

**BIOLOGICAL SCIENCE II**  
**ABIO 122 (4 credit hours)**  
**Spring, 2008**

**LECTURE INSTRUCTOR:** Dr. Hugh Hanlin  
**PHONE:** 641-3439

**OFFICE:** SBDG 101A  
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**LAB INSTRUCTORS:**

Dr. Andy Dyer, SBDG 101 E, 641-3443, andyd@usca.edu  
Mr. Brad Reinhart, SBDG 106, 641-3425, bradr@usca.edu  
Dr. Derek Zelmer, SBDG 101C, 641-3472, derekz@usca.edu

**LECTURE:** MW 1:00-2:15 PM, SBDG 327

<b>LABS:</b> Sec. 001	T	9:25AM-12:05PM	SBDG 103	Dr. Zelmer
Sec. 002	W	8:00 -10:40AM	SBDG 103	Dr. Zelmer
Sec. 003	M	10:00AM-12:40PM	SBDG 103	Dr. Dyer
Sec. 004	W	2:30 - 5:10 PM	SBDG 103	Mr. Reinhart

**TEXTBOOK:** Biology (7<sup>th</sup> ed.), Raven, Johnson, Losos & Singer (or any earlier edition of Raven & Johnson)

**LAB MANUALS:** A Photographic Atlas for the Biology Laboratory, Van de Graff & Crawley  
Biology Laboratory Manual, Dyer, Bennett & Hanlin

**LAB SUPPLIES:** A quad-ruled notebook is required. Surgical gloves are recommended for use with handling preserved specimens. Each student must provide his/her own eye protection and gloves when working with preserved specimens. (Caution: Exposure to formaldehyde has been linked to cancer in rats.)

**COURSE DESCRIPTION:** Biological principles and concepts from the tissue through ecosystem levels of organization.

**COURSE OBJECTIVES:**

- To acquaint students with biological principles associated with multicellularity, development, phylogeny, ecology and evolution.
- To acquaint students with the anatomical organization of organisms to include tissue, organs, and systems and their functions.
- To trace the development of organisms.
- To trace the phylogeny of organisms.
- To acquaint students with the behavior and ecology of organisms.

**STUDENT COMPETENCY STATEMENTS:** By the end of this course the student will have demonstrated the ability to:

- Discuss biological principles and topics of historical and current interest and importance.
- Describe the biological processes that operate at the multicellular levels to include histological, organismal, population, community and ecosystem levels of organization.
- Apply theoretical concepts in the laboratory by following a written procedure.

**METHODS OF PRESENTATION:** This course will consist of lectures by the instructors, classroom discussion, and group and individual laboratory exercises. The instructors will utilize appropriate modes of visual aids and laboratory equipment.

**METHODS OF EVALUATION:** Achievement of course objectives will be evaluated by lecture exams, laboratory reports, notebooks, quizzes and exams, and a final comprehensive exam.

**GRADES:** The lecture will count for 60% and the lab for 40% of the final course grade. However, **you must receive a passing grade in lab to pass the class.**

Grades in the course will be determined as follows:

- 10% - weekly laboratory quizzes
- 10% - lab notebooks
- 10% - 2 laboratory reports
- 10% - 2 laboratory exams
- 40% - 4 lecture quizzes
- 20% - final comprehensive exam

**See the course schedule below for dates of lecture quizzes, lab exams and final exam.**

### **IMPORTANT GUIDELINES:**

- 1) This is a survey course and covers a great deal of material! The text is good and can help explain lecture material you may not fully understand. I will not cover all of the text in class, but you will understand lectures better if you read the assigned text sections **before you come to class**, and you will do better on tests if you keep up with the reading. In addition, I will provide information in lecture that will **supplement** your text. You will be expected to know this additional material for lecture quizzes, so it is imperative that you attend lectures to do well in this class.
- 2) The lab is heavily scheduled and you will be expected to stay for the entire period.
- 3) You will be expected to have read all laboratory exercises and the accompanying text references before attending labs. You must bring both your laboratory manual and your text to the laboratory.
- 4) No make-up exams will be given for missed lecture quizzes except under extreme situations (see your Student Handbook). **There will be no opportunity to make up missed lab quizzes or exams unless it can be arranged during another lab period during the week the absence occurred.**
- 6) Students are expected to adhere to the University attendance policy as stated in the Student Handbook. In addition, 75% attendance in lab is required. **You cannot get a passing grade in lab with more than three absences and you cannot pass the course if you do not pass the lab.**
- 7) You are strongly encouraged to make appointments with your instructor if you are having problems in the course. You may make an appointment or drop in if I am not busy with another student. In general, the following hours are available for appointments: MTW 9:30-11:00 AM. If my office hours conflict with your schedule, we can make arrangements to meet at another time during the week. The laboratory instructors also welcome student visits. Office hours will be posted on our office doors.
- 8) You will be expected to endorse the following HONOR PLEDGE on every quiz:

