

## BIOLOGY

### BIO 001 CRSE SPCFC STDY SK-BIO105

1 Lecture 0 Lab 1 Credit Hours(s)

BIO 001 is a study skills course designed for those students who require support in BIO-105, General Biology I, taught by the instructor of BIO 105 with which it is content related. BIO 001 will include practical work with notetaking, textbook mastery, laboratory techniques, exam preparation and test taking techniques, as well as specific strategies necessary to the successful study of biology.

Note: BIO 001 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student's grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

Co-requisite: BIO-105

### BIO 030 INTRODUCTION TO BIOLOGY

2 Lecture 3 Lab 3 Credit Hours(s)

This course is designed for students in programs requiring Biology who are unprepared to enter a 100 level course as shown by testing and/or background. Course content includes study techniques, the nature of science, the scientific method, the metric system, biochemistry, the cell, the laboratory report and basic laboratory techniques. This course requires basic mathematical skills. Students are encouraged to take the appropriate English and math courses determined by placement testing with this course. A grade of C or better is required to take BIO 130. This course is a prerequisite for BIO 130 for those students referred after testing. Students are eligible to register for this course only twice.

NOTE: BIO 030 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student's grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

### BIO 103 HUMAN BIOLOGY

3 Lecture 2 Lab 4 Credit Hours(s)

An introductory course which concerns the structure and function of the human body and the maintenance of homeostasis. The course is designed for non-science majors and does not fulfill the elective requirement of the LAX student.

### BIO 104 ENVIRONMENTAL BIOLOGY

3 Lecture 2 Lab 4 Credit Hours(s)

An introductory course focusing on people and their relationship to the external environment. The subject is treated in the context of conservation, ecology, taxonomy and human behavioral patterns. Topics of current interest are discussed, such as pollution, local environmental

issues and the economic uses of natural areas. The course is designed primarily for non-science majors and does not fulfill the elective requirement of the LAX program.

### BIO 105 GENERAL BIOLOGY I

3 Lecture 3 Lab 4 Credit Hours(s)

An interdisciplinary study of basic biological concepts, including the nature of science, matter, the cell, characteristics of living matter, a brief survey of the living world, and ecology. BIO 105 and BIO 106 are recommended for students who wish to pursue studies in the Biological and Life Sciences. This course assumes a high school level of chemistry knowledge. Non-science majors are encouraged to consider BIO 103 and BIO 104 (see descriptions).

Prerequisite: Placement level 3 (see DCC Math Placement Table)

### BIO 106 GENERAL BIOLOGY II

3 Lecture 3 Lab 4 Credit Hours(s)

A continuation of BIO 105, including homeostasis in organisms, genetics, evolution and a consideration of the structure and function of tissues, organs and organ systems.

prerequisites: BIO 105 with a grade of C or better.

### BIO 112 A BIOMEDCL VIEW AIDS/HIV INFCT

3 Lecture 0 Lab 3 Credit Hours(s)

This course is designed to examine the frequency and distribution of AIDS/HIV infection. It will provide a general understanding of HIV, its modes of transmission, and approaches to its control and management. In addition, the course explores current concepts in the areas of testing, treatment and prevention.

### BIO 115 ANATOMY & PHYSIOLOGY FOR PAR

4 Lecture 3 Lab 5 Credit Hours(s)

This one semester course is designed primarily for Paramedic students. It focuses on a problem-oriented approach to enhance understanding of the biological, chemical and physical principles underlying body system interactions in health and disease. The course is required for students in the Emergency Medical Technician-Paramedic program. Students must complete BIO 115 with a grade of C or better. It is not intended for Biology majors.

### BIO 117 UNDERSTANDING CANCER

3 Lecture 0 Lab 3 Credit Hours(s)

This course is intended to introduce the student to various aspects of cancer including the biology of cancer, its impact on the patient and on society, treatment methods, risk assessment, prevention and future trends in dealing with the United States' second leading killer. Instructional methods include lecture, videos, classroom discussions,

and guest lectures. Nursing students may not use this course for free elective credit.

#### BIO 122 NUTRITION

3 Lecture 0 Lab 3 Credit Hours(s)

This course is a study of the role nutrition plays in maintaining health. The course will cover basic nutrition concepts, application of nutrition guidelines, awareness of nutrition's role in disease management, life cycle nutrition, and food safety. Controversial issues related to nutrition and health will also be discussed.

#### BIO 130 INTRODUCTION TO PHYSIOLOGY

3 Lecture 2 Lab 4 Credit Hours(s)

Course content includes biochemistry, the cell, transport mechanisms, the laboratory report and laboratory techniques. This course requires basic computational skills. This course is a prerequisite for BIO 131 for those students referred after testing. A grade of C or better is required to take BIO 131. This course does not fulfill the elective requirement of the LAX student.

Pre-requisites and/or co-requisites: A grade of C or better in BIO 030 is required to take BIO 130. BIO 030 is a prerequisite for BIO 130 for those students referred after testing.

#### BIO 131 ANATOMY AND PHYSIOLOGY I

3 Lecture 2 Lab 4 Credit Hours(s)

The application of scientific principles from the areas of biology, chemistry and physics to the study of human anatomy and physiology. Required for nursing students and open to students in medically allied technologies. Not intended for biology majors.

Prerequisite: For those referred by testing or BIO 130 with a grade of C or better.

#### BIO 132 ANATOMY AND PHYSIOLOGY II

3 Lecture 2 Lab 4 Credit Hours(s)

BIO 132 is a continuation of BIO 131. Designed primarily for those students in the medically allied technologies.

