Biology (BIOL)

BIOL&100  F,W  5 credits
SURVEY OF BIOLOGY  NSL
Examines major concepts in biology -- The science of life -- and the nature of science itself and includes survey of fundamental life processes by which organisms live, grow, reproduce, and interact with their environment. This course is recommended for students interested in a brief overview of biology. Laboratory is included.
Prerequisite: None

BIOL 109  S,Sp  5 credits
ENERGY AND LIFE: BIOLOGICAL SCIENCES  NSL
Explores energy and life on earth through the study of biodiversity, metabolism, cell structure, genetics, evolution, and ecosystems. Students will gain an understanding of the natural world, science as a field of study, and develop skills to apply and teach scientific principles in everyday life. Intended for elementary education and early childhood education majors. Part of a three quarter sequence; students are not required to take entire sequence. Includes lab.
Prerequisite: None.

BIOL 130  F  5 credits
BIODIVERSITY OF THE PACIFIC NORTHWEST  NSL
Introduces biological diversity of the major ecosystems of the Pacific Northwest (e.g. forest, riparian, wetland, estuary, and marine intertidal). Surveys common organisms of these ecosystems and students will learn fundamental biological principles as they relate to biodiversity (e.g. ecology, evolution, genetics) and the importance to human well-being, as well as the intrinsic value of biodiversity at three levels: genetic, species, and ecosystems. Students will learn methods in the lab and field for surveying, identifying, and measuring biodiversity. Students will complete original research on a group and/or ecosystem of their choice. Class will meet often outdoors and three day-long field trip(s) are required.
Prerequisite: ENGL& 101, MATH 089, or instructor permission.

BIOL 150  W  5 credits
HUMAN GENETICS AND SOCIETY  NSL
Introduces the discipline of human genetics by interweaving classical genetics concepts with current issues in genetics, including genetic diversity, the human genome, biotechnology, and genetic disorders. Presents the tools necessary for making informed decisions regarding the impact of genetic advances on individual lives and society. Laboratory includes exploration of DNA structure, DNA identification, and problem solving using activities, specimens and biotechnology equipment.
Prerequisites: none

BIOL&160  S,F,W,Sp  5 credits
GENERAL BIOLOGY WITH LAB  NSL
Introduces cell biology lecture and lab course including the chemistry of life, the structure, reproduction, and metabolism of cells, genetics, and evolutionary biology. The topics are similar to BIOL 211 (General Biological Science) but are covered in less depth. Lab is inquiry based. BIOL& 160 is a prerequisite for BIOL& 241 (Human Anatomy and Physiology 1) and BIOL& 260 (Microbiology). A grade of C or higher is required in order to advance to BIOL& 241 or BIOL& 260. Intended for non-biology majors, pre-nursing, pre-dental hygiene, pre-occupational therapy and other pre-allied health students. Prerequisites: None

BIOL 179  Sp  5 credits
HUMAN BIOLOGY & EXERCISE  NSL
Introduces fundamental biological principles from cells to human organ systems. Provides comprehensive coverage of the physiology of exercise and its role in successful integration of exercise principles into exercise programs. Laboratory is included.
Prerequisites: None

BIOL&211  F  5 credits
MAJORS BIOLOGY CELLULAR  NSL
Covers three major themes in biology: cellular, genetics, and evolution. Cell biology includes cell structure, organization, metabolism, and energetics. Genetics includes gene structure and function, molecular and chromosomal mechanisms of inheritance, and Mendelian and microbial patterns of inheritance. Evolution is a central theme in biology that ties together all other major themes. Laboratory is included. (Formerly known as BIOL 201)
Prerequisite: CHEM& 161 or CHEM& 121 or instructor permission.

BIOL&212  W  5 credits
MAJORS BIOLOGY ANIMAL  NSL
Continues these series for science majors emphasizing the biological diversity and evolution of animals and comparing general principles of physiology, growth, development, and behavior across animal groups. Laboratory included. (Formerly known as BIOL 202)
Prerequisite: BIOL& 211 (was BIOL 201) with 2.0 or better.

BIOL&213  W,Sp  5 credits
MAJORS BIOLOGY PLANT  NSL
Continues these series for science majors emphasizing prokaryotes, fungi, algae, and plants including their diversity, anatomy and physiology; includes general evolutionary theory, including population genetics, and ecological principles. Laboratory included. (Formerly known as BIOL 202)
Prerequisite: BIOL& 212 (was BIOL 202) with 2.0 or better.
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<td>SPECIAL TOPICS IN HUMAN PHYSIOLOGY</td>
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**BIOL&241**
Provides a study of structure and function of the human body. Topics include the cell, tissues, skeletal system, articulations, muscular system, and nervous system. This is the first of a two-course sequence. This course may not be transferrable unless the entire sequence (BIOL& 241 and 242) is taken at LCC. Prerequisite: BIOL& 160, BIOL& 260 or BIOL& 211 with a grade of C or above. Prerequisite waiver may be granted with appropriate documentation to the instructor.

**BIOL&242**
Continues the study of structure and function of the human body. Topics include endocrine, circulatory, lymphatic, respiratory, digestive, urinary, and reproductive systems; and fluid and electrolyte balance. This is the second part of a two-course sequence. This course may not be transferable unless the entire sequence (BIOL& 241 and 242) is taken at LCC. Laboratory is included. Prerequisites: BIOL& 241 with a C or better. Prerequisite waiver may be granted with appropriate documentation to the instructor.

**BIOL&260**
Introduces the fundamentals of microbiology, including: evolution, microbial structures and functions, metabolism, growth, genetics, classification and pathogenesis; virology; principles of infectious disease; host defenses and antimicrobial drugs. Laboratory includes techniques for isolation, cultivation and identification of microbes. Prerequisites: BIOL& 160 or BIOL& 211 with a grade of C or better or instructor permission.

**BIOL 298**
Discusses selected advanced topics in human physiology. May be repeated for credit as topics change each time course is offered. Prerequisites: BIOL& 241 or concurrent enrollment.