

Biology 211
Biodiversity, Ecology & Conservation Biology
Fall 2017 Section 01 & 02
Lecture: HWWE 305 TR 9:55-11:10
Discussion: HWWE 305 M 2:10-5:20 or W 2:10-5:10

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

Instructor:

Brian Scholtens

Office: HWWE 214; Lab: HWWE 212

Office phone: 953- 8081

Email: scholtensb@cofc.edu

Office Hours:

Officially, TR 12:45 – 2:00 and by appointment, but please feel free to drop in 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. Exams will be based predominantly on lectures. Assigned text and article readings are also required. You will not do well in this course if you miss lectures. Lecture notes (PowerPoint handouts) are not available online nor are they handed out in class. You are responsible for your own note-taking.

Discussion Session Attendance: Discussion attendance is **mandatory**. If you must miss a discussion session, prior notification and documentation of excuse is required.

Participation: Both lecture and 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.

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) 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.

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 the professor in a timely manner so that your needs can be addressed. International or ESL students are also encouraged to discuss any concerns with the Instructor 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 outlines of lectures (not the same as actual notes). I will communicate with you from your CofC email accounts (not yahoo, hotmail, gmail etc).

All students are expected to turn in assignments by the beginning of the class period on the dates scheduled. Papers must be typed (word processed) to receive full credit. Late papers will be marked down 5% if turned in late (outside of class) on the day the assignment is due and 10% for every class day of delay.

You will be expected to 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	75
Project 2	100
Project 3	100
Participation, mini-assignments, discussion questions, etc.	100
Totals	825 pts

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	8-22	1,54	Introduction – plan for course
R	8-24	54	Biodiversity
T	8-29	23	Population & conservation genetics
R	8-31		Population & conservation genetics
T	9-5	49, 51	Population demography
R	9-7	51	Life Histories
T	9-12	51	Population Growth
R	9-14	51	Populations
T	9-19		EXAM I
R	9-21	52	Community Interactions
T	9-26	52	Community Structure
R	9-28	52, 53	Species Diversity; Ecosystem Function
T	10-3	53	Climate Change & Global warming
R	10-5	54	Invasive species; Fragmentation
T	10-10		EXAM II
R	10-12	25	Phylogenies
T	10-17		Fall Break
R	10-19	24	Macroevolution
T	10-24	26	Bacteria & Archaea
R	10-26	27	Protists
T	10-31	28	Plants
R	11-2	29	Fungi
T	11-7	30	Intro to Animals
R	11-9	31	Protostome Animals
T	11-14	32	Deuterostome Animals
R	11-16		Finish up
T	11-21		EXAM III
R	11-23		Thanksgiving Break, no class
T	11-28	54	Humans & biodiversity
R	11-30		Review & Finish Up (Last day of class)
R	12-7		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 28	Intro, Academic Plans, Introduction to scientific literature; Asking biological questions	
Sep 4	Discuss article, Project 1: Building biological hypotheses	<ul style="list-style-type: none"> • Read paper and hand outs for paper reading on OAKS • provide discussion questions <u>Categorized questions assignment</u>
Sep 11	Project 1: Working with and graphing data	Data entered in Excel
Sep 18	Project 1: Statistical analyses of data Introduction to Powerpoint	<u>Graphs in electronic Excel format</u>
Sep 25	Article discussion Student PPT Presentation: answering a question Introduce citizen science project 2	<ul style="list-style-type: none"> • <u>PPT presentations</u> Discussion questions
Oct 2	Field trip for citizen science project 2	Project 1 due
Oct 9	Project 2: Experimental design workshop Article discussion	Discussion questions
Oct 23	Poster workshop Introduce Project 3 Phylogeny exercises: avoiding common student pitfalls	Bring materials for citizen science poster
Oct 30	Project 2: Poster Session Web of Science work: Find ecology paper for next week's presentation, phylogeny check	Poster due Phylogeny at end of period
Nov 6	Ecology paper Powerpoint Project 3: Group discussion of phylogenies for your organism	Ecology paper PPT
Nov 13	Project 3: Writing workshop	Draft due in class – for peer review
Nov 27	Project 3: Final Presentation Presentations	FINAL Draft of Project 3 due on or prior to Dec 4 th

This is a **tentative** schedule and may be modified at any time.

Discussion Questions: Hand in a typed copy 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.