Lessons from the Biosphere

A MAP Natural Science-2 course  V55-0311
Spring 2003
M&W 12:30 – 1:45  121 Meyer

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SYLLABUS

1. Wednesday January 22: Introduction to course.

Th & F—LAB Week 1: Introduction to Electronic and Paper Resources.

2. Monday January 27: From the big bang to the origin of Earth (Liebes: pages 4-19 for main text, pages 8-19 for timeline text and images).


Th & F—LAB Week 2: Evidence for Evolution.


5. Wednesday February 5: Multicelled creatures and Big life comes ashore. (Liebes: pages 103-140 for main text, pages 104-167 for timeline text and images).

Th & F—LAB Week 3: No formal lab meeting, students go on their own time for trip to American Museum of Natural History.


7. Wednesday February 12: Reptiles reign and Asteroid impact brings mammals to the fore. (Liebes: pages 141-170 for main text, pages 167-196 from timeline text and images).

Th & F—LAB Week 4: Student Presentations on AMNH trip.

Monday February 17: NO CLASS, PRESIDENT'S DAY

8. Wednesday February 19: Exam # 1 — Evolution

-----BIODIVERSITY-----

Th & F—LAB Week 5: Techniques of microscopy.


10. Wednesday February 26: Habitat fragmentation and loss (Dobson, chapter 2).
Th & F—LAB Week 6: Biodiversity of Microscopic Life (including biodiversity CD-ROM).

11. Monday March 3: The mathematics of extinction (Dobson, chapter 3).
12. Wednesday March 5: When is a species endangered? (Dobson, chapter 4).
Th & F—LAB Week 7: Biodiversity in the marketplace
14. Wednesday March 12: Species in captivity (Dobson, chapter 6).
Th & F—LAB Week 8: Student Presentations on Endangered Species.

Monday March 17 SPRING RECESS
Wednesday March 19 SPRING RECESS

15. Monday March 24: Current topics on biodiversity (Directed readings).
16. Wednesday March 26: Current topics on biodiversity (Continued—more directed readings).

Th & F—LAB Week 9: Photosynthesis.

17. Monday March 31: Special lecture or class activity, to be announced.

18. Wednesday April 2: Exam #2 — Biodiversity

-----GLOBAL CYCLES-----

Th & F—LAB Week 10: Respiration.
19. Monday April 7: Cycles in the biosphere.
20. Wednesday April 9: Cycles in the biosphere.
Th & F—LAB Week 11: Paper decomposition by an enzyme.
21. Monday April 14: Cycles in the biosphere.
22. Wednesday April 16: Cycles in the biosphere.

Th & F—LAB Week 12: Part 1: Student Presentations on Helping the Biosphere. (Note: This is Lab #12 in the Lab Manual)
23. Monday April 21: Cycles in the biosphere.

24. Wednesday April 23: Cycles in the biosphere.

Th & F—LAB Week 13: Part 2: Student Presentations on Helping the Biosphere. (Note: This, too, is Lab #12 in the Lab Manual)

25. Monday April 28: Cycles in the biosphere.

26. Wednesday April 30: Cycles in the biosphere.

Th & F—LAB Week 14: Plastics + review (Note: This is Lab #13 in the Lab Manual)

27. Monday May 5: Conclusion to course.

**FINAL EXAM Wednesday May 7 12:00-1:50 (as given in Spring 2003 Directory)**

**Books:**

- For the "Evolution" section of the course—
  Liebes, Sidney; Elisabet Sahtouris, & Brian Swimme. *A Walk Through Time: From Stardust to Us*. Available now in the bookstore.

- For the "Biodiversity" section of the course—
  Dobson, Andrew P. *Conservation and Biodiversity*. (This book is out of print, so the bookstore is preparing a bound copy of our required chapters 1-6, which should be available soon but not quite yet.)
  Plus required directed readings from articles, to be announced.

- For the "Global Cycles" section of the course—
  Required readings for each lecture will be announced during this section.

**GRADING:**

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<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Labs</td>
<td>35%</td>
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<tr>
<td>Test#1</td>
<td>20%</td>
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<tr>
<td>Test #2</td>
<td>20%</td>
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<tr>
<td>Final</td>
<td>25%</td>
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- Labs are important; unexcused labs receive "0", a total of three unexcused labs results in "F" for the course.

**Blackboard:** I will use the blackboard site for the course to post this syllabus, previous exams, and other information about the course during the semester. Last year, for instance, the readings for the final third of the course on "global cycles" were all posted, drawn from my own writings on the subject.