BIOLOGICAL SCIENCES

The department mission includes (1) transfer preparation; (2) preparing students to attain an associate degree; and (3) helping students satisfy biological science prerequisite for various programs at LBCC and other colleges. Students who have matriculated through the programs will be exposed to the scientific method, gain an appreciation for the environment, and become aware of the vital roles of science in our lives. The courses will also help students to become better 'consumers' of scientific information.

Associate in Science Transfer Degrees

- Biology - Associate in Science Transfer Degree (https://lbcc-public.courseleaf.com/degrees-certificates/biological-sciences/biology-ast/)

Associate in Science Degrees

- Biological Sciences - Associate in Science (https://lbcc-public.courseleaf.com/degrees-certificates/biological-sciences/biological-sciences-as/)

BIO 1A 5 units
Biology for Science Majors
54 hours lecture, 108 hours laboratory
Prerequisite: CHEM 1A.
Grading: letter grade.
This is the first semester of a one-year survey of biology. It includes the chemistry of life, cellular organization, biological membranes, energetics, genetics, evolution and diversity of prokaryotes, protista, and fungi.
Transferable to both UC and CSU; see counselor for limitations

BIO 1B (C-ID BIOL 135S) 5 units
Biology for Science Majors
54 hours lecture, 108 hours laboratory
Prerequisite: BIO 1A.
Grading: letter grade.
This is the second semester of a one-year survey of biology. It includes an overview of structures and life processes in plants and animals, animal and plant taxonomies, ecology, and behavior.
Transferable to both UC and CSU; see counselor for limitations

BIO 2 5 units
General Microbiology
54 hours lecture, 108 hours laboratory
Prerequisite: ANAT 1 or ANAT 41 or BIO 60 or BIO 1A or CHEM 3.
Grading: letter grade or pass/no pass.
This course is an introduction to the anatomy of bacteria, fungi, protozoa, viruses and prions. It covers microbial metabolism, pathogenesis of bacteria & viruses, control of micro-organisms, microbial nutrition and growth,the most common genera of micro-organisms and their connection to disease processes,and the replication of viruses and prions. Aspects of the course that are particularly helpful to health fields include a study of epidemiology and human-microbe interactions, host defenses and the immune system, and the most common infectious diseases of the body systems. The course is designed to meet the requirements of health fields such as registered nursing as well as to serve as a general education laboratory science course, which is transferable to four-year universities.
Transferable to both UC and CSU; see counselor for limitations

BIO 5 4 units
Plant Biology
54 hours lecture, 54 hours laboratory
Grading: letter grade or pass/no pass.
This course utilizes lecture, laboratory, and fieldwork to present the student with fundamental concepts and principles of plant life, including a study of plant structure, function, and diversity. Intended for the non-science major. Not open to students registered in or with credit in BIO 1A.
Transferable to both UC and CSU; see counselor for limitations

BIO 11 3 units
Environmental Problems of Man
54 hours lecture
Grading: letter grade or pass/no pass.
This course is a study of the effects of man's interaction with the environment, problems resulting from ignoring known ecological principles and socio-cultural implications of biological concepts. Selected crisis situations will be examined. Physical, biological and political means and methods of reversing environmental deterioration will be considered, as well as conservation and management of natural resources. Sustainable solutions and lifestyles will be emphasized.
Transferable to both UC and CSU; see counselor for limitations

BIO 20 4 units
Marine Biology
54 hours lecture, 54 hours laboratory
Grading: letter grade or pass/no pass.
This course provides an introduction to marine natural history, incorporating biological concepts such as plants, animals and habitats of the marine environment. A variety of marine communities are discussed in relation to their biotic, physical and chemical components. Lab work and field trips are included.
Transferable to both UC and CSU; see counselor for limitations

BIO 20H 4 units
Honors Marine Biology
54 hours lecture, 54 hours laboratory
Prerequisite: Qualification for the Honors Program.
Grading: letter grade or pass/no pass.
This course provides an introduction to marine natural history, incorporating biological concepts such as plants, animals and habitats of the marine environment. A variety of marine communities are discussed in relation to their biotic, physical and chemical components. Lab work and field trips are included.
Transferable to both UC and CSU; see counselor for limitations

BIO 22 3 units
The Marine Environment
54 hours lecture
Grading: letter grade or pass/no pass.
This course focuses on the marine environment as a unique feature of the Earth and investigates areas of scientific and public concern. Students will discover basic principles of oceanography including the ocean's dynamic structure, its properties and functions, as well as its effect on geopolitical and economic matters. Other topics will be explored including the diversity of marine life forms, ocean pollution, human exploitation, management and conservation of marine resources.
Transferable to CSU Only

