

ENVIRONMENTAL BIOLOGY (BIOL 105)
TUESDAY AND THURSDAY 9:30-10:45
FALL 2011

COURSE SYLLABUS

Instructor: Dr. Brian D. Fath

Office: 273 Smith Hall

Office Hours: TR 10:45-12:15 or by appointment

Office Phone: 410-704-2535

Email: bfath@towson.edu

Textbook: Keller EA, Botkin DB. 2008. Essential Environmental Science. Wiley, New York, NY.

Course Description: BIOL105 introduces the relationships between humans and the environment. Fundamentals of ecology, hydrology, demography, energy, and nutrient cycling will be covered, as well as the human impact on the use and management of the earth's land, water, and air resources. An emphasis is placed on six key themes: Human Population, Sustainability, Global Perspective, Urban World, Environmental Unity, and Values.

Learning Outcomes: Students will be able to:

1. Construct and analyze input-output models
2. Calculate exponential growth of biological populations
3. Trace energy and material flows through ecological food webs
4. Describe the demographic transition for human populations
5. Identify the major agricultural crops and the environmental impacts of producing them
6. Differentiate between renewable and non-renewable energy sources, their applications and limitations
7. Complete an atmospheric energy budget including the impact of greenhouse gases
8. Diagram the hydrological cycle and ways that consumption and land use patterns alter it
9. Write a scientific essay of a current environmental issue

Grading Policy: Course grade will be based on the combined total from papers, homework, attendance, and exams. Homework will focus on daily class activities or readings. Homework must be submitted in class on the day that it is due. Late homework or emailed homework will not be considered. Each student will need to have an account on Blackboard. A research paper is to be individually written based on current events related to course material. Further information regarding the paper will be given during the semester. Format of exams is multiple choice, short answer, or other formats explained to you. Exams will be comprehensive, covering all class activities, discussions, lectures, and readings. Exams missed for justified and documented reasons may be made up. The student is responsible for obtaining permission and making arrangements for make-up exams **within 24 hours after the missed exam** (you must call or email me before the next class). Exam scores will be reconsidered providing you explain your case in writing within one week after the exam was returned.

Grade evaluation: (points available):

Papers	150
Homework	200
Participation/Attendance	50
Exam #1	200
Exam #2	200
<u>Final Exam</u>	<u>200</u>
Total	1000

Grading Scale (based on percent of overall points):

<u>A = 92-100; A- = 90-91;</u>
<u>B+ = 88-89; B = 82-87; B- = 80-81;</u>
<u>C+ = 78-79; C = 70-77;</u>
<u>D+ = 68-69; D = 60-67;</u>
<u>F = 0-59</u>