

# BSC: BIOLOGICAL SCIENCES

## Courses

	Credit(s)	Contact	Lab	
BSC 1005. BIOLOGICAL SCIENCE.	3	3	0	
BIOLOGICAL SCIENCE An introduction to essential principles of biological science. Topics include, but are not limited to, the nature of science and the scientific method, chemistry for biology, cell structure, metabolism reproduction and genetics, gene regulation, organisms, and the theory of evolution. This course is for non-science majors. It is also recommended for students who need preparation before enrolling in a biology course for science majors. Students should be prepared to complete college-level reading, writing, and mathematics assignments as part of this course. This course satisfies one of the General Education Science requirements.				
BSC 1005C. BIOLOGICAL SCIENCE COMBINED.	4	3	3	
BIOLOGICAL SCIENCE COMBINED Combination of BSC 1005 and BSC 1005L with class and lab combined. An introduction to essential principles of biological science. Topics include, but are not limited to, the nature of science and the scientific method, chemistry for biology, cell structure, metabolism reproduction and genetics, gene regulation, organisms, and the theory of evolution. This course is for non-science majors. It is also recommended for students who need preparation before enrolling in a biology course for science majors. Students should be prepared to complete college-level reading, writing, and mathematics assignments as part of this course. This course satisfies one of the General Education Core Science requirements. (Special Fee: \$68.00).				
BSC 1005H. BIOLOGICAL SCIENCE - HONORS.	4	3	3	
BIOLOGICAL SCIENCE - HONORS Prerequisites: Honors Program permission Same as BSC 1005 with honors content. Honors program permission required. (Special Fee: \$68.00).				
BSC 1005L. LAB IN APPLIED BIOLOGY.	1	0	3	
LAB IN APPLIED BIOLOGY A Biology laboratory course that may be taken concurrently with, or independently of, BSC 1005. Students should be able to complete college level reading, writing, and mathematics assignments as part of this course. (Special Fee: \$68.00).				
BSC 1010C. GENERAL BIOLOGY I.	4	3	3	
GENERAL BIOLOGY I Prerequisite: Satisfactory completion of all mandated courses in reading, mathematics, English, and English for Academic Purposes. Introduction to fundamental biological principles emphasizing common attributes of all living organisms. Unifying concepts include the chemical structure of living matter, structure and function of the cell, cell types, major metabolic functions, control systems, reproduction, genetics, evolution, and ecology. Prerequisite for advanced biology courses. Students should be prepared to complete college-level reading, writing, and mathematics assignments as part of this course. This course meets one of the General Education science requirements for graduation. (Special Fee \$59.00).				
BSC 1010H. GENERAL BIOLOGY I HONORS.	4	3	3	
GENERAL BIOLOGY I HONORS Same as BSC 1010C with honors content. Honors program permission required. (Special Fee: \$59.00).				
BSC 1011C. GENERAL BIOLOGY II.	4	3	3	
GENERAL BIOLOGY II Prerequisite: Minimum grade of C in BSC 1010C or BSC 1010H A continuation of BSC1010C. Includes an analysis of biological systems at the organismal and supraorganismal levels: Unity and diversity of life, organismal structure and function. Will examine such topics as: Darwinism, origin of life, diversity and origin of Eukaryotes, evolution and diversity of the three Domains; animal and plant morphology, reproduction, development of animal behavior, population biology and ecology. Students should be prepared to complete college level reading, writing, and mathematics assignments as part of this course. This course meets the General Education science requirements for graduation. (Special Fee \$103.00).				
BSC 1011H. GENERAL BIOLOGY II - HONORS.	4	3	3	
GENERAL BIOLOGY II - HONORS Same as BSC 1011C with honors content. Honors program permission required. (Special Fee: \$103.00).				
BSC 1020. HUMAN BIOLOGY.	3	3	0	
HUMAN BIOLOGY This course includes the application of the scientific method and study of the human body with an emphasis on major organ systems and processes and their links to biological concepts underlying major societal and bioethical issues. Students should be able to complete college level reading, writing, and mathematics assignments as part of this course.				
BSC 1020C. HUMAN BIOLOGY COMBINED.	4	3	3	
HUMAN BIOLOGY COMBINED This course is designed for students not majoring in biology that is fully integrated with a laboratory that emphasizes active learning strategies and includes application of scientific method and study of human biology with an emphasis on major organ systems and processes, human development, genetics, diseases, biochemical processes and their relation to the human body, and biological concepts underlying major societal and bioethical issues. Students should be able to complete college level reading, writing, and mathematics assignments.				
BSC 1026. BIOLOGY OF HUMAN SEXUALITY.	3	3	0	
BIOLOGY OF HUMAN SEXUALITY General, non-laboratory course designed to introduce students to various biological aspects of human sexuality, including sexual genetics and sex determination, sexual anatomy, physiology and development, processes of fertilization, pregnancy, birth control, sexually transmitted diseases, menstruation, menopause, and aging. Other appropriate areas may be discussed when time permits. Students should be able to complete college level reading, writing, and mathematics assignments as part of this course.				
BSC 1026H. BIOLOGY OF HUMAN SEXUALITY - HONORS.	3	3	0	
BIOLOGY OF HUMAN SEXUALITY - HONORS Prerequisites: Honors Program permission Same as BSC 1026 with honors content. Honors program permission required.				
BSC 1421C. INTRODUCTION TO BIOTECHNOLOGY.	4	3	3	
INTRODUCTION TO BIOTECHNOLOGY In this lecture/lab course, students will be introduced to the field of biotechnology. Focus will be placed on applications of biotechnology, career opportunities, basic chemistry and cell biology, as well as on concepts and techniques necessary to work effectively in a biotechnology lab. Basic skills learned will include following procedures and keeping records, laboratory safety procedures, laboratory mathematics and measuring, preparing solutions; and basic techniques used for DNA extraction, processing and quantification. Students will develop confidence in their ability to work safely and proficiently with basic biotech lab instruments. (Special Fee: \$112.00).				

