

BIOLOGICAL SCIENCE II
ABIO 122 (4 credit hours)
Fall, 2008

LECTURE INSTRUCTOR: Lynn D. Wike, Ph.D.

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OFFICE: 101B

Hours: Tuesday, Thursday 5 PM – 6PM or by appointment

LECTURE & LABS: Tuesday & Thursday 6:00-8:40 PM, SBDG 103

TEXTBOOK: Biology (8th 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:

- Acquaint students with biological principles associated with multicellularity, development, phylogeny, ecology and evolution.
- Acquaint students with the anatomical organization of organisms to include tissue, organs, and systems and their functions.
- Trace the development of organisms.
- Trace the phylogeny of organisms.
- Acquaint students with the behavior and ecology of organisms.

STUDENT COMPETENCY STATEMENTS: By the end of this course the student will demonstrate 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.

Grade will be determined as follows:

- 10% - weekly laboratory quizzes
- 10% - laboratory reports
- 20% - 2 laboratory exams
- 40% - 4 lecture exams
- 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 except under extreme situations. There will be **no make up 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 an appointment with your instructor if you are having problems.
- 8) You will be expected to endorse the HONOR PLEDGE on every exam.
- 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 SCHEDULE

WEEK	DATES	TOPIC	TEXT CHAPTERS/LAB EXERCISE
1	Aug 21	Biology as a Science; Evolution: An Overview No Lab	1, 20-22
2	Aug 26, 28	Cell Cycle; Life Cycles Lab-Scientific Method/Animal Behavior	10-11 I
3	Sept 2, 4	Systemics and Phylogenetics Lab - Intro to Microscope; Cell Cycle, Division & Ploidy	23, 26 II
4	Sept 9, 11	Exam 1 Prokaryotes and Protists Lab - Prokaryote & Protist Diversity; Group Project I initiated	28-29 III
5	Sept 16, 18	Plant Phylogeny Lab	29
6	Sept 23, 25	Plant Structure, Growth, and Function Lab - Plant Diversity	36-38 V
7	Sept 30, Oct 2	Exam 2 Plant Structure, Growth, and Function Lab - Monocots & Dicots; Plant Tissues	41, 42 VI & VII
8	Oct 7, 9	Fungi Laboratory Exam I , Group Project I completed	31
9	Oct 14, 16	(last day to withdraw) Animal Development Lab - Flowers, Fruits & Seeds; Group Project II initiated	53 VIII
10	Oct 21, 23	Animal Phylogeny Lab - Fungi Diversity	32-35 IV
11	Oct 28, 30	Exam 3 Animal body Lab - Animal Development	43 IX
12	Nov 4, 6	Neural, Sensory and Endocrine Controls Lab - Animal Diversity I	44-46 X
13	Nov 11, 13	Circulation, Respiration & Digestion Lab - Animal Diversity II; Vertebrate Form & Function	48, 49 XI & XII
14	Nov 18, 20	Exam 4 Homeostasis, Osmoregulation & Reproduction Lab – Ecology; Group Project II completed	50-52 XIV
15	Nov 25 Nov 26-30	Population and Community Ecology Thanksgiving break	55, 56
16	Dec 2, 4	Ecosystems, biosphere, conservation Laboratory Exam II	57-59
Dec 12	FINAL EXAM 8:00 PM (6 PM if possible)		