

## **Concepts/Applications in Biology II (Biol 102-02, Fall 2016)**

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<b>Lectures:</b>	M,W,F 12:30-1:20, Harbor Walk West 213
<b>Instructor:</b>	Professor Courtney Gerstenmaier
<b>E-mail:</b>	cegerste@cofc.edu
<b>Phone:</b>	(330)-815-0626 texts only
<b>Office:</b>	65 Coming St. Room 102
<b>Office Hours:</b>	M,W,F: 1:30-2:30 or by appointment

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**Course Overview:** This general education science course provides a background for understanding and evaluating contemporary topics in biology and societal/environmental issues. Students develop a general understanding of core concepts and develop the critical competencies that form the bases for the practice of science and use of scientific knowledge. During our semester, we will address fundamental principles in biology including evolution, plant and animal structure and function, and biological systems. These ideas will be explored in the following concepts: evolutionary processes, origins of life, biodiversity, plant form and function, animal form and function, and ecology

### **Instructional Objectives:**

- Students will understand the nature of scientific knowledge and the scientific methods of discovery
- Students will learn factual knowledge about evolution, physiology, and ecology
- Students will think about applications of course material (to improve thinking, problem solving, and decisions)
- Students will have an appreciation of related applications to real-life of the theories they learn

### **Student Learning Outcomes:**

- Students will demonstrate knowledge of plant and animal physiology, evolution, and ecology
- Students will be able to identify and use basic vocabulary of evolution, ecology, conservation biology, anatomy and physiology of plants and animals
- Students will develop a scientific attitude
- Students will be able to effectively conduct scientific analysis and communicate about scientific problems
- Students will be able to apply physical/natural principles to analyze and solve problems
- Students will be able to discover the impact of science on society
- General Education Student Learning Outcomes can be found on our OAKS page under the syllabus folder

**Required Materials:** Biology: Concepts and Applications by C. Starr et al. 9th ed.  
MindTap Access

**Prerequisite:** Biology 101: Concepts/Applications in Biology I

**Co-requisite:** Biology 102 Lab

## COURSE ASSIGNMENTS

**Tests:** We will have three tests and a final cumulative exam (with some new material) that will be administered during the lecture portion of the course. These tests are designed to assess your knowledge of the subjects covered. They will consist of multiple choice, true-false, and matching questions.

**Class Reading Quizzes and Assignments:** These will be online quizzes and assignments administered through the MindTap companion software that are related to the course readings.

**Class Discussions:** During this course we will be using case studies, polls, and quizzes to begin our exploration into various topics. These tools will provide us with a jumping off point for exploring abstract topics and making them more relatable. During that discussion we will be using Poll Everywhere to answer questions and prompt discussion. This system works through your cell phones, so please bring them to class everyday. Participation grades will be based partly on participating actively in polling responses.

**Science in the News Paper:** This is a short 2-page paper that summarizes an interesting science article that you find in the scientific press and discusses how the scientific finding either relates to your life or impacts human society. The goal of this assignment is to discover the connection between science and our daily lives.

Note: Missing an assignment, test, or final without permission from the instructor will result in a zero. Make-up assignments/tests/finals will not be given except under extenuating circumstances. If the student cannot be present, they are expected to contact the instructor BEFORE the assignment/test/final and will be asked to obtain an official excuse from the dean of undergraduate affairs office before rescheduling. Whether the student is allowed to make- up the assignment/test/final is entirely at the discretion of the instructor regardless of a letter from the dean

**Grading of Assignments:** A single grade based on performance in both the lecture and lab will be assigned for this 4-credit course. The following criteria will be used to calculate the grade.

Three In-class Exams (Drop One):	30%
Final Exam (cumulative):	20%
Class Reading Quizzes:	10%
Science in the News Paper:	10%
Class Discussions:	5%
Laboratory Grade:	25%

## ONLINE COURSE COMPONENTS

**OAKS:** This is the College of Charleston's course management system. It is an integral part of many of our courses and we will be making use of it during the semester. OAKS is where any supplemental class readings, notes, news, powerpoints, etc. will be located.

**MindTap:** This is a personalized program of digital products and services that allows us to interactively engage with the subject matter. Class reading quizzes will be provided through this online software. Other features of MindTap include an eBook and flash cards of important terms. To register for our class, use the following URL: <https://login.cengagebrain.com/course/MTPP-94PP-92JX>

**Poll Everywhere:** This is a program that works through cell phones, tablets, and computers to gain live feedback during lectures. We will be using this as part of our in class discussions, so please bring a device that works with the program to class.

### STUDENT SUPPORT

**Office Hours:** Please come see me if you need any additional help in my class, the lab or are just looking for some general advice about your academic path here at the college. I have scheduled office hours on Monday, Wednesday, and Friday that will occur after our class in Harbor Walk Rooms 309 or 311. I will also happily meet you in my office at 65 Coming St. by appointment.

**Center for Student Learning:** I encourage you to utilize the Center for Student Learning's (CSL) academic support services for assistance in study strategies, speaking & writing strategies, and course content. They offer tutoring, Supplemental Instruction, study strategy appointments, and workshops. Students of all abilities have become more successful using these programs throughout their academic career and the services are available to you at no additional cost. For more information regarding these services please visit the CSL website at <http://csl.cofc.edu> or call (843)953-5635.

