

## **Course Syllabus- Biological Science II (BIOL 122)- Spring Semester 2011**

<b>Instructor:</b>	Dr. Scott Parker
<b>Contact Info:</b>	Office: SCI 116B Lab: SCI 213 (shared with Dr. Deborah Hutchinson) email: <a href="mailto:sparker@coastal.edu">sparker@coastal.edu</a> Office phone: (843) 349-2491 Office Hours: Monday 10:30-1:30, Tuesday 2:00-4:00, Wednesday 1:30-4:30, Thursday 2:00-4:00, or by appointment

**Class Meeting Time and Location:** Lecture: Tuesday, Thursday, 4:30-5:45, Smith Science Building, room 219.

**Required textbook:** *Biology* (2009), 8<sup>th</sup> ed, by Campbell and Reece, (ISBN 978-0-8053-6844-4), Benjamin Cummings.

**Course description:** 122 Biological Science II: (3) (Prereq: Biology 121, 121L) Coreq: BIOL 122L). An introduction to biological principles for students majoring in biology and related fields of study. Topics include evolution, origin of life, plant and animal development, ecology. F, S.

**Objectives:** BIOL 122 is the foundation for upper-level courses in biology, and is the second part of a two-semester introductory series (Biology 121/121L). The objective of this course is for students to master basic principles of ecology, evolution, and organismal biology, thus providing the necessary background for progression to upper-level courses within the major.

### **Student Learning Outcomes:**

After completing this course, students should be able to:

1. Be able to define and explain the similarities and differences between scientific hypotheses, theories, and laws.
2. Understand evolution by natural selection, and explain how evolutionary theory forms a framework for biological principles
3. Provide evidence for the theory of how early life evolved
4. Provide evidence for the relatedness of all species
5. Describe the characteristics and functions of select plant and animal physiological and anatomical systems
6. Recognize and describe the basic characters of bacteria, archaeabacteria, protists, plants, invertebrates and vertebrates.
7. Exhibit skills in comprehension, analysis, and critical thinking
8. Explain basic concepts of ecology

**Evaluation:**

Midterms:   **First exam 18%, 3 February**  
                 **Second exam 18%, 3 March**  
                 **Third exam 18%, 12 April**

Final exam:   **Comprehensive, 28%, Thursday, 5 May, 4 pm**

**Exams:** Exams are mandatory and will include all material covered in class up until the exam date. Format of exams can include: true/false, multiple choice, math problems, interpretation of drawings, graphs and just about any other type of test question. **The final exam is cumulative.** Exams will be taken on a scantron so please bring a #2 pencil.

**Exam make-up policy:** Exam dates may not be changed unless you receive prior approval by me. Make up exams are only given for university-approved absences. Please see the CCU 2010 Catalog p. 41 for specific information. If you miss an exam without a prior approved excuse YOU WILL NOT BE ALLOWED TO TAKE THE EXAM. If you miss an exam due to an emergency and are unable to contact me, you must provide a legitimate note from a physician, counselor, emergency-responder (e.g. police, fire, tow-truck), or other person of official capacity. Please note: missing an exam due to sleeping through a clock alarm is not a valid excuse.

***In-class assignments: 18%:*** In-class assignments that address the various topics/concepts covered will be given at various times throughout the course. These writing assignments will range from a few sentences to no more than two pages in length (double spaced with 1" margins). The purpose of these short assignments are twofold: 1) they will help me determine which concepts students may be having trouble with, and, 2) it will help you keep actively engaged in the material as we cover it.

**(Please note: in-class assignments are equivalent to one midterm exam. Take them seriously).** If you miss a class due to an unexcused absence, you may not make up in-class assignments.

<b>Assignment</b>	<b>Points</b>
Exam 1	180
Exam 2	180
Exam 3	180
Final exam	280
In-class assign	180
Total	1000

<b>Grade</b>	<b>%</b>	<b>Earned Points</b>
A	90-100	899.5-1000
B+	87-89	869.5-899
B	80-86	799.5-869
C+	77-79	769.5-799
C	70-76	699.5-769
D+	67-69	669.5-699
D	60-66	599.5-669.5
F	< 60	< 599

**Determination of Grade:** The final grade will be assigned based upon the percentage of the total points earned. If you score in the ranges listed above you are assured getting at least the letter grade shown. It is possible that the scale could drop, but you are promised that it will not be raised. NO EXTRA CREDIT ASSIGNMENTS WILL BE GIVEN ON AN INDIVIDUAL BASIS. Extra credit may be given to the class as a whole. **Returned assignments:** I will return all assignments in a timely fashion. If you have a question about a returned grade, you must notify me within TWO WEEKS of having received the returned assignment/quiz/exam. After two weeks, all grades will be considered final.

