

Biological Science II
Spring 2007
ABIO 102 (4 credit hours)

Instructor: Dr. Derek Zelmer
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Office Hours: WF 10am-12pm or by appointment

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Lab Instructor: Brad Reinhart
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Lab Instructor: Dr. Andy Dyer
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Lecture: **MWF 8-8:50am** **SBDG 327**

Labs: Weekly in Sciences Building Room 103.

Sec 001T	10:50am – 1:40 pm	Zelmer
Sec 002W	9:00am – 11:40 am	Reinhart
Sec 003T	1:40pm – 4:20 pm	Dyer

Textbook: Raven, P.H., G.B. Johnson, J.B. Losos, and S.R. Singer. 2005. Biology. 7th Edition. McGraw-Hill, Boston, MA. 1250 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. 5th Edition. Morton Publishing Co., Englewood, CO. 264 pp.

Dyer, A., H. Bennett, and H. Hanlin. 2007. Biology 102 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
- 10% - lab notebooks
- 10% - 2 laboratory reports
- 10% - 2 laboratory exams
- 40% - 4 lecture exams
- 20% - final comprehensive exam

See the course schedule below for dates of lecture quizzes, 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 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 17, 19	Biology as a Science; Evolution: An Overview	1, 21-24
2	Jan 22 - 26	Evolution: An Overview; Cell Cycle; Life Cycles	1, 21-24; 11-12; 28
3	Jan 29 – Feb 2	Fungi-like Protists & Fungi	28,30
4	Feb 5 Feb 7, 9	Exam 1 Plant-like Protists & Plant Phylogeny	28-29
5	Feb 12 - 16	Plant Phylogeny	29
6	Feb 19 - 23	Plant Structure, Growth, and Function	35-37, 40-41
7	Feb 26, 28 Mar 2	Plant Structure, Growth, and Function Exam 2	35-37, 40-41
8	Mar 5 - 9 Mar 9	Animal Development Last Day To Withdraw Without “WF”	31,51
9	Mar 12, 16	Spring Break	
10	Mar 19 - 23	Animal Phylogeny	31-34
11	Mar 26 Mar 28 - 30	Exam 3 Protection, Support, and Movement	42
12	Apr 2 - 6	Neural & Endocrine Controls	45-47
13	Apr 9 - 13	Circulation, Respiration & Digestion	43-44
14	Apr 16 Apr 18, 20	Exam 4 Osmoregulation & Reproduction	49-50
15	Apr 23 - 27	Population & Community Ecology; Ecosystems	53-55
16	Apr 30	Ecosystems	55
	May 7	FINAL EXAM 8:00 AM	

LABORATORY SCHEDULE

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