

Biology 211
Biodiversity, Ecology & Conservation Biology
Fall 2020 Section 01
Lecture: RITA 154 TR 10:50-12:05
Discussion: RITA 271 R 1:45-4:45

Textbook: *Biological Science*, 6th or 7th edition. S. Freeman.

Instructor:

Brian Scholtens

Office: RITA 268 (lab)

Office phone: 953- 8081

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Office Hours:

For this term, I would prefer to have online Zoom meetings if at all possible. If that doesn't work, let me know. My office hours are TR 9:50 – 10:50 and by appointment, but please feel free to contact me and schedule anytime. Your best bet to contact me is through email. I will check my email frequently and I will reply.

Course Description: Biodiversity, Ecology & Conservation Biology is a foundation course for intermediate level biology majors emphasizing conservation biology and focusing on evolution, biodiversity, population genetics and ecology. You will be exposed to lectures, readings, discussions, and written assignments to ensure a thorough, lasting understanding of the material. Co-requisite three hour discussion section involves individual and group work focusing on reading, discussing and critiquing scientific literature; data analysis and interpretation (statistics); research proposal writing; and oral presentations (Poster and PowerPoint). This course will prepare you to meet expectations for upper-level classes in the major.

Student Learning Objectives:

Demonstrate an understanding of the centrality of evolutionary theory in modern biology and how interactions between and among organisms influence the evolution of populations

Appreciate the influence that humans have on ecosystems and the organisms in them

Practice and improve scientific writing skills

Develop basic scientific research skills

Pre-requisites: Biology 111 and 112 with corresponding labs.

Class Attendance: Class attendance is **very important**. Students are responsible for all content for each class that is missed.

Lectures this term will be asynchronous, with audio PPT slides available online on our OAKS site. The class will be split in half for discussion, with ½ attending during the scheduled discussion period on Thursday, and the other ½ attending during the scheduled lecture times on Tuesday and Thursday. Exams will be based predominantly on lecture material, but discussion material, particularly scientific process material will also be covered. Assigned text and article readings are also required. You give yourself the best chance to do well in this course if you listen to lectures and do readings. You

are responsible for your own note-taking, but feel free to ask questions about the material.

Discussion Session Attendance: Discussion attendance is **mandatory**. If you must miss a discussion session, prior notification and documentation is required. I understand that we are in very unique times right now, and that reasons may come up to necessitate an absence. However, it is very important that students not think that they can switch back and forth between lecture times and discussion time. Our discussion room is rated at only 11 students and an instructor for COVID capacity. It will not be possible to have students make up discussion in that room.

Participation: Discussion sections are interactive and your participation is expected. You are expected to be respectful of your classmates and of the learning environment. Participation (or lack thereof) will contribute to your grade. Come prepared having done any reading or assignments so that we can have the best experience possible in discussion.

Collaborative learning: Several activities in this course will involve working in small groups, and part of your grade will be based on working effectively within your group. Nevertheless, most assignments are to be completed individually, and you alone are responsible for your submitted work.

Exams: There are 3 exams scheduled during the semester (see syllabus for dates – all on Thursdays) and a cumulative final exam scheduled during the final examination period. Exams will be short answer and essay style. If you have any legitimate conflicts with the scheduled exams, please see me well ahead of time, before the exam date. Students must provide a valid and documented excuse (letter from Doctor, Coach or Dean) for missing a scheduled exam. Acceptable excuses include severe illness, personal tragedy (i.e. funeral), celebration (i.e. wedding), or circumstances beyond the student's control. Whenever possible, please alert me well ahead of time when you know you will miss a scheduled exam. Anyone who misses an exam without an acceptable excuse will receive a grade of zero for that exam. Makeup exams must be arranged promptly.

College of Charleston Honor Code and Academic Integrity:

Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when suspected, 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 status indicator 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.

Students should be aware that unauthorized collaboration--working together without permission-- is a form of cheating. 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. Because we use a great deal of material from the web and other papers, it is especially important to realized that if text is not your words, it is plagiarism, including text from the internet.

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>

Parity Statement:

Any student eligible for and needing academic adjustments or accommodations through the SNAP program because of a documented disability is requested to speak with me in a timely manner so that your needs can be addressed. International or ESL students are also encouraged to discuss any concerns with me in a timely manner.

Important Course Policies:

You are expected to check our course OAKS site frequently. Course assignments, announcements, etc. will be posted there. The OAKS site for the course will have all assignments, handouts and lecture PPTs. I will communicate with you from your CofC email accounts (not yahoo, hotmail, gmail etc), often by sending messages through OAKS to the entire class.

All students are expected to turn in assignments by the beginning of the class period on the dates scheduled. Papers must turned in as MS Word documents to receive full credit. The entire MS Office Suite is available free to all students through our IT services. Late papers will be marked down 5% if turned in late on the day the assignment is due and 10% for every class day of delay.

You should retain a printed (not just electronic) copy of your assignments until the graded papers are returned to you by the instructor. In addition, you should hold onto all graded assignments and exams returned to you until the final grade has been turned in.

