

BIOLOGICAL SCIENCE II
ABIO 122 (4 credit hours)
Fall, 2007

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

OFFICE: SBDG 101A
E-MAIL: hughh@usca.edu

LAB INSTRUCTORS:

Dr. Derek Zelmer, SBDG 101C, 641-3472, derekz@usca.edu

Dr. Andy Dyer, SBDG 101 E, 641-3443, andyd@usca.edu

Mr. Brad Reinhart, SBDG 106, 641-3425, bradr@usca.edu

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

LABS: Sec. 001	T	8:00 -10:40AM	SBDG 103	Dr. Zelmer
Sec. 002	T	1:40 - 4:20 PM	SBDG 103	Dr. Dyer
Sec. 003	Th	8:00 -10:40AM	SBDG 103	Mr. Reinhart
Sec. 004	Th	1:40 - 4:20 PM	SBDG 103	Dr. Zelmer

TEXTBOOK: Biology (7th 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.**
- 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 that might affect your performance in this class, please contact the Office of Disability Services, B&E 126, (803) 641-3609, as soon as possible. The Office of Disabilities Services will determine appropriate accommodations based on medical documentation.

TENTATIVE LECTURE SCHEDULE

WEEK	DATES	TOPIC	TEXT CHAPTERS
1	Aug 27, 29	Biology as a Science; Evolution: An Overview	1,21-24
2	Sep 3 Sep 5	Labor Day -- No Class Evolution: An Overview; Cell Cycle; Life Cycles	1,21-24; 11-12; 28
3	Sep 10, 12	Fungi-like Protists & Fungi	28,30
4	Sep 17 Sep 19	Quiz #1 Plant-like Protists & Plant Phylogeny	28-29
5	Sep 24, 26	Plant Phylogeny	29
6	Oct 1, 3	Plant Structure, Growth, and Function	35-37,40-41
7	Oct 8 Oct 10	Plant Structure, Growth, and Function Quiz #2	35-37,40-41
8	Oct 15, 17 Oct 18	Animal Development Last Day To Withdraw Without "WF"	31,51
9	Oct 22, 24	Animal Phylogeny	31-34
10	Oct 29 Oct 31	Quiz #3 Protection, Support, and Movement	42
11	Nov 5, 7	Neural & Endocrine Controls	45-47
12	Nov 12, 14	Circulation, Respiration & Digestion	43-44
13	Nov 19 Nov 21	Quiz # 4 Thanksgiving Holidays	
14	Nov 26, 28	Osmoregulation & Reproduction	49-50
15	Dec 3, 5	Population & Community Ecology; Ecosystems	53-55
	Dec 10	FINAL EXAM 2:00 PM	

TENTATIVE LABORATORY SCHEDULE

WEEK	DATES	TOPIC	LAB EXERCISE
1	Aug 28, 30	Scientific Method/Animal Behavior	I
2	Sep 4, 6	Introduction to the Microscope; Cell Cycle, Division & Ploidy	II
3	Sep 11, 13	Prokaryotes & Protists * Group Project I (Plant Growth) initiated	III
4	Sep 18, 20	Fungi Diversity	IV
5	Sep 25, 27	Plant Diversity	V
6	Oct 2, 4	Monocots & Dicots; Plant Tissues	VI
7	Oct 9, 11	No Labs (Fall Break, Oct 11-12)	
8	Oct 16, 18	Flowers, Fruits & Seeds * Group Project I (Plant Growth) completed	VII
9	Oct 23, 25	Laboratory Exam I; notebooks and lab reports due Animal Development	VIII
10	Oct 30, Nov 1	Animal Diversity I * Group Project II (Population Dynamics) initiated	IX
11	Nov 6, 8	Animal Diversity II	X
12	Nov 13, 15	Vertebrate Tissues, Form & Function	XI & XII
13	Nov 20, 22	No Labs (Thanksgiving Holidays, Nov 21-23)	
14	Nov 27, 29	Ecology * Group Project II (Population Dynamics) completed	XIII
15	Dec 4, 6	Laboratory Exam II; notebooks and lab reports due	