BIOLOGY (BIOG)

BIOG 115, BODY STRUCTURE AND FUNCTION 3 (3)
Basic introduction to the structure and function of the human body systems. A course intended primarily for Health and Wellness certificate program students. Natural Science Core Course.
General Education: GEO2, GEO5, GEO7
Typically Offered: Summer, Fall and Spring Semesters

BIOG 123, CROSS-SECTIONAL ANATOMY 2 (2)
A survey of the human body as seen in cross-section and in images from various imaging modalities. Course is designed primarily for students of Radiologic Technology and Diagnostic Medical Sonography.
General Education: GEO2
Course Entry Requirement(s): Prerequisite: BIOG 221 and previous or concurrent enrollment in BIOG 222.
Typically Offered: Fall and Spring Semesters

BIOG 150, INFECTIOUS DISEASE A TO Z 2 (2)
This course is designed for both science and non-science majors. The stresses of increased population size, climate change, increased world travel, and global commerce threatens a greater disease burden in the coming years. This course will examine various organisms, disease transmission, the host's response to infection, and medical treatments, as well as various public health procedures that can help control infectious diseases in the population. Natural Science Core Course. (OT36)
General Education: GEO2, GEO3, GEO4, GEO5, GEO6, GEO7
Typically Offered: Fall and Spring Semesters

BIOG 151, GENERAL BIOLOGY 4 (5)
An introductory biology course designed for non-science majors. Topics include basic chemistry and cell biology, evolution, genetics, ecology and a survey of the kingdoms. Laboratory required. (A special fee will be assessed.) Natural Science Core Course. (OT 36)
General Education: GEO2, GEO6, GEO7
Typically Offered: Summer, Fall and Spring Semesters

BIOG 152, HUMAN BIOLOGY 4 (5)
An introductory course intended for the non-science major covering basic anatomy and physiology of the human body. Laboratory with dissection of preserved specimens required. (A special fee will be assessed.) Natural Science Core Course. (OT36)
General Education: GEO2, GEO5, GEO6, GEO7
Typically Offered: Summer, Fall and Spring Semesters

BIOG 153, BASIC HUMAN NUTRITION 3 (3)
Course designed for the non-science major to educate the consumer about normal physiological activities used to process food nutrients, dietary requirements for all stages of the human life cycle, and food safety. World hunger and global issues related to the food supply are also addressed.
General Education: GEO2, GEO3, GEO4, GEO5, GEO7
Typically Offered: Summer, Fall and Spring Semesters

BIOG 159, AQUATIC LIFE 3 (4)
Introductory course designed for non-science majors to explore various aquatic environments, with an emphasis on aquatic species and the interaction of humans with such environments. Laboratory required. (A special fee will be assessed.)
General Education: GEO2, GEO3, GEO5, GEO6, GEO7
Typically Offered: Summer, Fall and Spring Semesters

BIOG 161, PRINCIPLES OF BIOLOGY I 4 (6)
Course designed for science majors that focuses on the introduction to the principles of biology recommended for Science majors. Topics include basic chemistry, the cell, metabolism, photosynthesis, genetics and evolution. A considerable writing component is present. Laboratory required. (A special fee will be assessed.) Natural Science Core Course. (OT 36, TAG)
General Education: GEO2, GEO3, GEO6, GEO7
Course Entry Requirement(s): Course placement policy: Satisfactory placement assessment into college level mathematics or previous or concurrent enrollment in a co-requisite mathematics course.
Typically Offered: Fall and Spring Semesters

BIOG 162, PRINCIPLES OF BIOLOGY II 4 (6)
A continuation of BIOG 161 emphasizing a taxonomic survey of the kingdoms, as well as a study of animal and plant anatomy and physiology and ecology. Laboratory required. (A special fee will be assessed.) Natural Science Core Course. (OT 36, TAG)
General Education: GEO1, GEO2, GEO5, GEO6, GEO7
Course Entry Requirement(s): Prerequisite: BIOG 161 or division approval.
Typically Offered: Fall and Spring Semesters