Grading: Grades will be based on a points system. The breakdown is given below.

Component:	Points:
Midterm	100
Midterm	100
Midterm	100
Final	150
Project 1	TBA
Project 2	TBA
In class essays	50
Participation, mini-assignments, discussion questions, etc.	TBA
Totals	TBA

Letter grades will be determined by the following breakdown:

Numerical Grade	Letter Grade
93-100	A

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

Class Rules and Pet Peeves: Please be prompt. **Turn off your cell phone during class** unless you have a VERY important reason for having it on (e.g. child in daycare, ill or hospitalized friend or relative) in which case you may leave it on but in silent mode. **No text messaging during class.** Cell phones are to remain out of sight during class time. Please stay awake, participate and be attentive. You may interrupt me any time to ask a question.

Helpful Advice to do well in this class:

1. Attend class!
2. Get involved. Ask questions (to both the instructor and your peers).
3. Don't just take notes, LISTEN and LEARN during class time (active learning).
4. Read through your notes regularly, don't get behind.
5. Do the readings as you go along, DON'T PROCRASTINATE.
6. Do the assignments/projects well ahead of time. They can be time consuming so DON'T PROCRASTINATE.
7. Try studying with a partner or group and TALKING through the information. If you can explain concepts to another person, you will have them mastered.
8. Study to understand, not to memorize.
9. Remember to think logically about biological concepts; you will frequently be able to reason out an answer instead of just memorizing it.
10. Come see me with your questions or concerns. If you are engaged in your learning, you will have questions and I am happy to help!

Tentative lecture schedule:

<u>Day</u>	<u>Date</u>	<u>Readings</u>	<u>Topic</u>
T	8-25	1,54	Introduction – plan for course
R	8-27	54	Biodiversity
T	9-1	23	Population & conservation genetics
R	9-3		
T	9-8	49, 51	Population demography & Life history
R	9-10	51	Population Growth
T	9-15		Zoom review
R	9-17		EXAM I
T	9-22	52	Community Interactions
R	9-24		
T	9-29	52	Community Structure
R	10-1	53	Species Diversity
T	10-6	53	Ecosystem Function
R	10-8	54	Climate Change & Global warming
T	10-13	54	Zoom review
R	10-15		EXAM II
T	10-20	24 & 25	Phylogenies & macroevolution
R	10-22	26	Bacteria & Archaea
T	10-27	27	Protists
R	10-29	28	Plants
T	11-3		Election Day – do class – VOTE!
R	11-5	29 & 30	Fungi & Intro to Animals
T	11-10	31 & 32	Animals
R	11-12		
T	11-17		Zoom review
R	11-19		EXAM III
T	11-24		Thanksgiving, no class
R	11-26		Thanksgiving, no class
T	12-1	54	Humans & biodiversity
R	12-3		Zoom Review
R	12-		FINAL EXAM 8-11 AM

Readings outside of the text will be available through the OAKS site for this course. This is a **tentative** schedule and may be modified at any time.

Recitation schedule:

<u>Week of</u>	<u>Topic</u>	<u>Due</u>
Aug 25	Intro, Academic Plans, Introduction to scientific literature; Asking biological questions Introduce iNaturalist project	
Sep 1	Discuss article, Project 1: Workshop on biological hypotheses and essay writing In class essay 1 & peer review	<ul style="list-style-type: none"> • Read paper and handouts for paper reading on OAKS • provide discussion question <u>Categorized questions assignment</u>
Sep 8	Project 1: Working with and graphing data	<u>Hypothesis statements</u> <u>Completed essay</u>
Sep 15	Test week – no discussion	
Sep 22	Project 1: Statistical analyses of data	<u>Graphs in electronic Excel format</u>
Sep 29	Article discussion Project 1: Literature search to support research projects In class essay 2	<ul style="list-style-type: none"> • <u>Statistical analysis of data and written interpretation</u> Discussion questions
Oct 6	Article discussion Project 1: Writing workshop for discussion section of paper	10 relevant references properly formatted Discussion questions
Oct 13	Test week – no discussion	
Oct 20	Project 2: LTER Experimental design workshop	Written discussion section with figures, statistical analysis and references.
Oct 27	Project 2: LTER literature search Find ecology paper for next week's presentation Phylogeny exercises: avoiding common student pitfalls	Group Proposal for LTER project
Nov 3	Project 2: Poster format workshop	Ecology paper PPT (all on Thursday afternoon by Zoom)
Nov 10	Project 2: Poster peer review	Poster due Reviews due by end of discussion
Nov 17	Test week – no discussion	
Dec 1	Project 2: Poster Session	Poster evaluation sheets complete by end of discussion

This is a **tentative** schedule and may be modified, particularly the discussion schedule.

Discussion Questions: Hand in a MS Word document at the end of class (no extensions). All other assignments are due at the beginning of class and will otherwise be considered late. Details of projects and associated handouts will be provided during discussion. Please see the lecture syllabus for point distributions of projects.