BSC 2093C. HUMAN ANATOMY AND PHYSIOLOGY I. 4 3 3

HUMAN ANATOMY AND PHYSIOLOGY I Prerequisite: Satisfactory completion of all mandated courses in reading, mathematics, English, and English for Academic Purposes and a minimum grade of C in BSC 1010C or departmental approval. Scientific method, biochemical processes of life, cells, tissues, structure and function of integumentary, skeletal, muscular, endocrine and nervous systems, and organs of special senses. Lab exercises emphasize anatomic and physiologic principles associated with classroom work. (Special Fee: \$42.00).

BSC 2094C. HUMAN ANATOMY AND PHYSIOLOGY II. 4 3 3

HUMAN ANATOMY AND PHYSIOLOGY II Prerequisite: Minimum grade of C in BSC2093C or department approval Continuation of BSC 2093C, including cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems with considerable emphasis on biochemistry of metabolic processes and body fluids. (Special Fee: \$45.00).

BSC 2423C. PROTEIN BIOTECHNOLOGY AND CELL CULTURE. 4 3 3

PROTEIN BIOTECHNOLOGY AND CELL CULTURE Prerequisite: MCB 2010C and BSC 2427C This combined lecture and laboratory course will address the use of proteins and cell culture in the field of Biotechnology. Students will conduct experiments to learn protein-based techniques including protein expression, purification, quantification, and analysis. Students will also perform protein-based assays. Cell culture will include instruction in growing both prokaryotic and eukaryotic organisms. (Special Fee: \$200.00).

BSC 2426C. BIOTECHNOLOGY METHODS I. 4 3 3

BIOTECHNOLOGY METHODS I Prerequisite: BSC 1010C and CHM 1045C or higher and BSC 1421C This is a hands-on course that focuses on techniques and concepts of modern molecular biology with an emphasis on nucleic acid manipulation and analysis. The lecture will complement the lab to provide essential technical training to enable students to work in pharmaceutical, biotechnology, and research laboratory settings. The instruction involves standard protocols in bacteria culture, DNA purification and manipulation, basic sequence analysis, and appropriate instrument operations and maintenance through project-based learning. (Special Fee: \$136.00).

BSC 2427C. BIOTECHNOLOGY METHODS II. 4 3 3

BIOTECHNOLOGY METHODS II Prerequisite: BSC 2426C This lecture/lab course will provide students with an opportunity to apply the skills they have learned in Biotechnology Methods I in a Capstone DNA cloning project. Students will also learn about RNA structure and function. Students will perform RNA-based molecular biology techniques. (Special fee \$192.00).

BSC 2933. SELECTED TOPICS IN BIOLOGY. 1-3 variable

SELECTED TOPICS IN BIOLOGY Prerequisite: Departmental approval Selected topics in biological sciences based on historical, traditional or contemporary approach as background and interest of students and professor dictate. Multiple credit course. May be repeated for credit, but grade forgiveness cannot be applied.

BSC 2941. INTERNSHIP EXPLORATION IN BIOLOGY. 1-4 variable

INTERNSHIP EXPLORATION IN BIOLOGY Prerequisites: Satisfactory completion of all mandated courses in Reading, Mathematics, English, and English for Academic Purposes; a minimum 2.0 institutional or overall GPA; and 12 credits, including BSC 1010C. The Program Director/ Program Chair/Program Coordinator or Internship Placement Office has the discretion to provide override approval as it relates to the waiver of required program/discipline-related courses. This course is a planned work-based experience that provides students with supervised career exploration activities and/ or practical experiences. Each earned credit of internship requires a minimum of 80 clock hours of work. Multiple credit course. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$10.00).