Biology 211
Biodiversity, Ecology and Conservation Biology
Fall 2015

Instructor: Mrs. Dorian McMillan
School Science and Math Building (SSMB) Room 154
Office Phone: 953-4847
E-Mail: memilland@cofc.edu (preferred to phone messages)

Office Hours: I am generally downtown all day M-R and can be available for students before or after class. Please contact me for an appointment.
Prerequisites: BIOL 111/111L; BIOL 112/112L
Co-requisite: BIOL211D
Textbook: Biological Science, 5th Edition (Freeman)

Course Objectives: A continuation of the foundational series, with emphasis on evolution, biodiversity and ecology. Weekly one-hour recitations will focus on practicing skills including researching/understanding/critiquing scientific literature, statistical analysis, and writing/presentation skills.

Class attendance and participation: Participation is critical in this course, and you can’t participate if you aren’t in class. For that reason, the following attendance policy applies:

- Students may miss up to 3 LECTURES and 1 RECITATION for whatever reason (excused or unexcused).
  - Students are expected to arrive to class ON TIME and are expected TO REMAIN for the class duration. For every 2 instances that a student is tardy/leaves class early, a penalty of 1 unexcused absence will be assessed. IT IS THE RESPONSIBILITY OF THE STUDENT TO MAKE SURE THAT (S)HE WAS COUNTED ON THE CLASS ROLL.
- Any UNexcused absences accrued thereafter will result in a final grade of WA (=F) for the course.
  - Acceptable excuses include illness, death of a family member or close friend, pre-excused CofC athletics event, religious holiday, military or jury duty. These must be appropriately documented through Student Affairs. I WILL NOT ACCEPT NON-DOCUMENTED EXCUSES. The absence memo request form may be downloaded here: http://studentaffairs.cofc.edu/about/absence-memo/absence-memo.pdf
  - UNACCEPTABLE excuses include (but are not limited to): fraternity/sorority/other social events, family/friends in town, personal vacations (including family vacations), holiday extensions, family reunions, birthdays, oversleeping, good weather, bad weather (unless classes are officially cancelled by CofC), studying for other courses, job/work issues, concert tickets, traffic.

Students are responsible for any missed material, whether the absence be excused or unexcused.

Online Course Materials: Readings, assignments, power point presentations, exams dates and grades will be available online through OAKS. You can access OAKS directly via https://lms.cofc.edu. CHECK THE CALENDAR FREQUENTLY!!!! Readings on the calendar are to have been read BEFORE coming to class on that day.

Cell Phones: As a courtesy to your instructor and your classmates, please make sure to silence your cell phone before coming into class. Text messaging during class time is not permitted. The instructor reserves the right to dismiss students who violate the cell phone policy (which counts as an unexcused absence).

Honor System: All students are expected to abide by the College of Charleston Honor System. The Honor System text may be viewed on the Student Affairs web site: http://studentaffairs.cofc.edu/honor-system/index.php. Violation of the Honor Code may result in a final grade of XF.

Accommodation: Students needing special accommodations to complete the requirements for this course should contact me as soon as possible.
Assessment

Lecture Exams: There will be 3 hour exams and a cumulative final on the lecture content. AN EXCUSED ABSENCE MUST BE DOCUMENTED THROUGH STUDENT AFFAIRS TO MAKE UP AN EXAM.

Recitation Assessment: The recitation grade will be calculated based on a series of weekly exercises, which will include both individual and team assignments.

*Grading (subject to change)*

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<th>Grades</th>
<th>% of grade</th>
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<tbody>
<tr>
<td>Lecture Exam 1</td>
<td>15</td>
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<td>Lecture Exam 2</td>
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<tr>
<td>Lecture Exam 3</td>
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<td>Final Exam (cumulative)</td>
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<td>Recitation assignments</td>
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Range 0.5 and higher rounded up to next whole number; 0.49 and lower rounded down

Tentative Sequence of Topics

Please see Calendar in OAKS for assigned readings

LECTURE TOPICS

EVOLUTIONARY PRINCIPLES AND PROCESSES
- Evidence for evolution (homology); review of natural selection
- Evolutionary processes (H-W Equilibrium)
- Review of species concepts & speciation
- Phylogenies and history of life

OVERVIEW OF LIFE’S DIVERSITY
- Prokaryotes (Bacteria & Archaea)
- Protists
- Plants
- Fungi
- Animals

TOPICS IN ECOLOGY
- Nutrient cycles; aquatic and terrestrial ecosystems
- Population ecology
- Community ecology
- Issues related to ecosystem-level ecology

DISCUSSION TOPICS
- Week 1 – Intro; overview of Biology majors and minors available at ColC; how to read scientific papers
- Week 2 – Hypothesis construction and data collection
- Week 3 – Constructing phylogenies
- Week 4 – Graphing in Excel, intro to statistics
- Week 5 – Using statistics in hypothesis testing
- Week 6 – Poster presentation workshop
- Week 7 – Poster symposium and evaluation
- Week 8 – Library/literature search skills
- Week 9 – Writing a research proposal
- Week 10 – PowerPoint presentations
- Week 11 – Written research proposal evaluations
- Week 12 – PowerPoint symposium and evaluations