BIOLOGICAL SCIENCE II
ABIO 102 (4 credit hours)
Fall, 2006

LECTURE INSTRUCTOR: Dr. Hugh Hanlin **OFFICE:** SBDG 101A
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LAB INSTRUCTOR: Dr. Derek Zelmer **OFFICE:** SBDG 101C
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LECTURE: MW 1:00-2:15 PM, SBDG 327

LABS: Sec. 1	T	8:00 -10:40AM	SBDG 103
Sec. 2	T	10:50AM -1:30PM	SBDG 103
Sec. 3	Th	8:00 -10:40AM	SBDG 103

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 or 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.**

G**rades** 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: MW 9:30-11:00 AM, T 1:00-4:00 PM. If my office hours conflict with your schedule, we can make arrangements to meet at another time during the week. Dr. Zelmer also welcomes 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	Aug 28, 30	Biology as a Science; Evolution: An Overview	1,21-24
2	Sep 4	**Labor Day -- No Class**	
	Sep 6	Evolution: An Overview; Cell Cycle; Life Cycles	1,21-24; 11-12; 28
3	Sep11, 13	Fungi-like Protists & Fungi	28,30
4	Sep 18	**Quiz #1**	
	Sep 20	Plant-like Protists & Plant Phylogeny	28-29
5	Sep 25, 27	Plant Phylogeny	29
6	Oct 2, 4	Plant Structure, Growth, and Function	35-37,40-41
7	Oct 9	Plant Structure, Growth, and Function	35-37,40-41
	Oct 11	**Quiz #2**	
8	Oct 16, 18	Animal Development	31,51
	Oct 18	**Last Day To Withdraw Without "WF"**	
9	Oct 23, 25	Animal Phylogeny	31-34
10	Oct 30	**Quiz #3**	
	Nov 1	Protection, Support, and Movement	42
11	Nov 6, 8	Neural & Endocrine Controls	45-47
12	Nov 13, 14	Circulation, Respiration & Digestion	43-44
13	Nov 20	**Quiz # 4**	
	Nov 22	**Thanksgiving Holidays**	
14	Nov 27, 29	Osmoregulation & Reproduction	49-50
15	Dec 4, 6	Population & Community Ecology; Ecosystems	53-55
	Dec 11	**FINAL EXAM 2:00 PM**	

LABORATORY SCHEDULE

WEEK	DATES	TOPIC	LAB EXERCISE
1	Aug 29, 31	Scientific Method/Animal Behavior	I
2	Sep 5, 7	Introduction to the Microscope; Cell Cycle, Division & Ploidy	II
3	Sep 12, 14	Prokaryotes & Protists * Group Project I (Plant Growth) initiated	III
4	Sep 18, 20	Fungi	IV
5	Sep 26, 28	Plant Phylogeny	V
6	Oct 3, 5	Monocots & Dicots; Plant Tissues	VI
7	Oct 10, 12	Flowers, Fruits & Seeds * Group Project I (Plant Growth) completed	VII
8	Oct 17, 19	**No Labs (Fall Break, Oct 19-20)**	
9	Oct 24, 26	**Laboratory Exam I**; **notebooks and lab reports due** Animal Development	VIII
10	Oct 31, Nov 2	Animal Phylogeny I * Group Project II (Population Dynamics) initiated	IX
11	Nov 7 Nov 9	**No Labs -- Election Day** Animal Phylogeny II	X
12	Nov 14 Nov 16	Animal Phylogeny II Vertebrate Tissues, Form & Function * Group Project II (Population Dynamics) completed	X XI & XII
13	Nov 21 Nov 22	Vertebrate Tissues, Form & Function * Group Project II (Population Dynamics) completed **No Labs -- Thanksgiving Holidays**	XI & XII
14	Nov 28, 30	Ecology	XIII
15	Dec 5, 7	**Laboratory Exam II; notebooks and lab reports due**	