

BSC 103: Biology and Society
Spring 2006

Instructor

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Lecture Location

Walker Science Building 137 (Big Reuben Auditorium)

Office Hours

- (a) Tuesdays and Thursdays after lecture, 2:15–3:00 P.M.
- (b) By appointment

Course Description

Lecture. 3 hrs. Concepts and methods of biological science and their relationship to human affairs. Satisfies general education curriculum requirements for laboratory sciences (Category IV). Cannot be taken in combination with BSC 110 or 111 to meet the general education curriculum requirement. This course is **not** counted toward a major in Biological Sciences. This course is taken concurrently with BSC 103/L, the biological science laboratory. No prerequisites.

Course Overview

Biology and Society is an introductory course whose lectures are designed to acquaint the student with the scientific method and the basic concepts of biology. Because it is a course designed for non-majors, special emphasis is placed on concepts essential for understanding important issues such as evolution, biotechnology, and environmental biology.

Course Objectives for Lecture and Lab

Students will develop and demonstrate:

- Knowledge of the methods, basic data, ideas, and scope of the natural sciences,
- Understanding of contemporary issues and concerns in biology,
- Suitable reading, writing, and other communication skills,
- Fundamental mathematical and computer skills (exercised in lab),
- Capacity for intellectual independence and analytical thought, and
- Understanding of people as moral agents.

Course Communication

Any changes to the syllabus will be announced *in class* at least one week in advance.

Required Text and Supplies

- (a) Audesirk, T., G. Audesirk, & B. Byers. 2006. *Life on Earth*. 4th ed. Upper Saddle River, NJ: Pearson Prentice Hall. (See class schedule for reading assignments.)
- (b) 3-ring binder for project

Class Procedures and Requirements

Attendance in class is expected, but roll will not be taken. The indicated chapter(s) should be read before class, which will prepare you for the material presented in lecture. The exams will principally include material covered in lecture, but some questions may come from the relevant reading assignments. Lecture will include some material not present in the textbook. Because of the large number of students in the class, exams will be multiple choice, matching, or fill-in-the-blank. Extra-credit will not be given. Your writing skills will be exercised in preparing the project, and your speaking skills will be exercised in one of the labs.

Professionalism

Disrespect of the professor and/or students will not be tolerated. Be prompt to class, and if you must leave early, please sit near the rear of the classroom. Questions are encouraged; please raise your hand to be recognized. The use of cellular phones, pagers, computers, and other electronic devices is prohibited.

Evaluation Criteria

Exam 1	20%	(100 points)
Exam 2	20%	(100 points)
Exam 3	20%	(100 points)
Final Exam	20%	(100 points)
Project	20%	(100 points)

Grading Scale

90–100%	A	(450–500 points)
80–89%	B	(400–449 points)
70–79%	C	(350–399 points)
60–69%	D	(300–349 points)
0–59%	F	(0–299 points)

Make-Up Exams and Late Projects

Make-up exams are **only** given if written corroboration of a disabling condition or situation is provided (doctor's note, parental note [with phone number] about funeral, police report). Contact professor immediately about re-scheduling. Re-scheduling after one week is not possible. The grade for the projects will be deducted 10% for *each 24-hour period* that the assignment is late, starting with the beginning of the class period when the assignment should have been turned in.

Academic Honesty (directly from the *Undergraduate Bulletin*)

"When cheating is discovered, the faculty member may give the student an F on the work involved or in the course. If further disciplinary action is deemed appropriate, the student should be reported to the Dean of Students. In addition to being a violation of academic honesty, cheating violates the Code of Student Conduct and may be grounds for probation, suspension, and/or expulsion. Students on disciplinary suspension may not enroll in any courses offered by the University of Southern Mississippi."

ADA Policy

If a student has a disability that qualifies under the Americans with Disabilities Act and requires accommodations, he/she should contact the Office for Disability Accommodations (ODA) for information on appropriate policies and procedures. Disabilities covered by the ADA may include learning, psychiatric, physical disabilities, or chronic health disorders. Students can contact ODA if they are not certain whether a medical condition/disability qualifies. Mailing address: 118 College Drive #8586, Hattiesburg, MS 39406-0001; Telephone: 601-266-5024; TTY: 601-266-6837; Fax: 601-266-6035.