**Policies:**

My goal is to foster an active learning environment. To achieve this goal, I ask that you refrain from engaging in conversation during lecture. Try to avoid being late to class, however, should you have to arrive late, please find a seat near the entrance where you entered the classroom. Similarly, if you have to leave early, please sit near an exit so that your departure does not disturb the class. **Also, as a courtesy to all of your colleagues, please turn off all cell phones while class is in session. Just to be clear this means NO TEXTING!**

**Academic dishonesty-** I view students as junior colleagues and as such I expect that you will maintain the highest standards of academic integrity. As a student of Coastal Carolina University you are bound by an academic code of conduct. Each student is expected to do their own work on all assignments and examinations. Copying another's work, plagiarism, and any other forms of academic dishonesty will result in a 0 for the assignment. Any students involved in copying or cheating on an exam will receive an F for that exam. The academic code of conduct is available at:  
<http://www.coastal.edu/students/StudentHandbook.pdf> -- pp. 37-52

**Attendance (student)-** As life scientists, I assume that you are invested in your own education and are enrolled in this course because you want to be here. Consequently, daily attendance is expected. I will take attendance daily (although it does not count towards a grade) to comply with federal financial aid regulations. Please understand that if you want to do well in the course you will need to attend class regularly and on time. **As an additional incentive, writing assignments will be given on an impromptu basis so if you miss class you may very well also lose easy points on simple writing assignments.**

**Attendance (mine)-** I know that your time is important so I will do my utmost to begin class on time. I don't plan on being late but in the unlikely event that I am late and unable to provide prior notification, students are expected to wait 15 minutes before leaving the classroom.

**Blackboard Site:** All reading assignments, text of handouts and individual grades will be available on this site. The Blackboard website may be accessed at  
<http://www.coastal.edu/blackboard/>

**Disability Accommodations:** Accommodations are available for all students who have a disability that may prevent him or her from fully demonstrating their ability. Please let me know of any accommodations that you may need for this course as soon as possible. Please contact Counseling Services: <http://www.coastal.edu/counseling/> to assess your disability and provide you with the necessary documentation that you will then pass on to me. Counseling Services can be reached at (843) 349-2305. The office is located at 204 University Blvd in the Student Health Services/Counseling Services Building.

### **Some suggestions for how to do well in the course:**

- We will be covering a lot of material over the semester so it is crucial to stay actively engaged and not get behind. I recommend studying at least some every day and most importantly, if you do not understand something, make sure to come see me for help.
- **Attend Class Regularly:** One of the most important factors determining success of students in BIOL 122 is daily class attendance. Without exception, students who do not attend class regularly do much more poorly than students who attend class.
- If possible, form study groups with your colleagues. Talking about topics covered in lecture with others will help show you where your strengths and weaknesses lie and also help to increase your understanding of the material.
- Rewrite and clarify any parts of your lecture notes as needed. If you read through your notes and something does not make sense please ask me.
- Exams are based on material that we cover in class. I will use examples and material from the textbook to support the lectures but I will also use material from outside sources. The textbook should be used as a resource to compliment the lectures. Use the text to clarify and add context to material that you might not understand or that was only covered briefly during lecture.
- The evening or morning before class, skim the relevant areas of the textbook. By skimming the topics in the text prior to class you will be familiarized with the material and you will get a lot more out of the lecture.
- In science **details matter**. The material covered in the course will range from relatively broad concepts to understanding of specific mechanistic details. If you are unsure of how best to study or what details are important please ask.
- As much as you can help it, do not try to “cram” for exams in this course. Try to get a decent amount of sleep before the exam.
- Always feel free to ask questions and please come see me if you need help or even if you are just curious about something that we talked about in lecture or lab.

## **Schedule of Topics (NOTE: this schedule is tentative)**

<b><u>Date</u></b>	<b><u>Topic</u></b>
11 Jan	Course overview, administrative issues, decent with modification (Ch. 22)
13 Jan	Decent with modification (Ch. 22)
18 Jan	Evolution of populations (Ch. 23)
20 Jan	Origin of species (Ch. 24)
25 Jan	History of life on Earth (Ch. 25)
27 Jan	Phylogeny and the tree of life (Chapt. 26)
1 Feb	Phylogeny and the tree of life (con't)
<b>3 Feb</b>	<b>Midterm I</b>
8 Feb	Bacteria, archaea, and protists (Chs. 27, 28)
10 Feb	Bacteria, archea, protists (con't)
15 Feb	Plant diversity I: Seedless non-vascular and vascular plants (Ch.29)
17 Feb	Plant diversity II: Evolution of seed plants (Ch. 30)
22 Feb	Plant diversity (con't)
24 Feb	Plant form and function (Ch 35, 36)
1 Mar	Animal diversity (Ch. 32)
<b>3 Mar</b>	<b>Midterm II</b>
8 Mar	Invertebrates (Ch. 33)
10 Mar	Invertebrates (Con't)
<b>14-18 Mar</b>	<b>Spring Break</b>
22 Mar	Chordates (Ch. 34)
24 Mar	Vertebrates (Ch. 34)

- 29 Mar                  Animal form and function (Ch. 40)  
31 Mar                  Nutrition and digestion (Ch. 41)  
5 Apr                  Circulation and gas exchange (Ch. 42)  
7 Apr                  Circulation and gas exchange (con't)

**12 Apr                  Midterm III**

- 14 Apr                  Osmoregulation and excretion (Ch. 44)  
19 Apr                  Osmoregulation and excretion (con't)  
21 Apr                  Control and integration (Chs. 45, 48, 49)  
26 Apr                  Control and integration (Con't)  
28 Apr                  Introduction to ecology and the biosphere (Ch. 52)

**5-May (Thursday)      Final Exam (4:00 pm)**

**Legal Caveat/disclaimer:** The above schedule, policies, procedures and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better student learning.

## **Biological Sciences II (BIOL 122) Student Contract**

My signature below indicates I have read and understand the syllabus, and I accept the requirements of this course.

Signature: \_\_\_\_\_

Date: