various diseases in the 12 body systems.

BIOL 220. Anatomy and Physiology I
Credits: 3
Corequisite: Concurrent registration in, or previous successful completion of, BIOL 220L.
Typically Offered: FASPSU
This is the first of two courses in which anatomy and physiology are leveraged to present a unified picture of the structure and function of the organs and systems of the human body. The courses include biochemistry, cells, tissues, and the following systems: integumentary, skeletal, muscular, nervous, and special senses. Both gross and microscopic structures are studied. A student should have ACT placement scores of 21 in Math and Reading OR COMPASS placement scores of 49 in math, 85 in Reading AND a 3.0 or higher gpa in high school Biology or Chemistry; OR one of the following: Successful completion (C or better) of BIOL 115/115L; a bachelor's degree; a GPA of 3.0 or higher in CHEM 121/121L or MICR 202/202L or BIOL 150/150L or BIOL 151/151L; or 60% on the A&P Placement Exam, contact your advisor for more information.

BIOL 220L. Anatomy and Physiology I Lab
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, BIOL 220.
Typically Offered: FALLSPR
Anatomical structures will be studied at both gross and microscopic levels. Experiments are performed demonstrating fundamental physiological principles.

BIOL 221. Anatomy and Physiology II
Credits: 3
Prerequisite: BIOL 220 and BIOL 220L.
Corequisite: Concurrent registration in, or previous successful completion of, BIOL 221L.
Typically Offered: FALSPR
This is the second of two courses in which discussions of anatomy and physiology are interwoven in an attempt to present a unified picture of the structure and function of the organs and systems of the human body. The following systems are examined: endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive. Both gross and microscopic structures are studied.

BIOL 221L. Anatomy and Physiology II Lab
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, BIOL 221.
Typically Offered: FALLSPR
Anatomical structures will be studied at both gross and microscopic levels. Experiments are performed demonstrating fundamental physiological principles.

BIOL 250. Survey of Tropical Biology
Credits: 3
Corequisite: Concurrent registration in, or previous successful completion of, BIOL 250L.
Typically Offered: SUMMER
This course will survey the basic concepts of tropical biology. It will provide the student with a sound foundation in tropical ecosystems and biodiversity. This course will include formal lectures and laboratory field work in a tropical setting. When taken with BIOL 250L, it satisfies a four-credit lab science requirement. The lecture topics will include tropical plant adaptations and defenses, tropical invertebrate and vertebrate diversity and conservation issues. Special emphasis will be given to comparing the differences between tropical areas and temperate zones. This course is intended for any student regardless of major or background and there are no prerequisites.

BIOL 250L. Survey of Tropical Biology Lab
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, BIOL 250.
Typically Offered: SUMMER
The lab will consist of laboratory field work in a tropical setting and experiments designed to help the students better understand tropical biological concepts and techniques. Experiments that will be performed include marking and recapturing spiders, fish species diversity, identification of neotropical moths, population estimates, and more.