

Biology

Biology Study Skills

BIOLO 0470 - 1 Credits

Designed for students who need basic knowledge, improvement or practice in study skills for biology. This course includes basic study techniques, techniques specific for biology terminology, text and lecture notes, problem solving, laboratory skills, test-taking techniques and biology resources. This course is especially appropriate for students in Biology 1100 and 1151, or those who have little or no experience in biology. This course can only be taken on a pass/fail basis. Prerequisite: Course requires Reading Placement Test Score-Category One (1 lecture hour)

Survey of Biology

BIOLO 1100 - 4 Credits

This biology course promotes scientific literacy for non-science majors and interested students. Organisms are studied from their behavioral, ecological, hereditary and evolutionary perspectives. An inquiry-based approach to understanding biological processes is emphasized. Students explore the relevance of biology to contemporary issues in human society. Prerequisite: Mathematics 0481 (or college equivalent) with a C or better, or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

Environmental Biology

BIOLO 1110 - 4 Credits

An interdisciplinary study of the environment investigating how nature works and how things are interconnected. Based on an understanding of ecological concepts and principles, students examine lifestyle issues and critically analyze the relationship among population, natural resources, land use, agriculture, biodiversity, industrialization and pollution. Environmental problems are examined from scientific, ethical, economic and sociological perspectives to enable students to understand the relevance of biology to contemporary issues in human society. Prerequisite: Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

Introduction to Genetics

BIOLO 1120 - 3 Credits

This course provides an introduction to the principles of genetics emphasizing the significance of genetics to human culture, including classical transmission genetics, molecular genetics and biotechnology, and the genetics of populations. Prerequisite: Mathematics 0481 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score - Category One (3 lecture hours)

Fundamentals of Biotechnology

BIOLO 1130 - 4 Credits

Application of living organisms and their products in industry, medicine, agriculture, forensics, and environmental science. This multidisciplinary course introduces fundamental principles of biology and chemistry that are used to develop biotechnology and surveys various fields of biotechnology. Topics include biochemistry, recombinant DNA, bioinformatics, medical biotechnology, and bioremediation. Laboratory includes techniques that are routinely used in biotechnology such as chromatography, electrophoresis, and genetic transformation of cells. This course is intended for both science majors and non-science majors. Prerequisite: Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)

Introduction to Biology of Aging

BIOLO 1140 - 3 Credits

Study of aging in humans and other species. Topics include theories of aging, aging research, age-related changes at the molecular, cellular, systemic and organismal levels, and normal aging and its relationship to human disease. Prerequisite: Course requires Reading Placement Test Score-Category One (3 lecture hours)

Principles of Biological Science I

BIOLO 1151 - 5 Credits

An introduction to biology for the biological science major and interested students. Topics include the philosophy of science, scientific method, chemical organization of life, cell biology, cellular metabolism, genetics, molecular genetics, molecular biology, evolution, and biodiversity of the Bacteria, Archaea, protists, and Fungi. Prerequisite: Mathematics 0481 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One (4 lecture hours, 3 lab hours)

Principles of Biological Science

BIOLO 1152 - 5 Credits

Continuation of Biology 1151. An introduction to higher levels of biological organization from the organism to the ecosystem. Topics include diversity of the plants and animals, organismal structure and physiology, behavior, population ecology, community ecology, ecosystem ecology, and environmental biology. Prerequisite: Biology 1151 with a grade of C or better. Course requires Reading Placement Test Score-Category One (4 lecture hours, 3 lab hours)

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Special Project

BIOLO 1800 - 1-3 Credits

Special project courses in biology cover topics not otherwise covered by general education courses and other courses in the Catalog for the biology discipline. These courses require direct experience and focused reflection in an in-depth study of a specific biology topic and/or the critical analysis of contemporary issues in biology. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of biology concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). This course may be taken four times for credit as long as a different topic is selected each time. Prerequisite: Course requires Reading Placement Test Score-Category One.

Selected Topics I

BIOLO 1820 - 3 Credits

Introductory exploration and analysis of selected topics in biology with a specific theme indicated by course title listed in college Class Schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One (6 lab hours)

Selected Topics II

BIOLO 1821 - 3 Credits

Introductory exploration and analysis of selected topics in biology with a specific theme indicated by course title listed in college Class Schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One (2 lecture hours, 2 lab hours)

Independent Study

BIOLO 1840 - 1-4 Credits

Exploration and analysis of topics within biology to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. Course requires Reading Placement Test Score-Category One (2 to 8 lab hours)

Ecology

BIOLO 2150 - 4 Credits

Introduction to the field of ecology. Ecological principles and concepts pertaining to ecosystems, communities and populations are examined. Emphasis is given to experimentation in the field. Prerequisite: Biology 1151 and Biology 1152. Course requires Reading Placement Test Score-Category One (2 lecture hours, 4 lab hours)

Cell Biology

BIOLO 2151 - 4 Credits

Advanced examination of the morphology and physiology of eukaryotic and prokaryotic cells. Coverage includes organelle structure and function, cell membranes, the cytoskeleton, extracellular matrices, enzymes, bioenergetics, cell division, gene expression, cell movement, and cell communication. Course is intended for the biological science major and has a lab component. Prerequisite: Biology 1152 with a grade of C or better, or equivalent and Chemistry 1552 with a grade of C or better, or equivalent. Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

Special Project

BIOLO 2800 - 1-3 Credits

Special project experiential courses in biology cover topics not otherwise covered by general education courses and other courses in the Catalog for the biology discipline. These courses require direct experience and focused reflection in an in-depth study of a specific biology topic and/or the critical analysis of contemporary issues in biology. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of biology concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one course in Biology or consent of instructor. Course requires Reading Placement Test Score-Category One.

Internship (Career & Technical Ed)/Coop Ed/Internship Occup

BIOLO 2860 - 1-4 Credits

Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with

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approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Associate Dean from the academic discipline where the student is planning to earn credit.

Internship Advanced (Career & Tech Ed)

BIOLO 2865 - 1-4 Credits

Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Associate Dean from the academic discipline where the student is planning to earn credit.

Internship (Transfer)

BIOLO 2870 - 1-4 Credits

Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Associate Dean from the academic discipline where the student is planning to earn credit.

Internship - Advanced (Transfer)

BIOLO 2871 - 1-4 Credits

Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Associate Dean from the academic discipline where the student is planning to earn credit.