Prerequisite: BIO 131 with a grade of C or better.

#### BIO 144 HUMAN GENETICS

3 Lecture 0 Lab 3 Credit Hours(s)

An interdisciplinary course involving the study of basic human genetics principles relating to cytogenetics, birth defect syndromes, genetic counseling, application to developmental disabilities, biochemical genetics, ethics, human engineering, clinical diagnoses, community services, community residential facilities and current legislation.

#### BIO 203 INVERTEBRATE ZOOLOGY

3 Lecture 3 Lab 4 Credit Hours(s)

An introduction to the principles of the classification of animals, followed by a systematic study of invertebrate animals, including their morphology, physiology, and natural history. Concepts of evolution, paleontology, and ecology are discussed.

Prerequisite: BIO 105

#### BIO 204 GENERAL BOTANY

3 Lecture 3 Lab 4 Credit Hours(s)

An introduction to the dynamic aspects of the plant world, including principles of classification, physiology, a survey of the plant kingdom, conservation, ecology and evolution. Laboratory work deals with physiological experiments, plant identification, life histories, and morphology. Field trips are scheduled.

Prerequisite: BIO 105

#### BIO 205 GENETICS

3 Lecture 3 Lab 4 Credit Hours(s)

An introductory study of the basic principles of inheritance, including the biochemical, physiological and evolutionary aspects. Laboratory work includes experiments with microorganisms and fruit flies.

Prerequisite: BIO 105 and BIO 106

#### BIO 207 GENERAL MICROBIOLOGY

3 Lecture 3 Lab 4 Credit Hours(s)

A study of microorganisms, with major focus on the bacteria. Morphology, physiology and genetics are emphasized. Applied areas are included.

Prerequisites: BIO 105-106, CHE 121-122 or permission of instructor.

#### BIO 210 PHYSIOLOGY

3 Lecture 3 Lab 4 Credit Hours(s)

A study of the workings and functional interrelationships of the organ systems, with emphasis on human physiology. Includes the skeletal, muscular, circulatory, respiratory, digestive, excretory, nervous, and reproductive systems. Laboratory work will include experiments and demonstrations utilizing living material.

Prerequisites: BIO 105 – 106 and BIO 209 or permission of the instructor.

#### BIO 212 MICROBIOLOGY

3 Lecture 3 Lab 4 Credit Hours(s)

This course is a study of microorganisms, with emphasis on their morphology, physiology, and medical significance. Intended for students in the medical-allied health technologies. Not intended for biology majors, and does not fulfill the elective requirements of the LAX student.

Prerequisites: BIO 131 and BIO 132 with a grade of C or better.

### BIO 214 ECOLOGY

2 Lecture 4 Lab 4 Credit Hours(s)

Ecology is a study of biological communities using field and laboratory methods. The ecological basis of contemporary environmental problems are examined and related to human activities. Food webs, energy pyramids, community structure, limiting factors and ecological succession are studied as they relate to environmental management practices.

Prerequisite: BIO 105 with a grade of C or better.

### BIO 231 HUMAN ANATOMY & PHYSIOLOGY I

3 Lecture 3 Lab 4 Credit Hours(s)

A study of the anatomy and physiology of the mammalian organism with emphasis on the human. This course will explore the structure and function of the body at the cellular, tissue, organ and system levels for the Endocrine, Nervous, Integumentary, Muscular, and Skeletal systems. Laboratory work will include dissection of the mink, and example organs from other mammals, in addition to experiments and demonstrations utilizing living material.

Prerequisite: BIO 105 and BIO 106 with a grade of C or better.

### BIO 232 HUMAN ANATOMY & PHYSIOLOGY II

3 Lecture 3 Lab 4 Credit Hours(s)

A study of the anatomy and physiology of the mammalian organism with emphasis on the human. This course will explore the structure and function of the body at the cellular, tissue, organ and system levels for the Cardiovascular, Lymphatic, Respiratory, Urinary, Reproductive, and Digestive systems. Laboratory work will include dissection of the mink, and example organs from other mammals, in addition to experiments and demonstrations utilizing living material.

Prerequisite: BIO 231 with a grade of C or better

### BIO 271 SPECIAL STUDY PROJECT I

1 Lecture 0 Lab 1 Credit Hours(s)

A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of biology or related areas. The student's time commitment to the project will be approximately 35-50 hours.

### BIO 272 SPECIAL STUDY PROJECT II

2 Lecture 0 Lab 2 Credit Hours(s)

Similar to BIO 271, except that the student's time commitment to the project will be approximately 70-90 hours.

### BIO 273 SPECIAL STUDY PROJECT III

3 Lecture 0 Lab 3 Credit Hours(s)

Similar to BIO 271, except that the student's time commitment to the project will be approximately 105-135 hours.

### BIO 923 AGE OF DINOSAURS

3 Lecture 0 Lab 3 Credit Hours(s)

BIO 923 is an elective science course focused on the diversity, behavior, and extinction of the non-avian dinosaurs. This course does not fulfill a science requirement.

### BIO 924 INTRODUCTION TO FOOD STUDIES

3 Lecture 0 Lab 3 Credit Hours(s)

A broad-based introduction to the field of Food Studies. The course examines food through an interdisciplinary approach, including history, anthropology, biology, sociology, chemistry, nutrition, economics, psychology, political science, animal, plant, soil, and environmental sciences. The course will expose participants to the various aspects of food through guest lecturers and invited speakers.