

Biological Science

Biological Science (BIOL) Classes

BIOL041G : Developmental Biology

This course will cover the main points of biology at the high school level. It is meant to replace or supplement students' background in biology if those students either never passed high school biology, or if they took the course too long ago to be prepared for further study of the life sciences. The course will give an overview of cell biology, the biology of organisms, and the biology of populations. These credits do not count toward graduation requirements.

Credits 3

Theory Hours 3

Lab Hours 0

Semester Offered

Fall/Spring semesters

BIOL100G : Concepts in Biology

This college-level course is designed for students who are curious about the biological sciences but do not intend to pursue a degree in Biology. It covers cellular anatomy and physiology, metabolism, and genetics. Laboratory exercises are designed to reinforce theoretical concepts presented in the lecture portion of the course.

Credits 4

Theory Hours 3

Lab Hours 2

Semester Offered

All semesters

BIOL101G : Human Disease

This course covers basic microbiology and immunology and is a non-science-majors' course. It provides an introduction to historical concepts of the nature of microorganisms, microbial diversity, the importance of microorganisms in the biosphere, and their roles in human and animal diseases. Emphasis is on medical microbiology, infectious diseases, and public health. The lab covers the basics of culture and identification of bacteria as well as microbial ecology.

Credits 4

Theory Hours 3

Lab Hours 2

Semester Offered

Fall/Spring semesters

BIOL106G : The Human Body

This is a one-semester course that introduces the structure and function of the human body. It includes the anatomy and physiology of each of the organ systems of the human body and practical discussions of disease and health. The course includes a series of laboratory experiences designed to enhance and reinforce the concepts presented in lecture.

Credits 4
Theory Hours 3
Lab Hours 2
Semester Offered
Fall/Spring semesters

BIOL108G : General Biology I

This college-level course covers the principles of cell biology, including cellular physiology, cellular metabolism, molecular biology, biochemistry and genetics. Laboratory exercises are designed to reinforce theoretical concepts presented in the lecture portion of the course.

Credits 4
Theory Hours 3
Lab Hours 3
Prerequisites
Successful completion of high school biology or [BIOL041G](#); successful completion of high school chemistry or [CHEM043G](#) is recommended but not required
Semester Offered
Fall/Spring semesters

BIOL109G : General Biology II

This college-level course covers principles of organismal biology, including comparative physiology, taxonomy, behavior, evolution and ecology. Laboratory exercises are designed to reinforce theoretical concepts presented in the lecture portion of the course. Students need not have taken Biology I in order to enroll in Biology II.

Credits 4
Theory Hours 3
Lab Hours 3
Prerequisites
Successful completion of high school biology or [BIOL041G](#); successful completion of high school chemistry or [CHEM043G](#) is recommended but not required
Semester Offered
Fall/Spring semesters

BIOL110G : Human Anatomy and Physiology I

This course is designed to give a student of any health or medical science a thorough background in anatomy and physiology. Current, in-depth information is presented on the structure and function of human cells, tissues and organ systems, including the skin, skeletal, muscular, nervous and sensory systems. Laboratory work augments lecture topics and includes exercises in microscopy, the study of fresh and preserved specimens, and exercises in human physiology.

Credits 4
Theory Hours 3
Lab Hours 3
Prerequisites
Placement into college-level reading; C or better in high school biology or [BIOL041G](#) or [BIOL106G](#); successful completion of high school chemistry or [CHEM043G](#) recommended
Semester Offered
Fall/Spring semesters

BIOL111G : Veterinary Anatomy and Physiology I

This course offers an in-depth study of the normal anatomy and physiology of domestic mammals with emphasis on the dog and cat. Major differences with respect to the larger domestic species are also covered. This is the first semester of a two-semester course and covers basic organization, cells, tissues, the integument, skeletal, muscular, and nervous systems. Lab work augments lecture topics and includes the study of microscope slides as well as preserved specimens and models.

Credits 4

Theory Hours 3

Lab Hours 3

Prerequisites

Admission to the Veterinary Technology program

Semester Offered

Fall semester

BIOL120G : Human Anatomy and Physiology II

A continuation of Human Anatomy and Physiology I. This course includes current in-depth information of the structure and function of the endocrine, digestive, respiratory, blood, cardiovascular, lymphatic, urinary, and reproductive systems. Laboratory work augments lecture topics and includes exercises in microscopy, the study of fresh and preserved specimens, and physiological measurements on the human body.