BIOG 164, EXPLORATIONS IN FIELD SCIENCE 3 (4)
This course is designed to introduce students to methods of sampling and analysis in Environmental Science. Topics include air pollution; noise pollution; water pollution; soil health assessment; plant identification and biodiversity estimation; and methods in basic statistics, experimental design, and scientific reporting. Students will participate in the design, implementation, analysis, and presentation of a Capstone Project based on original student research. Course may include a service learning component. Natural Science Core Course. (OT 36)
General Education: GEO1, GEO2, GEO7
Course Entry Requirement(s): Course placement policy: Satisfactory placement assessment into college level mathematics or previous or concurrent enrollment in a co-requisite mathematics course.
Typically Offered: Fall Semester

BIOG 165, INTRODUCTION TO ECOLOGY 3 (3)
Introductory course provides a survey of environmental issues and highlights interactions between human beings and the ecosystem. Course also addresses the economic, social and environmental dimensions of sustainable development. Course may include a Service Learning component. Natural Science Core Course. (OT36, CTAG)
General Education: GEO2, GEO5, GEO7
Typically Offered: Summer, Fall and Spring Semesters

BIOG 221, ANATOMY & PHYSIOLOGY I 4 (6)
This course reviews basic chemistry and cell biology as a foundation to studies of histology, the integumentary, skeletal, muscular, and nervous systems. It builds on the basic principles of feedback regulation and homeostasis to investigate the structure, function, and terminology connecting the systems of the body. Along with A&P 2, this course provides students with a general introduction to the biology of the human body and is primarily intended for students pursuing programs through the Health and Wellness Sciences Division or Science majors. Laboratory (involving dissection of specimens) required. (A special fee will be assessed.) Natural Science Core Course. (OT 36, TAG)
General Education: GEO2, GEO3, GEO5, GEO7
Course Entry Requirement(s): Prerequisite: C or better in high school biology or chemistry in the last 3 years OR C or better in BIOG 151 or CHMY 161 OR concurrent enrollment in CHMY 161 OR satisfactory score on placement test OR divisional approval.
Typically Offered: Fall and Spring Semesters

BIOG 222, ANATOMY AND PHYSIOLOGY II 4 (6)
This course is a continuation of A&P I which studies the endocrine, reproductive, respiratory, urinary and digestive systems, along with temperature regulation and nutrient, pH and water balance. A&P II builds on the basic principles of feedback regulation and homeostasis to investigate the structure, function, and terminology connecting the systems of the body. Along with A&P I, this course provides students with a general introduction to the biology of the human body and is primarily intended for students pursuing programs through the Health and Wellness Sciences Division or Science majors. Laboratory (involving dissection of specimens) required. (A special fee will be assessed.) Natural Science Core Course. (OT 36, TAG)
General Education: GEO2, GEO3, GEO5, GEO7
Course Entry Requirement(s): Prerequisite: BIOG 221 with a grade of C or higher or division approval
Typically Offered: Spring Semester

BIOG 251, GENERAL MICROBIOLOGY 4 (6)
Course designed for Health and Wellness associate degree students and Science majors which explores the major groups of microorganisms and the role they play in the environment and in disease. The host response to microorganisms, as well as control of microbial disease, are addressed. Laboratory provides the student with basic techniques of infection control, microbial identification, microscopy, and sterile technique. Laboratory required. (A special fee will be assessed.) Natural Science Core Course. (OT36)
General Education: GEO2, GEO4, GEO7
Course Entry Requirement(s): Prerequisite: Grade of C or better in BIOG 121 or BIOG 161 or CHMY 161
Typically Offered: Summer, Fall and Spring Semesters

BIOG 252, MICROBIOLOGY 5 (7)
Course designed for Science Majors. Discussion of the major groups of microorganisms and the role they play in the environment, disease, agriculture, biotechnology, and the food/beverage industry. This class will examine the host response to microorganisms, as well as chemical and pharmaceutical control of microbial disease. Laboratory provides the student with techniques of infection control, microbial identification, molecular genetic techniques involving manipulation of nucleic acid and proteins, microscopy, and sterile technique. Laboratory required. (A special fee will be assessed.) Natural Science Core Course. (OT36)
General Education: GEO1, GEO2, GEO7
Course Entry Requirement(s): Prerequisite: Grade of C or better in BIOG 161 and CHMY 171 or division approval
Typically Offered: Spring Semester

