

BIOLOGICAL SCIENCE II
ABIO 102 (4 credit hours)

Instructor: Dr. Lynn D. Wike

Phone: 642-1247 (home), 725-5210 (work), 292-1748 (cell) **email:** lynn.wike@srs.gov

Office hours: Before or after class or by arrangement (see additional comments below)

Lecture and Lab: 6 – 8:40 PM Tuesday and Thursday, Sciences Building, room 103

Required textbook: Biology (5th or 6th ed.), Raven & Johnson

Lab supplies: A quad-ruled notebook is required and a thin binder would be a good idea. Any student with special health considerations or conditions should inform the lab instructor.

Course description: Biological principles and concepts from the tissue through ecosystem levels of organization.

Course objectives:

- To acquaint students with biological principles associated with multi-cellularity, development, phylogeny, ecology and evolution.
- To acquaint students with the anatomical organization of organisms including tissues, organs, and systems and their functions.
- To trace the development of organisms.
- To trace the phylogeny of organisms.
- To acquaint students with the behavior, ecology, and evolution of organisms.

Student competency statement: 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 multi-cellular levels including 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 chapter quizzes, lecture exams and final, laboratory quizzes and exams, and a lab notebook.

Grading: The lecture and lab graders will count equally toward the final course grade.

The lecture grade will be based on 4 lecture tests spaced throughout the semester and a final lecture exam. See the course schedule for the tentative test dates. The final will count for 40% of the lecture grade.

The lab grade will be based on 2 practical tests, several quizzes, a lab notebook (graded twice), and attendance. The 2 practicals will count for half the lab grade.

The course grade will be an average of the lab and lecture grades.

Please note: This is a lab course and it cannot be passed with a failing lab grade regardless of the lecture grade. In addition, 75% attendance in lab is mandatory.

Additional comments:

- * This is a survey course and covers a great deal of material, I cannot cover all of the details in class and will assign sections of the text for further reading. The text is very good and can help explain lecture material you may not fully understand. You will understand lectures better if you read the text sections **beforehand** and you will do better on tests if you keep up with the reading.
- * I do not have an office on campus since I am not a full-time professor at USC-A. I have supplied three phone numbers, one of which will reach me at any time. Please use these numbers if you need to speak with me, or if you prefer I will schedule a time to meet with you.

Laboratory

- * 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.
- * The lab is heavily scheduled and you will be expected to stay the full time. Some of the written work will be assigned as homework. You will need your notebook every week.

General

- * You will be expected to endorse the following **Honor Pledge** on every test:
“On my honor as a University of South Carolina Aiken student, I have neither given nor received any unauthorized aid on this assignment/examination. To the best of my knowledge I am not in violation of academic honesty.”
- * 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.

Schedule for Lecture:

Please note that the schedule of topics for lecture may change.

DATE	LECTURE TOPIC	READING ASSIGNMENT
AUGUST		
21	Introduction to the instructor and Course;The Global Environment	Chapter 29.1, 29.3
23	Biomes, Marine and Aquatic Ecosystems	29.4
27	Dynamics of Ecosystems	28
30	Animal Behavior	26
SEPTEMBER		
4	Behavioral Ecology	27
6	LECTURE EXAM I	
11	Community Ecology	25
13	Population Ecology	24
18	Evolution: Darwin and the Theory of Natural Selection	21, 22
20	Evolution Beyond Darwin: The Modern Synthesis	20
25	Viruses and Bacteria	33,34
27	LECTURE EXAM II	
OCTOBER		
2	Protista	35
4	Fungi	36
11	Plant Form and Function	38, 39
16	<i>LAB PRACTICAL I</i>	<i>MEET IN LAB AT THE TIME YOU ARE TOLD!</i>
18	Plant Life Cycles	37.1
23	Plant Growth and Reproduction	40, 41,42
25	Plant Evolutionary History	37
30	LECTURE EXAM III	
NOVEMBER		
1	Animal Form and Function	49
6	Animal Systems	50 through 58 (skim them!!)
8	Animal Growth and Reproduction	59, 60
13	Animal Diversity I	44, 45
15	Animal Diversity II	46, 47, 48
20	LECTURE EXAM IV	
27	<i>LAB PRACTICAL II</i>	<i>MEET IN LAB AT THE TIME YOU ARE TOLD!</i>
29	Humans, Conservation Biology and the Future of Earth's resources	30, 31
DECEMBER		
11	8 PM	FINAL EXAM

Laboratory Schedule ABIO 102 Fall 2001

Date	Topic
AUGUST:	
28,29,30	Trophic pyramids and food webs (Owl pellets and food web diagrams)
SEPTEMBER:	
4,5,6	Introduction to the Scientific Method; Animal Behavior (Schooling and Fighting Fish)
11,12,13	How to Use a Microscope; Meiosis and Mitosis
18,19,20	Protista Survey (Live protozoans, algae); feed <i>Paramecium</i> , greenhouse algae and protozoans
25,26,27	Fungi Survey; Fungus field trip; ID fungi
OCTOBER	
2,3,4	Plant Survey (Nonvascular and Vascular Plants— mosses through conifers and their life cycles); Plant rapid plants and set up plant experiments
(9), 10,11 (Tuesday doesn't meet)	Monocots and Dicots (survey of whole ones) Plant experiments continued
16,17,18	Plant Tissues (slides, (compare mono/dicot roots/stems), leaves, celery w/ colored water); Plant experiments continued
23,24,25	Flowers, Fruits and Seeds; (dissect flower, key out fruits and seeds) Plant Experiments continued
NOVEMBER	
30, 31, 1	Animal Development (sea urchins, slides); [wrap up all plant experiments]
6,7,8	Animal Tissues; First observations of <i>Triops</i> and silkworms
13,14,15	Animal Form and Function; Continue observations of <i>Triops</i> and silkworms
20 (Tuesday only meets)	Animal Diversity I (sponges through annelids); Continue observations of <i>Triops</i> and silkworms
27,28,29	Animal Diversity II (arthropods, echinoderms, chordates); final observations of <i>Triops</i> and silkworms