

**Biological Science II**  
**Spring 2009**  
**ABIO 122 (4 credit hours)**

**Instructor: Dr. Derek Zelmer**  
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**Lecture/Lab: MWF 8-9:45 am SBDG 103**

**Textbook:** Raven, P.H., G.B. Johnson, J.B. Losos, and S.R. Singer. 2008. Biology. 8<sup>th</sup> Edition. McGraw-Hill, Boston, MA. 1259 pp. (earlier editions may be used)

**Lab Manuals:** Van de Graff, K.M., and J.L. Crawley. 2005. A photographic atlas for the biology laboratory. 5<sup>th</sup> Edition. Morton Publishing Co., Englewood, CO. 264 pp.

Biology 122 laboratory manual.USCA, Aiken, SC.

**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.

**Competencies:** Upon successful completion of this course students 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.

**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.

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

**Grades:** The lecture will count 60% and the lab 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
- 5% - lab notebooks

- 10% - 2 laboratory reports
- 15% - laboratory assignments
- 10% - lecture quizzes/assignments
- 30% - 3 lecture exams (10% each)
- 20% - final comprehensive exam

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

**Grading Scale:**

The following grading scale will be applied to the final percentage score derived from the examinations and assignments outlined previously. Grades will not be scaled, curved, or ‘bumped’. Extra credit is not available under any circumstance.

A	89.5% - 100%
B+	84.5% - 89.5%
B	79.5% - 84.5%
C+	74.5% - 79.5%
C	69.5% - 74.5%
D+	64.5% - 69.5%
D	59.5% - 69.5%
F	0.0% - 59.5%

**Guidelines:**

- 1) This is a survey course that covers a great deal of material! The textbook should be used to **review lecture material** before coming to class, and to help explain lecture material you might not fully understand while reviewing after class.
- 2) Expect to stay in lab 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 manuals 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.**
- 5) 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 **will not** get a passing grade in lab with more than three absences, and you **will not** pass the course if you do not pass the lab.
- 6) You are strongly encouraged to make appointments with your instructor if you are having problems in the course. Office hours will be posted on my office door. Please drop by my office if you have questions or are having difficulty in class or for any other reason. You may make an appointment or drop in if I am not busy with another student. If my office hours conflict with your schedule, we can make arrangements to meet at another time during the week. You must contact Mr. Reinhart or Dr. Dyer to arrange appointments with them.
- 7) Cheating, plagiarism, and other activities that can be reasonably considered as dishonest will result in a failing grade for the course and, forwarding of the matter to the University Judicial Committee.

Plagiarism essentially is the theft of 'intellectual property' through an intentional attempt to present another's ideas or work as your own, or through an *unintentional* omission of credit. If you are uncertain as to what plagiarism entails, please review the laboratory report guidelines and discuss it with me.

You will be expected to endorse the following HONOR PLEDGE on exams and assignments:

"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."

- 8) 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 12-16	Biology as a Science; Evolution: An Overview	1, 21-23
2	Jan 21-23	Evolution: An Overview; Cell Cycle; Life Cycles	21-23; 11-12; 28
3	Feb 2-6	Fungi-like Protists & Fungi	29,31
<b>4</b>	<b>Feb 9</b> Feb 11-13	<b>Exam 1</b> Plant-like Protists & Plant Phylogeny	29-30
5	Feb 16-20	Plant Phylogeny	30
6	Feb 23-27	Plant Structure, Growth, and Function	36-38, 41-42
7	<b>Mar 2</b> Mar 4-6	<b>Exam 2</b> Animal Development	32,53
	<b>Mar 6</b>	<b>Last Day To Withdraw Without “WF”</b>	
<b>8</b>	<b>Mar 9-13</b>	<b>Spring Break</b>	
9	Mar 16-20	Animal Phylogeny	32-35
11	Mar 23-27	Protection, Support, and Movement	43
12	Mar 30 - Apr 1 <b>Apr 3</b>	Neural & Endocrine Controls <b>Exam 3</b>	46
13	Apr 6-9	Circulation, Respiration & Digestion	48-49
14	Apr 13-17	Osmoregulation & Reproduction	50, 52
15	Apr 20-24	Population and Community Ecology	55
16	Apr 27	Ecosystems	56, 57
	<b>May 4 (Mon)</b>	<b>FINAL EXAM 8:00 AM</b>	

## TENTATIVE LABORATORY SCHEDULE

<b>WEEK</b>	<b>TOPIC</b>	<b>LAB EXERCISE</b>
1	Scientific Method/Animal Behavior	I
2	Scientific Method/Animal Behavior	I
3	Introduction to the Microscope; Cell Cycle, Division & Ploidy	II
4	Prokaryotes, and Protists * Group Project I initiated	III
5	Fungi	IV
6	Plant Diversity	V
7	Monocots & Dicots; Plant Tissues	VI
8	Flowers, Fruits and Seeds	VII
10	Animal Development * Group Project II initiated	IX
11	Animal Phylogeny I	X
12	Animal Phylogeny II	XI
13	Vertebrate Tissues, Form & Function	XII & XIII
14	Ecology * Group Project II completed	XIV