

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

LECTURE INSTRUCTOR: Dr. Lynn Wike

PHONE: 642-1247 (H), 725-5210 (W), 292-1748 (Cell)

E-MAIL: lynnwike@copper.net
lynn.wike@srnl.doe.gov

LECTURE: 6:00 – 8:40, Tuesdays, SBDG 327

LAB: 6:00 – 8:40, Wednesdays or Thursdays, 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 instructor, 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 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.**
- 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. 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 SOON AS POSSIBLE.**
- 7) 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 29	Introduction, Biology as a Science	1
2	Sep 5	Overview of Evolution; Cell Cycle	21-24, 11
3	Sep 11	Life Cycles & Protists	12, 28
4	Sep 18	Exam #1 (1, 11, 12, 21-24, 28)	
5	Sep 25	Fungi & Plant Phylogeny	29, 30
6	Oct 3	Plant Structure, Growth, and Function	35-37, 40-41
7	Oct 10	Plant Structure, Growth, and Function Exam #2 (29, 30, 35-37)	35-37, 40-41
8	Oct 17	Animal Development	31, 51
	Oct 18 Oct 19, 20	Last Day for Withdraw Without Penalty Fall Break	
9	Oct 24	Animal Phylogeny	32-34
10	Oct 31	Exam #3 (31-34, 51) Protection, Support, and Movement	42
11	Nov 7	Neural & Endocrine Controls	45-47
12	Nov 14	Circulation, Respiration & Digestion	43-44
13	Nov 21	Exam # 4 (42-47)	
14	Nov 28	Osmoregulation & Reproduction	49-50
15	Dec 5	Population & Community Ecology; Ecosystems	53-55
	Dec 12	FINAL EXAM 8pm (6pm if possible)	

LABORATORY SCHEDULE

WEEK	DATES	TOPIC	LAB EXERCISE
1	Aug 30, 31	Scientific Method/Animal Behavior	I
2	Sep 6, 7	Introduction to the Microscope; Cell Cycle Division & Ploidy	II
3	Sep 13, 14	Prokaryotes, Protists & Fungi Group Project I (Plant Growth) initiated	III & IV
4	Sep 20, 21	Fungi	IV
5	Sep 27, 28	Plant Phylogeny	V
6	Oct 4, 5	Monocots & Dicots; Plant Tissues	VI
7	Oct 11, 12	Flowers, Fruits & Seeds * Group Project I (Plant Growth) completed	VII
8	Oct 18, 19	No Labs -- Fall Break	
9	Oct 25, 26	Laboratory Exam I, notebooks and lab reports due Animal Development	VIII
10	Nov 1, 2	Animal Phylogeny I * Group Project II (Population Dynamics) initiated	IX
11	Nov 8, 9	Animal Phylogeny II	X
12	Nov 15, 16	Animal Phylogeny II, Vertebrate Tissues, Form & Function	X, XII & XIII
13	Nov 22, 23	NO LABS, Thanksgiving break	
14	Nov 29, 30	Ecology * Group Project II (Population Dynamics) completed	XII
15	Dec 6, 7	Laboratory Exam II, notebooks and lab reports due	