

Biological Science I

BSC2010

Course Description: In this course students will apply the scientific method to critically examine and explain the natural world. This course will cover molecular biology, cellular biology, genetics, metabolism, and replication.

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.

Student Learning Outcomes:

- Students will demonstrate scientific literacy by articulating and practicing the scientific method.
- Students will evaluate data regarding validity.
- Students will read and interpret a variety of scientific data.
- Students will identify major macromolecules and state their importance to living organisms.
- Students will explain metabolism.
- Students will compare and contrast prokaryotic and eukaryotic structures and processes of cell division and replication.
- Students will explain gene expression.
- Students will solve problems in transmission genetics.

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.

Grading Assignments: (Not every section is expected to have all the assignments on this list) 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%)

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 written 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 student's 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>)

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 Department of Student Support and Transitions to learn more.

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 accommodation for all persons with disabilities in a manner that is consistent with the academic standards of the course while empowering the student to meet the integral requirements of the course. Students with disabilities needing academic accommodation should:

- (1) register with and provide documentation to the Office of Accessibility Services; and
- (2) request a letter from the Office of Accessibility Services to be sent to the instructor indicating the need for accommodation and what type; and,
- (3) meet (in person, via phone, email, skype, zoom, etc...) with each instructor to whom a letter of accommodation was sent to review approved accommodations.

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 an alternative format upon request.

For the latest version of this statement and 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>

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 and Psychological Services (CAPS)
Florida State University's Counseling and Psychological Services (CAPS) primary mission is to address psychological needs and personal concerns, which may interfere with students' academic progress, social development, and emotional well-being. The following in-person and virtual (tele-mental health) services are available to all enrolled students residing in the state of Florida:

1. Individual therapy
2. Group therapy
3. Crisis Intervention
4. Psychoeducational and outreach programming
5. After hours crisis-hotline
6. Access to community providers for specialized treatment

Call 850-644-TALK (8255) for more information on how to initiate services.

Counseling &

Psychological Services

250 Askew Student Life Building

942 Learning Way

Tallahassee, Florida 32306

Phone: 850-644-TALK (8255)

Walk-in and Appointment Hours:

M-F 8 am – 4 pm

Services at UHS are available to all enrolled students residing in Florida:

The mission of University Health Services (UHS) is to promote and improve the overall health and well-being of FSU students. UHS provides a coordinated continuum of care through prevention, intervention, and treatment. Services include general medical care, priority care, gynecological services, physicals, allergy injection clinic, immunizations, diagnostic imaging, physical therapy, and a medical response unit. The Center for Health Advocacy and Wellness (CHAW) assists students in their academic success through individual, group, and population-based health and wellness initiatives. Topics include wellness, alcohol and other drugs, hazing prevention, nutrition and body image, sexual health, and power based personal violence prevention. For more information, go to uhs.fsu.edu.

University Health Services

Health and Wellness Center

960 Learning Way

Tallahassee, Florida 32306

Hours: M-F, 8 am – 4 pm

Phone: 850-644-6230