**Student Accommodations:** Any student eligible for and needing accommodations because of a disability is requested to speak with the professor during the first two weeks of class or as soon as the student has been approved for services so that reasonable accommodations can be arranged. For more information visit: <http://disabilityservices.cofc.edu/index.php>

### COURSE POLICIES

**Attendance:** While attendance is not mandatory it is an essential component of the course. The most beneficial parts of this course are going to occur through our in-class discussions. These discussions are factored into your grade and attendance will be measured through participation in the poll questions.

**Classroom Courtesy:** A movie theater and a classroom might not have much in common except when it comes to the distraction of electronic devices. Students are asked to keep all electronic devices on silent and cell phones out of sight unless being used for Poll Everywhere questions. No electronics will be allowed during exams. Exceptions will be made in extreme situations such as spouses anticipating the birth of a child or a serious emergency. Permission to leave an electronic device on should be obtained prior to class.

#### Grading Scale:

93 and above: A	73-76.9: C
90-92.9: A-	70-72.9: C-
87-89.9: B+	67-69.9: D+
83-86.9: B	63-66.9: D
80-82.9: B-	60-62.9: D-
77-79.9: C+	below 60: F

**Academic Integrity:** Students are expected to behave in an honest and responsible manner. Violations of the honor code are offensive and will generally be dealt with severely. We will adhere to the following policy as quoted from the Honor Council's recommended guidelines:

"Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when identified, are investigated. Each incident will be examined to determine the degree of deception involved.

Incidents where the instructor determines the student's actions are related more to a misunderstanding will be handled by the instructor. A written intervention designed to help prevent the student from repeating the error will be given to the student. The intervention, submitted by form and signed both by the instructor and the student, will be forwarded to the Dean of Students and placed in the student's file.

Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XXF in the course, indicating failure of the course due to academic dishonesty. This grade will appear on the student's transcript for two years after which the student may petition for the XX to be expunged. The F is permanent. The student may also be placed on disciplinary probation, suspended (temporary removal) or expelled (permanent removal) from the College by the Honor Board.

Students should be aware that unauthorized collaboration--working together without permission-- is a form of cheating. Unless the instructor specifies that students can work together on an assignment, quiz and/or test, no collaboration during the completion of the assignment is permitted. Other forms of cheating include possessing or using an unauthorized study aid (which could include accessing information via a cell phone or computer), copying from others' exams, fabricating data, and giving unauthorized assistance.

Research conducted and/or papers written for other classes cannot be used in whole or in part for any assignment in this class without obtaining prior permission from the instructor.

Students can find the complete Honor Code and all related processes in the Student Handbook at <http://studentaffairs.cofc.edu/honor-system/studenthandbook/index.php>

**Laboratory Safety:** Policy can be found in your laboratory syllabus and on our OAKS page under the syllabus folder.

<b>Date</b>	<b>Topic</b>	<b>Readings</b>
Aug 24	Introduction	
Aug 26	I. Principles of Evolution	Ch. 16
Aug 29** – Sep 2	A. Evidence of Evolution B. Processes of Evolution **Aug 29 Last day of drop-add	Ch. 16 Ch. 17
Sep 5 – Sep 9	C. Life's Origin and Early Evolution II. Biodiversity A. Viruses and Bacteria B. Protists	Ch. 18 Ch. 19 Ch. 20
Sep 12 – Sep 14	C. Fungi	Ch. 22
Sep 16	<b>Test 1</b>	
Sep 19 – Sep 23	D. Plant Evolution E. Plant Tissues	Ch. 21 Ch. 25
Sep 26 – Sep 30	E. Plant Tissues Cntd F. Plant Reproduction	Ch. 25 Ch. 26
Oct 3 – Oct 7	G. Animal Diversity – Invertebrates	Ch. 23
Oct 10 – Oct 12	H. Animal Diversity – Chordates	Ch. 24
Oct 14	<b>Test 2</b>	
Oct 17 – Oct 21	III. How Animals Work A. Animal Tissues and Organ Systems	Ch. 28
Oct 24 – Oct 28**	B. Circulation **Oct 27 Last day to withdraw with a grade of "W"	Ch. 33
Oct 31 – Nov 2	C. Immunity D. Digestion and Human Nutrition	Ch. 34 Ch. 36
Nov 4	E. Reproduction and Development <b>Science in the News Paper Due</b>	Ch. 38
Nov 7	Fall Break	
Nov 9	IV. Principles of Ecology A. Animal Behavior	Ch. 39
Nov 11	<b>Test 3</b>	
Nov 14 – Nov 18	B. Population Ecology C. Community Ecology	Ch. 40 Ch. 41
Nov 21	C. Community Ecology Cntd.	Ch. 41
Nov 23 – Nov 25	Thanksgiving Break	
Nov 28 – Dec 2	D. Ecosystems E. The Biosphere	Ch. 42 Ch. 43
Monday, Dec 5	F. Human Effects on the Biosphere	Ch. 44
Wednesday, Dec 7	<b>Final Exam 12:00 pm</b>	