Class Schedule*

Date	Topic	Reading Assignment (chapter)
January 17	Logistics and Introduction What is science? What is biology? What is life?	
19	More science, biology, and life	1
20	Last day to register for class	
24	Diversity and Taxonomy / Systematics	16 (282–287), 14 (245–246)
26	Archaea, Bacteria, and “Protists”	16 (287–297)
31	Fungi and Lichens	16 (297–300)
February 2	Plants, part 1	16 (300–304), 18
7	Plants, part 2	17
9	Exam 1	
♥ 14	Animals, part 1	16 (304–319)
16	Animals, part 2	19
21	Populations First Part of Project Due in Class	27
23	Communities	28
28	Mardi Gras Holiday, no class	
March 2	Ecosystems	29
3	Last day to drop course without academic penalty; midpoint of semester	
7	Climate and Biomes	30
9	Exam 2	
14	Evolution, part 1	13
16	Evolution, part 2	14
21	Evolution, part 3	15
23	Cells and Energy Flow	(2–3) 4–5
28	Photosynthesis and Respiration	6–7
30	DNA	8
April 2	Daylight Savings Time begins; move clocks ahead one hour.	

4	Exam 3	
6	Gene Expression and Regulation	9
11	Spring Holiday, no class	
13	Spring Holiday, no class	
18	Cell Division	10
20	Inheritance	11
25	Biotechnology Project Due in Class	12
27	Disease and Response	22
May 2	Nervous System, Senses, and the Mind	24
4	Animal Behavior, Societies, and Languages	25, 26
Tuesday, May 9 11:00 AM–1:30 PM	Final Exam Comprehensive	

*Schedule may be revised if necessary. Students will be notified if this is the case.

Student Project

Each student will prepare a collection of 25 print media articles (e.g., from a magazine, newspaper) related to the biological sciences. Articles from online sources are acceptable, but may **not** make up more than one of the articles per topic (see next paragraph).

The collection of articles must represent the range of scientific activity in the biological sciences. This range of activity is reflected in the textbook and the syllabus, which includes the following five topics: (1) science as a way of knowing / science philosophy / epistemology of science, (2) organismal biology / diversity, (3) ecology / environmental biology, (4) evolution, and (5) genetics / molecular biology / biotechnology. You should collect five articles in each topic, and then organize your collection of 25 total articles by category. Clearly, you may find some articles that could fit into more than one category; choose one.

You will have no trouble finding articles in *non-scientific* print media sources, whether newspapers or magazines. Articles from scientific journals (e.g., *Nature*, *American Journal of Botany*) and science magazines (e.g., *Scientific American*, *Science News*, *Discovery*) are **not** to be included. Articles should come from a wide variety of sources. A project with all articles from a single source or just a couple of sources will receive less credit. Length of articles may vary from a single column in the newspaper to several pages in a magazine.

Collect and organize your articles in a 3-ring binder. Include with your set of articles the following:

- (1) **Cover sheet** that includes your name, course title, and semester.
- (2) **Table of Contents** (list of article titles grouped according to topic)
- (3) **Articles** (or copies, if you can't rip up the dentist's magazine), each followed by (4)
- (4) **Typed or computer-printed page with (a) title of article, (b) source of article** (e.g., *Hattiesburg American*, 16 Jan. 2006, pp. A6-A7; *Rolling Stone*, June 2005, p. 18), **and (c) a synopsis that paraphrases the article, including the main point of the article and your thoughts on the subject.** The length of your synopsis should be one-third a page to a whole page, double-spaced, at 12-point Times New Roman or Arial font with title and source at top on two lines.

Your cover sheet and five articles and synopses are due on 21 February 2006. These should be in the correct format and placed in the binder. No table of contents is needed. These will be corrected for grammar and content to improve your writing skills. If the assignment is turned in on time, you will receive full credit. *These synopses should be included in your final project, along with your corrected and re-written version* (so that I can see how you improved).

The final project is due *in class* on 25 April 2006. Projects will not be returned.

Evaluation of your project, which represents 20% (100 points) of your course grade is based on the following scheme:

<u>Points</u>	<u>Expectation</u>
	First Assignment
20	On-time delivery (5 articles/synopses and cover sheet in binder)
	Final Assignment
25	Having 25 Articles, 5 in each subject area
10	Source Variation
25	Synopsis (including title and source)
10	Inclusion of corrected copies from first assignment
3	Title Page
3	Table of Contents
4	Neatness