

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

LECTURE INSTRUCTOR: Dr. Lynn Wike

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LECTURE: 6:00 – 8:40, Thursdays, SBDG 103

LAB: 6:00 – 8:40, Tuesdays, 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.

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

IMPORTANT GUIDELINES:

- 1) This is a survey course that 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 manuals and your text to the laboratory.
- 4) No make-up exams will be given for missed lecture exams. **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 **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.
- 7) You are strongly encouraged to make appointments with your instructor if you are having problems in the course. Because I do not have an office on campus I have given you my home, work and cell phone numbers as well as my personal and work e-mail addresses. **IF YOU ARE HAVING PROBLEMS IN THE COURSE PLEASE CONTACT ME AS SOON AS POSSIBLE. I WILL DO EVERYTHING I CAN TO MEET WITH YOU AS POSSIBLE.**
- 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	Jan 12	Biology as a Science; Evolution: An Overview	1, 21-24
2	Jan 19	Evolution: An Overview; Cell Cycle; Life Cycles	1, 21-24; 11-12; 28
3	Jan 26	Fungi-like Protists & Fungi	28,30
4	Jan 31 Feb 2	Exam #1 Plant-like Protists & Plant Phylogeny	28-29
5	Feb 9	Plant Phylogeny	29
6	Feb 16	Plant Structure, Growth, and Function	35-37,40-41
7	Feb 21 Feb 23	Plant Structure, Growth, and Function Exam #2	35-37,40-41
8	Mar 2 Mar 3	Animal Development Last Day To Withdraw Without “WF”	31,51
9	Mar 7, 9	Fall Break	
10	Mar 16	Animal Phylogeny	31-34
11	Mar 21 Mar 23	Exam #3 Protection, Support, and Movement	42
12	Mar 30	Neural & Endocrine Controls	45-47
13	Apr 6	Circulation, Respiration & Digestion	43-44
14	Apr 11 Apr 13	Exam # 4 Osmoregulation & Reproduction	49-50
15	Apr 20	Population & Community Ecology; Ecosystems	53-55
16	Apr 27	FINAL EXAM - 8:00 p.m.	

LABORATORY SCHEDULE

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