

BIOLOGICAL SCIENCE II
ABIO 102 (4 credit hours)
Fall, 2005

LECTURE INSTRUCTOR: Dr. Hugh Hanlin
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LAB INSTRUCTOR: Dr. Heather Bennett
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LECTURE: TTh 10:50AM-12:05 PM, SBDG 301

LABS: Sec. 1 W 1:00AM -3:40PM SBDG 103
Sec. 2 Th 1:00AM -3:40PM 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

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, 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.

Grades in the course will be determined as follows:

- 10% - weekly laboratory quizzes
- 10% - 2 laboratory reports
- 20% - 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. 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. Dr. Bennett 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 18	Biology as a Science	1
2	Aug 23, 25	Evolution: An Overview; Cell Cycle; Life Cycles	1,21-24; 11-12; 28
3	Aug 30, Sep 1	Fungi-like Protists & Fungi	28,30
4	Sep 6 Sep 8	Quiz #1 Plant-like Protists & Plant Phylogeny	28-29
5	Sep 13, 15	Plant Phylogeny	29
6	Sep 20, 22	Plant Structure, Growth, and Function	35-37,40-41
7	Sep 27 Sep 29	Plant Structure, Growth, and Function Quiz #2	35-37,40-41
8	Oct 4, 6	Animal Development	31,51
9	Oct 11 Oct 12 Oct 13	Laboratory Exam I Last Day To Withdraw Without "WF" Fall Break	
10	Oct 18, 20	Animal Phylogeny	31-34
11	Oct 25 Oct 27	Quiz #3 Protection, Support, and Movement	42
12	Nov 1, 3	Neural & Endocrine Controls	45-47
13	Nov 8, 10	Circulation, Respiration & Digestion	43-44
14	Nov 15, 17	Osmoregulation & Reproduction	49-50
15	Nov 22 Nov 23	Quiz # 4 Thanksgiving Holidays	
16	Nov 29, Dec 1 Dec 13	Population & Community Ecology; Ecosystems FINAL EXAM 11:00 AM	53-55

LABORATORY SCHEDULE

WEEK	DATES	TOPIC	LAB EXERCISE
1	Aug 24, 25	Scientific Method/Animal Behavior	I
2	Aug 31, Sep 1	Introduction to the Microscope; Cell Cycle, Division & Ploidy	II
3	Sep 7, 8	Prokaryotes & Protists * Group Project I (Plant Growth) initiated	III
4	Sep 14, 15	Fungi	IV
5	Sep 21, 22	Plant Phylogeny	V
6	Sep 28, 29	Monocots & Dicots; Plant Tissues	VI & VII
7	Oct 5, 6	Flowers, Fruits & Seeds * Group Project I (Plant Growth) completed	VIII
8	Oct 11 Oct 12, 13	Laboratory Exam I (During Lecture Period) No Labs -- Fall Break	
9	Oct 19, 20	Animal Development * Group Project II (Population Dynamics) initiated	IX
10	Oct 26, 27	Animal Phylogeny I	X
11	Nov 2, 3	Animal Phylogeny II	XI
12	Nov 9, 10	Vertebrate Tissues, Form & Function	XII & XIII
13	Nov 16, 17	Ecology * Group Project II (Population Dynamics) completed	XIV
14	Nov 23, 24	No Labs -- Thanksgiving Holidays	
15	Nov 30, Dec 1	Laboratory Exam II	