

Biological Science II

BSC 2011

Course Description:

This is the second part of a two-semester introductory biology course designed for those interested in pursuing a career in life sciences. This course provides an overview of the processes underlying animal embryonic development, inheritance genetics, evolution and ecology. The diversity of knowledge gained in BSC 2011 will aid students' understanding in more advanced biology classes.

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

Unit 1

Students will be able to... Identify and describe the set of processes that allow a linear sequence of information contained in DNA to direct the embryonic development of a complex multicellular eukaryotic organism from a single cell

Unit 2

Students will be able to... Explain the mechanisms that govern the patterns by which traits are inherited by offspring from parents and solve problems based on Mendelian inheritance

Unit 3

*Students will be able to...*List types of evidence for evolution; describe and compare the various mechanisms that result in changes in populations of organisms over evolutionary time; contrast micro- and macroevolution; explain the Hardy-Weinberg principle and apply this to solve problems in population genetics; explain the role of reproductive isolation in speciation and the various means by which populations may become reproductively isolated; contrast allopatric and sympatric modes of speciation; and interpret phylogenetic trees

Unit 4

Students will be able to... Describe interactions among organisms at different ecological levels; explain how interactions between organisms and their physical environment determine patterns of distribution and abundance of organisms on Earth; describe threats to earth's biodiversity; and recognize the importance of conserving biodiversity.

This course has been approved for the Liberal Studies disciplinary requirement of Natural Science and thus is designed to help students become an effective interpreter of scientific results and a critical analyst of claims about the natural world. 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:

- Graded Assignments 15 – 25%
- Quizzes 20%
- Unit Exams 30 – 45%
- Final Exam 15 – 20%
- In Class Participation 0% -- 10%

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, Rm. 4100
(850) 644-7161
Available 24/7/365
Office Hours: M-F 8-5
<https://dsst.fsu.edu/vap>

Counseling and 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/>