

Concepts & Applications in Biology II
BIOL 102 -Spring Semester 2020
RITA 102

Required text: *Biology: Concepts and Application 10th+ Ed. (Starr, Evers, and Starr)*
Website: OAKS

Contact information:

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Course Description: This is a non-science majors' course, which will provide a background for understanding and evaluating contemporary topics in biology and societal/environmental issues. The course emphasizes physiology and anatomy of organisms, ecological and evolutionary concepts, biodiversity, and conservation biology. An understanding of methods, history, and dynamic nature of science will also be emphasized. A case study based approach will be used to learn much of the material in this course. We will apply biological concepts to real-life problems.

Prerequisites/Corequisites: BIOL 101 and BIOL 101L are prerequisites for BIOL 102. BIOL 102L is a corequisite. Be sure to purchase the BIOL 102 Lab Manual from the bookstore prior to your first lab.

Learning Outcomes: Upon completing this course, students will demonstrate basic knowledge and understanding in each of the following content areas as is covered in class, as well as demonstrate the ability to apply this knowledge to real-life situations:

- Evolutionary Processes
- Origins of Life
- Biodiversity
 - Viruses, Bacteria, and Archaeans
 - "Protist" Lineages
 - Plants
 - Fungi
 - Animals
- Principles of Ecology
- Basics of Immunology

OAKS: OAKS is the learning management system that is used by the College of Charleston. It is imperative that you learn to use OAKS, as it will be used by many of your classes as a way to provide material, give quizzes or tests, as a way to collect assignments, as a way to have class discussions, and as a way to communicate grades. I will be using OAKS extensively for this course, and will keep a running grade average for you on OAKS. You can log in to OAKS through MyCharleston, and there are many tutorials if you have trouble familiarizing yourself on your own. Here is a link to the OAKS support page, which is an excellent resource and links out to all of the tutorials: <http://blogs.cofc.edu/oaks/students/getting-started/> .

Assessments:

Participation	50 pts
Midterm 1	100 pts
Midterm 2	100 pts
Midterm 3 (Final)	100 pts
<u>Writing Assignments (3 Topics)</u>	<u>150 pts</u>
Total	500 pts

Grading Scale:

A	93-100 %
A-	90-92 %
B+	87-89 %
B	83-86 %
B-	80-82 %
C+	77-79 %
C	73-76 %
C-	70-72 %
D+	67-69 %
D	63-66 %
D-	60-62 %
F	0 -59 %

Attendance: Your grade in this course relies heavily on your participation in class. Excessive absences are guaranteed to affect your grade. Attendance will not be taken in lecture; however, no make-ups will be allowed for missed assignments or quizzes. If you are late to class and miss the quiz, you will not be allowed to take it. Therefore, regular attendance is highly recommended. It is the student's responsibility to find out what was missed in case of unavoidable absence. If you must miss a class due to illness, you may be allowed to complete the missed work or an alternate assignment, but you must obtain an absence memo from the Office of the Associate Dean of Students at 67 George Street. It must be a **documented** absence to be excused; you must talk to me about it, and it is at my discretion. You may access the required forms at the following address:

<http://studentaffairs.cofc.edu/services/absence.php>

MISSING 4-5 CLASSES IN A ROW WILL RESULT IN A "WA" GRADE (WITHDRAWN FOR EXCESSIVE ABSENCE) AT MIDTERM AND/OR FINAL GRADE. A FINAL "WA" GRADE IS CALCULATED AS AN "F" IN YOUR GPA . It is the student's responsibility to contact me immediately with any issues. If you have extenuating circumstances, then please speak to me on an individual basis .

Food insecurity: Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Dean of Students for support. Furthermore, please notify me if you are comfortable in doing so. This will enable me to provide connections to any resources of which I may be aware.

Extra help: The Center for Student Learning (CSL) now has a walk-in science tutoring lab. You may use the walk-in lab during the scheduled times of operation which can be found at <http://csl.cofc.edu/labs/> .

Inclement Weather: It has become tradition at the College of Charleston to cancel classes in observance of tropical storms and/or hurricanes that might make landfall within the neighboring coastal states. Please be considerate to the challenges faced by the Department and College to reschedule the missed course meeting times. If lectures are cancelled due to inclement weather, we reserve the option to reschedule missed lectures, modify the course content, or require students to learn course material outside the scheduled lecture times.