"On my honor as a University of South Carolina at Aiken student, I have neither given nor received any unauthorized aid of this assignment/examination. To the best of my knowledge I am not in violation of academic honesty."

**Infractions of this honor pledge will not be tolerated!**

- 9) If you have a physical, psychological, and/or learning disability which might affect your performance in this class, please contact the Office of Disability Services, 126A B&E, (803) 641-3609, as soon as possible. The Disabilities Services Office will determine appropriate accommodations based on medical documentation.

### TENTATIVE LECTURE SCHEDULE

WEEK	DATES	TOPIC	TEXT CHAPTERS
1	Jan 14, 16	Biology as a Science; Evolution: An Overview	1, 21-24
2	<b>Jan 21</b> Jan 23	<b>Martin Luther King, Jr. Day - No Class</b> Evolution: An Overview; Cell Cycle; Life Cycles	1, 21-24; 11-12; 28
3	Jan 28, 30	Fungi-like Protists & Fungi	28,30
4	Feb 4 Feb 6	<b>Quiz #1</b> Plant-like Protists & Plant Phylogeny	28-29
5	Feb 11, 13	Plant Phylogeny	29
6	Feb 18, 20	Plant Structure, Growth, and Function	35-37,40-41
7	Feb 25 Feb 27	Plant Structure, Growth, and Function <b>Quiz #2</b>	35-37,40-41
8	Mar 3, 5 <b>Mar 7</b>	Animal Development <b>Last Day To Withdraw Without "WF"</b>	31,51
9	<b>Mar 10, 12</b>	<b>Spring Break</b>	
10	Mar 17, 19	Animal Phylogeny	31-34
11	Mar 24 Mar 26	<b>Quiz #3</b> Protection, Support, and Movement	42
12	Mar 31, Apr 2	Neural & Endocrine Controls	45-47
13	Apr 7, 9	Circulation, Respiration & Digestion	43-44
14	Apr 14 Apr 16	<b>Quiz # 4</b> Osmoregulation & Reproduction	49-50
15	Apr 21, 23	Population & Community Ecology	53-54
16	Apr 28 Apr 30	Ecosystems Reading Day	55
17	<b>May 5</b>	<b>FINAL EXAM 2:00 PM</b>	

## LABORATORY SCHEDULE

<b>WEEK</b>	<b>DATES</b>	<b>TOPIC</b>	<b>LAB EXERCISE</b>
1	Jan 14-16	Scientific Method/Animal Behavior	I
2	Jan 21-23	<b>No Lab</b>	
3	Jan 28-30	Introduction to the Microscope; Cell Cycle, Division & Ploidy	II
4	Feb 4-6	Prokaryote & Protist Diversity * Group Project I initiated	III
5	Feb 11-13	Fungi Diversity	IV
6	Feb 18-20	Plant Diversity	V
7	Feb 25-27	Monocots & Dicots; Plant Tissues	VI & VII
8	Mar 3-5	<b>Laboratory Exam I</b> * Group Project I completed	
9	Mar 10-12	<b>No Lab -- Spring Break</b>	
10	Mar 17-19	Flowers, Fruits & Seeds * Group Project II initiated	VIII
11	Mar 24-26	Animal Development	IX
12	Mar 31-Apr 2	Animal Diversity I	X
13	Apr 7-9	Animal Diversity II; Vertebrate Form & Function	XI & XII
14	Apr 14-16	Ecology * Group Project II completed	XIV
15	Apr 21-23	<b>Laboratory Exam II</b>	