

Biological Science I

BSC2010

Course Description:

This is the first part of a two-semester introductory biology course designed for those interested in pursuing a career in life sciences. The intention of this course is to provide the building blocks necessary for a student to gain a strong foundation in general biology. Topics covered will provide an overview of biological processes and function at the molecular, cellular and organismal level: 1) Atoms and Biological Molecules, 2) Cellular Biology, 3) Biochemistry and Energy Transformation 4) Molecular Genetics and 5) Physiology. The diversity of knowledge gained in BSC 2010 will aid understanding in more advanced biology classes.

This course is divided into modules and the information in each module is critical for the understanding of the next. The first half of the semester focuses on the building of biological molecules from atoms, followed by the description of the organization of biological molecules within the cell. The second half of the semester will be dedicated to molecular biology and human physiology.

Course Learning Objectives (including liberal studies learning objectives assigned to the course):

At the end of the semester, students will be able to:

- describe the basic structure of atoms and important biological molecules
- identify parts of the eukaryotic cell and describe fundamental cell functions
- explain basic cellular biochemistry and energy-transformation processes in plant and animal cells
- identify and explain the components of the Central Dogma of molecular genetics; describe the mechanisms and significance of gene regulation
- explain some physiological processes underlying human functional systems (e.g., cell communication...).

In addition, this course has been approved for the Liberal Studies disciplinary requirement of Natural Science and thus is designed to help you become a critical appraiser of the theories of natural science and the facts that support them.

Therefore, at the end of the semester, students will also be able to:

1. Pose questions or hypotheses based on scientific principles.
2. Use appropriate scientific methods and evidence to evaluate claims or theoretical arguments about the natural world.
3. Analyze and interpret research results using appropriate methods.

Grading Assignments:

Grades will come from multiple sources and assignments assess the progress toward the mastering of learning objectives.

Formative Assessments

- In- class assessments (10-30%). Group activities, such as worksheets, and individual activity, such as chapter quizzes, completed during class time. Concept questions will also be accounted.
- Online submission (5-20%) Homework and active reading notes

Summative Assessments

- Unit exams will be given throughout the semester (30%)
- One cumulative final will be given during the week of Finals (10-20%)

LIBERAL STUDIES STATEMENT

This course has been approved to meet FSU's Liberal Studies Natural Sciences requirement and helps you become an effective interpreter of scientific results and a critical analyst of claims about the natural world.

By the end of this course, students will:

1. Pose questions or hypotheses based on scientific principles.
2. Use appropriate scientific methods and evidence to evaluate claims or theoretical arguments about the natural world.
3. Analyze and interpret research results using appropriate methods.

UNIVERSITY ATTENDANCE POLICY

Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

ACADEMIC HONOR POLICY

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their

pledge to "...be honest and truthful and... [to] strive for personal and institutional integrity at Florida State University." (Florida State University Academic Honor Policy, found at <http://fda.fsu.edu/Academics/Academic-Honor-Policy>)

AMERICANS WITH DISABILITIES ACT

Florida State University (FSU) values diversity and inclusion; we are committed to a climate of mutual respect and full participation. Our goal is to create learning environments that are usable, equitable, inclusive, and welcoming. FSU is committed to providing reasonable accommodations for all persons with disabilities in a manner that is consistent with academic standards of the course while empowering the student to meet integral requirements of the course.

To receive academic accommodations, a student:

(1) must register with and provide documentation to the Office of Accessibility Services (OAS); (2) must provide a letter from OAS to the instructor indicating the need for accommodation and what type; and, (3) should communicate with the instructor, as needed, to discuss recommended accommodations. A request for a meeting may be initiated by the student or the instructor. Please note that instructors are not allowed to provide classroom accommodations to a student until appropriate verification from the Office of Accessibility Services has been provided. This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the

Office of Accessibility Services
874 Traditions Way
108 Student Services Building
Florida State University, Tallahassee, FL 32306-4167
(850) 644-9566 (voice) (850) 644-8504 (TDD)
oas@fsu.edu
<https://dsst.fsu.edu/oas>

ACADEMIC SUCCESS

Your academic success is a top priority for Florida State University. University resources to help you succeed include tutoring centers, computer labs, counseling and health services, and services for designated groups, such as veterans and students with disabilities. The following information is not exhaustive, so please check with your advisor or the Dean of Students office to learn more.

CONFIDENTIAL CAMPUS RESOURCES

Various centers and programs are available to assist students with navigating stressors that might impact academic success. These include the following:

Victim Advocate Program
University Center A, Room 4100
(850) 644-7161 Available 24/7/365
Office Hours: M-F 8-5
<https://dsst.fsu.edu/vap>

Counseling & Psychological Services
Askew Student Life Center, 2nd Floor
942 Learning Way
(850) 644-8255
<https://counseling.fsu.edu/>

University Health Services
Health and Wellness Center
(850) 644-6230
<https://uhs.fsu.edu>