

Biology 111
Fall 1993
H.F. Sharp, Jr.

- I. TEXT: Odum, E.P. Ecology And Our Endangered Life-Support Systems. 1993. Sinauer Associates, Sunderland, MA
- II. TESTS: A. A ten-minute quiz will be given at the end of the period each Thursday unless announced otherwise.
- B. Hour quizzes will include appropriate material from both lecture and laboratory.
- 1) September 14
 - 2) October 5
 - 3) October 28
 - 4) November 23
- B. Laboratory Practical: as announced
- III. FINAL EXAMINATION: A comprehensive examination over all of the material covered in lecture, the readings, and laboratory exercises will be given on the date announced by the office of Records and Registration.
- IV. During the semester the following topics will be considered in more or less the following order:
- Lecture: (Readings: Prologue through Chapter 6, Odum)
- A. Ecosystem Structure
 1. Trophic Relationships
 2. Habitat vs Niche
 - B. Energy Flow
 1. Ecological Pyramids
 - C. Biogeochemical Cycles
 - D. Population Ecology and Evolution
 - E. Human Ecology and the Economics of Nature
 1. Energy Utilization
 2. Pollution:
 - a. water
 - b. land
 - c. air

Laboratory (Readings: Chapters 7 & 8, Odum)

- A. Primary Succession or What Lives on This Very Hot/Cold Rock?
- B. Secondary Succession or Why Do I Have to Mow the Pasture?
- C. Terrestrial Ecosystem Structure or What and How Many Organisms Live Here?
- D. Aquatic Ecosystem Structure or Who Put This Stuff in This Stream?

Note: Lecture material presented during laboratory sessions should be incorporated into the class notes.

- V. A. Student Evaluation: Lecture sessions and laboratory exercises are complementary components of this course. Therefore, as noted above, material from lectures and laboratories will be included on all tests. Grades will be determined by scores on the various tests, reports and participation in the laboratory activities. Final grades will be determined by approximately the following system: 1/3 weekly & hour quizzes, 1/3 performance in laboratory, and 1/3 final exam.

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1. Weekly and Hour Quizzes:

- a. The two(2) lowest weekly quiz scores will be dropped and the average of the remaining weekly quiz scored will be calculated.
- b. The lowest of the four hour quiz scores will be dropped.
- c. The average of the weekly scores and the three remaining hour quiz scores are averaged to determine the weekly/hour quiz value which will constitute 1/3 of the final grade.

2. Performance in Laboratory: The student's laboratory performance will be evaluated based on the following:

- a. the student's attitude toward, participation in, and comportment during the laboratory exercises;
- b. grade on the laboratory practical examination (given subsequent to the last scheduled laboratory exercise);
- c. grade on laboratory reports.

Biology 111
Lab Schedule - Fall 1993

<u>Lab No.</u>	<u>Date</u>	<u>Exercise</u>
1.	Aug. 19	<u>Secondary Succession</u> A. Lecture & Slides B. Woody Plant List
2.*	Aug. 26	<u>Secondary Succession Field Trip</u> Local Plant Communities
3.*	Sept. 2	<u>Terrestrial Ecology</u> Plant Plot Studies - Oxhouse
4.	Sept. 9	<u>Terrestrial Ecology</u> Compilation and Analysis of Data Obtained from Plot Studies
5.	Sept. 16	<u>Primary Succession</u> Lecture/Slides
6.*	Sept. 23	<u>Primary Succession</u> Field Trip
7.*	Sept. 30	<u>Stream Ecology</u> Collection of macrobenthic invertebrates and water samples
8.	Oct. 7	FALL BREAK
9.	Oct. 14	<u>Stream Ecology</u> A. Identification, counting and Analysis of Invertebrate Community B. Analysis of Water Samples
10.	Oct. 21	<u>Wetland Ecology</u> Lecture, Slides, Video
11.*	Oct. 28	<u>Wetland Ecology Field Trip</u>
12.*	Nov. 4	<u>Municipal Water Supply</u> A. Cornish Creek Reservoir B. Filtration/Purification Plant
13.*	Nov. 11	<u>Municipal Waste Water Treatment</u> A. Sewage Treatment Plant B. Land Application Site
14.	Nov. 18	
15.	Nov. 25	THANKSGIVING BREAK
16.	Dec. 2	<u>Practical</u>

*FIELD TRIP