Should this occur, a revised syllabus and schedule for the lectures will be distributed to all students.

Student Conduct:

- a. There is to be no talking during the instruction period. If you have a question, please raise your hand prior to asking the question. While answering a student's question, please remain quiet so that the student and other class members can hear the reply.
- b. There is to be no talking during quizzes or exams. If you have a question, please raise your hand and remain quiet until the instructor can come to you.
- c. Please turn off all cellular phones before entering the classroom. If you use your cell-phone during class you will be asked to leave the room.
- d. Remember you are attending classes to learn and apply the material/principles covered in the lecture. Reading newspapers/magazine, sleeping, or distracting the instructor or the other students will not be tolerated.
- e. If you have a documented disability that may require assistance, you will need to contact the Center for Disability Services for coordination in your academic accommodations. If the CDS will be involved in administering an exam, we request that you inform us in advance (e.g. the day before the exam is not acceptable). The CDS is located in the Lightsey Center in Suite 104. The CDS phone number is (843) 953-1431. For more information about disabilities, see <http://disabilityservices.cofc.edu>. Reasonable efforts will be made to accommodate any disability.
- f. No College of Charleston employee or student should be subject to unwelcome verbal or physical conduct. It is expected that students, faculty and staff will treat one another with respect. Individuals who violate this policy are subject to disciplinary action up to, and including, termination and/or expulsion from the College and the possibility of civil and criminal prosecution.
- g. 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 by both 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 XF 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 X to be expunged. 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. No collaboration during the completion of the quizzes, assignments, or exams is permitted. Other forms of cheating include possessing or using an unauthorized study aid (which could include accessing information stored on a cell phone), copying from others' exams, fabricating data, and giving unauthorized assistance.

Students can find the complete Honor Code and all related processes in the *Student Handbook* at <http://www.cofc.edu/generaldocuments/handbook.pdf>

Writing Assignments: Students will pick three general topics from those listed (unless agreed on beforehand) to write a 2-page (double spaces) assignment. Topics are: Evolution in Education, Genetically Modified Organisms (GMOs), Gene Therapy, Genetically-enhanced humans, Human Cloning, Conservation, Invasive Species Control, Climate Change, and Environmental Pollution. Shape your writing as a persuasive 'Policy Brief' to convince a national policy-making committee to adopt your recommendations or viewpoint.

TENTATIVE LECTURE SCHEDULE

Week	Dates	Topic	Book Chapters	Notes
1	1/8	Introduction to Inheritance		
	1/10	Inheritance Patterns		
2	1/13	Inheritance continued		
	1/15	Population Genetics		Add/Drop Deadline
	1/17	Violations of Hardy-Weinberg		
3	1/20	Martin Luther King, Jr Holiday		No Class
	1/22	Introduction to Evolution		
	1/24	Natural Selection		
4	1/27	Processes of Evolution		
	1/29	Speciation and Macroevolution		
	1/31	Evolution cont.		
5	2/3	How Life Began—Early Evolution		
	2/5	The RNA World		
	2/7	Midterm I		
6	2/10	Viruses		Withdraw Deadline
	2/12	Viruses		Essay 1 Due
	2/14	Prokaryotes		
7	2/17	Prokaryotes		
	2/19	Prokaryotes		
	2/21	Protists		
8	2/24	Protists		
	2/26	Fungi – Life cycles		
	2/28	Fungi – Structures		
9	3/2	Plant evolution – Algae		
	3/4	Plant evolution – Bryophytes		
	3/6	Plant Evolution – Ferns		Midterm Grades
10	3/9	Plant Evolution – Gymnosperms		
	3/11	Plant Evolution –Angiosperms		
	3/13	Midterm II		Essay 2 Due
	3/15-21	Spring Break		Spring Break
11	3/23	Introduction to Animals; Acoelomate Invertebrates		
	3/25	Protostome Invertebrates		
	3/27	Deuterostome Invertebrates		
12	3/30	Fish – hard and soft		
	4/1	Amphibians and Reptiles,		
	4/3	Dinosaurs and Birds		
13	4/6	Marsupials and Mammals		
	4/8	Primates		
	4/10	Introduction to Immunity		
14	4/13	Self vs Non-self		
	4/15	Adaptive Immunity		
	4/17	Intro to Ecology		
15	4/20	Ecology Case Studies		
	4/22	Ecology Case Studies		Essay 3 Due
Final	4/24	8-11am		RITA 102