BIO 25 3 units
Biology and Society
54 hours lecture
Grading: letter grade or pass/no pass.
This course covers a variety of basic biological concepts, discoveries and theories that also have important social, philosophical, ethical and religious implications. Students are introduced to critical thinking skills and scientific methods while exploring topics such as biological evolution, natural selection, bioethics, HIV and AIDS, genetic engineering, reproductive technologies, extinctions, overpopulation and major ecological issues.
Transferable to both UC and CSU; see counselor for limitations

BIO 30 4 units
Wildlife Biology
54 hours lecture, 54 hours laboratory
Grading: letter grade or pass/no pass.
This natural history course utilizes lecture, laboratory, and field trips to provide a general survey of all major forms of life, characteristics and behaviors of selected forms, with a focus on California representatives. Various natural communities are discussed.
Transferable to both UC and CSU; see counselor for limitations

BIO 31 2 units
Birds
27 hours lecture, 27 hours laboratory
Grading: letter grade or pass/no pass.
This is an introductory course for the identification and recognition of the various bird species common to Southern California. This course discusses birding identification terminology including bird anatomy, behavior, variations, migrations and speciation. Emphasis is on field identification and use of the field guide. Habitats, behaviors, songs, ecology and natural history of the species will be summarized. This course includes at least three required field trips to local sites.
Transferable to CSU Only

BIO 41 3 units
Contemporary Biology
54 hours lecture
Grading: letter grade or pass/no pass.
This course covers the general principles of biology, such as molecular biology, organic evolution, taxonomy, basic similarities of living patterns, genetic continuity and environmental biology. Significant problems of modern biology are included. Not open for credit to students registered in or with credit in BIO 1A-B or 5.
Transferable to both UC and CSU; see counselor for limitations

BIO 41H 3 units
Honors Contemporary Biology
54 hours lecture
Prerequisite: Qualification for the Honors Program.
Grading: letter grade or pass/no pass.
This course covers the general principles of biology, such as molecular biology, organic evolution, taxonomy, basic similarities of living patterns, genetic continuity and environmental biology. Significant problems of modern biology are included. Not open for credit to students registered in or with credit in BIO 1A-B or 5.
Transferable to both UC and CSU; see counselor for limitations

BIO 41L 1 units
Contemporary Biology Laboratory
54 hours laboratory
Corequisite: BIO 41 or BIO 41H.
Grading: letter grade or pass/no pass.
This is an audio tutorial lab that provides practical, hands on experience in the field of biology. Students complete a series of experiments and demonstrations that clarify the general principles developed in BIO 41 lecture. The BIO 41 Lab is not open for credit to students registered in or with credit in BIO 1A-B or 5.
Transferable to both UC and CSU; see counselor for limitations

BIO 60 4 units
Human Biology
72 hours lecture
Grading: letter grade or pass/no pass.
This course combines the elementary principles of anatomy, physiology, microbiology, nutrition and very elementary chemistry. Students are expected to learn the basic terminology of these fields as a foundation for further study of medical problems and diseases. Biology 60 is designed to fulfill the general science requirement and to meet the pre-requisite needs of the health occupations student. This course is not open for credit to students registered in or with credit in ANAT 1 and PHYS 1.
Transferable to both UC and CSU; see counselor for limitations

BIO 60L 1 units
Human Biology Laboratory
54 hours laboratory
Corequisite: BIO 60
Grading: letter grade or pass/no pass.
Human Biology lab provides hands-on experience for principles learned in BIO 60 through experiments, demonstrations and dissections. Not open for credit to students registered in or with credit in BIO 1A-B or 5.
Transferable to both UC and CSU; see counselor for limitations

BIO 61 3 units
Introduction to Pathophysiology
54 hours lecture
Prerequisite: BIO 60 or ANAT 41, or ANAT 1 and PHYSI 1.
Grading: letter grade or pass/no pass.
This course is an introduction to the study of disease, including cause, prevention and symptoms of the common human diseases. The course assumes a basic understanding of anatomy and physiology. Biology 61 is designed for the general student and those in the health technology fields.
Transferable to both UC and CSU; see counselor for limitations

BIO 602 0 units
Introduction to Health Career Sciences
36 hours lecture
Corequisite: READ 602.
Grading: non graded.
This course provides instruction of literacy and science skills in preparation for prerequisite courses such as Human Anatomy, Physiology, and Microbiology, and prepares students to have good work habits on the job.