Credits 4

Theory Hours 3

Lab Hours 3

Prerequisites

C or better in [BIOL110G](#)

Semester Offered

Fall/Spring semesters

BIOL121G : Veterinary A&P II

This course offers an in-depth study of the normal anatomy and physiology of domestic mammals with emphasis on the dog and cat. Major differences with respect to the larger domestic species are also covered. This course is a continuation of [BIOL111G](#) and covers the endocrine, reproductive, cardiovascular, respiratory, urinary, and digestive systems. Lab work augments lecture topics and includes the study of microscope slides as well as preserved specimens and models.

Credits 4

Theory Hours 3

Lab Hours 3

Prerequisites

C+ or better in [BIOL111G](#) and [VETN110G](#)

Semester Offered

Spring semester

BIOL150G : Nutrition

Biology 150G (Nutrition) is a course designed to offer students an understanding of the science of nutrition so that they can make healthy food choices in their daily lives. The processes of digestion, absorption, and transport of the macro- and micronutrients in the body will be studied. The function and sources of the major nutrients including carbohydrates, lipids, protein, vitamins, minerals and water will be analyzed. Also, the

following will be discussed: energy balance, nutrition throughout the life cycle, sports nutrition, environmental food issues, hunger, food safety, and nutrition therapy for medical problems including cardiovascular disease, cancer and diabetes. Each week selected activities, worksheets, and assignments will be completed. These are designed to engage and encourage students to apply what they are learning in lecture, in practical and personal contexts. Students will have the opportunity to work in formal Cooperative Learning Groups to complete the assignment in lab. The intent of group activity is to foster the learning of each member of the group from other members. The class will also engage in discussion on weekly topics.

Credits 4

Theory Hours 3

Lab Hours 3

Semester Offered

All semesters

BIOL160G : Introduction to Environmental Science

This course is designed to present the basics of environmental science and will focus on the earth as a living planet. Topics covered include principles of ecology, human population effects, natural resource needs and management, energy resources, pollution/prevention issues, and sustainability. Although primarily a science course, ethical issues related to the above topics will also be explored. Lab exercises are designed to reinforce the material presented in the lecture.

Credits 4

Theory Hours 3

Lab Hours 3

Semester Offered

All semesters

BIOL200G : Professional Skills and Exploration for STEM Students

This one-credit course is designed for second-year biological science majors but is open to any interested student meeting the pre-requisites. It will provide students with an opportunity to hone their skills as developing science scholars with an emphasis on effective studying, metacognition, and scientific communication (including practice with reading primary literature). Students will also explore issues of scientific identity and learn about the many career pathways available to students in the sciences. Information about transfer and degree options beyond the associates will be discussed. Credit will transfer to UNH COLSA. This course is required for students intending to apply for P2P transfer scholarships.

Credits 1

Theory Hours 1

Lab Hours 0

Prerequisites

Grade of C or better in two of the following courses: General Biology I, General Biology II, General Chemistry I, General Chemistry II

BIOL210G : Microbiology

An introduction to the principles and practices of microbiology. Topics covered include: the nature and behavior of microorganisms; principles of growth and reproduction of microorganisms; identification of

microorganisms using staining, pure culture, biochemical and antigenic techniques; and the epidemiology, clinical features, laboratory diagnosis and appropriate control measure for microbial diseases caused by viruses, bacteria, fungi, protozoa and helminthes.

Credits 4

Theory Hours 3

Lab Hours 3

Prerequisites

Prerequisite: C or better in high school biology or BIOL041G; successful completion of high school chemistry or CHEM043G recommended.

Semester Offered

Fall/Spring semesters

BIOL220G : Principles of Genetics

This course covers fundamentals of classical, molecular and population genetics. Topics include chemical structure of the genetic material, Mendelian theory, gene recombination, chromosome mapping, genetic mutation, gene expression and regulation, applications of recombinant DNA technology, quantitative inheritance and the genetic basis of evolution. Laboratory exercises are designed to reinforce theoretical concepts presented in the lecture portion of the course.

Credits 4

Theory Hours 3

Lab Hours 3

Prerequisites

[BIOL108G](#) and C- or better in [MATH150G](#)/152G (or higher-level math class)

Semester Offered

Spring semester

BIOL230G : General Ecology

This course is for students who have already had some introduction to organismal biology. It focuses on physical and biological factors affecting distribution, abundance and adaptation of living organisms. Laboratory exercises emphasize fieldwork when possible and are designed to reinforce the theoretical material presented in lecture.

Credits 4

Theory Hours 3

Lab Hours 3

Prerequisites

[BIOL109G](#) and C- or better in [MATH150G](#)/152G (or higher-level math course)

Semester Offered

Fall semester