BIOG 261, BOTANY 4 (6)
Introductory course designed for Science majors exploring the various aspects of plant biology. Topics include plant anatomy, physiology, genetics, diversity, growth, reproduction, ecology and impact on human society. Laboratory required. (A special fee will be assessed.) Natural Science Core Course. (OT 36)
General Education: GEO2, GEO5, GEO6, GEO7
Course Entry Requirement(s): Prerequisite: BIOG 161 or division approval
Typically Offered: Spring Semester

BIOG 275, GENETICS 4 (4)
GENETICS Course designed for Science majors that will examine gene transmission, function, expression, and regulation in prokaryotic and eukaryotic organisms. Natural Science Core Course. (OT36, TAG)
General Education: GEO2, GEO3, GEO4, GEO5, GEO6, GEO7
Course Entry Requirement(s): Course placement policy: Satisfactory placement assessment into college level mathematics or previous or concurrent enrollment in a co-requisite mathematics course; Prerequisite: BIOG 161 or BIOG 251
Typically Offered: Fall and Spring Semesters

BIOG 281, MOLECULAR BIOLOGY 4 (4)
Course designed for Science majors that will study how the biological molecules DNA, RNA and proteins determine the properties of living things. This course will explore gene transmission, expression, and regulation in prokaryotic and eukaryotic cells. Natural Science Core Course.
General Education: GEO2, GEO3, GEO4, GEO6, GEO7
Course Entry Requirement(s): Prerequisite: Grade of C or better in BIOG 161 or BIOG 251 or BIOG 252 and CHMY 161 or CHMY 171
Typically Offered: Spring Semester

BIOG 284, INDEPENDENT STUDENT RESEARCH 1 (5)
Laboratory-only course designed to provide students with an opportunity to participate in authentic scientific research utilizing appropriate research techniques and laboratory equipment. (A special fee will be assessed.) Course repeatable up to 10 times.
General Education: GEO1, GEO7
Course Entry Requirement(s): Prerequisite: Division approval
Typically Offered: Summer, Fall and Spring Semesters

BIOG 287, WORK-BASED LEARNING I - BIOG 1-3 (1)
This course provides supervised work experience building on experience in Work-Based Learning with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating classroom learning with work experience. Students will be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. Activities are coordinated and evaluated by college personnel.
General Education: GEO1, GEO2, GEO6, GEO8
Course Entry Requirement(s): Prerequisite: Minimum 2.0 GPA overall and division approval
Typically Offered: Offer as required

BIOG 288, WORK-BASED LEARNING II - BIOG 1-3 (1)
Building on experiences from Work-Based Learning I, this course provides supervised, paid work experience with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating prior or concurrent classroom learning with work experience through career readiness competencies. Students will be able to evaluate career selection and satisfactorily demonstrate work-related competencies.
General Education: GEO1, GEO2, GEO6, GEO8
Course Entry Requirement(s): Prerequisite: BIOG 287
Typically Offered: Offer as required

BIOG 289, WORK-BASED LEARNING III - BIOG 1-3 (1)
Building on experiences from Work-Based Learning II, this course provides supervised, paid work experience with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating prior or concurrent classroom learning with work experience through career readiness competencies. Students will be able to evaluate career selection and satisfactorily demonstrate work-related competencies.
General Education: GEO1, GEO2, GEO6, GEO8
Course Entry Requirement(s): Prerequisite: BIOG 288
Typically Offered: Offer as required

BIOG 299, INDIVIDUALIZED STUDIES IN BIOLOGY 1-3 (1)
An in-depth study of areas in biology presented by discussion and/or individual research and reading. Topics will vary. Repeatable up to six (6) times for a total of six (6) credit hours.
Course Entry Requirement(s): Prerequisite: Second-year standing and division approval
Typically Offered: Offer as required