

BIOLOGY 2: Environmental Science

Fall 2012

Instructor: Ms. Smith Bush

Office Hours: Tuesday, Wednesday & Thursdays 11:00am-12:00pm; LFS 13

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Lecture: W, F 12:00-1:25pm; LFS 17

Lab: Wednesday 1:35-4:35; LFS 17.

I. COURSE DESCRIPTION

- A. Title:** Biology 2 – Environmental Science
- B. Prerequisite:** None - Just the desire to learn.
- C. Summary:** This introductory course examines the earth as an ecosystem composed of biological, chemical, and physical processes, with an emphasis on human impacts. Topics will include the structure and function of ecological systems, air and water pollution, pesticide use, waste disposal, climate change, natural resource use, and environment laws. Students will gain an understanding of how humans influence natural environments while focusing on sustainable practices. Basic chemical, physical, and geological processes will be introduced to better explain these topics throughout the course.
- D.** Biology 2 is a 4 unit class with 3 hours lecture and 3 hours laboratory each week.

II. COURSE OBJECTIVES:

In the process of completing this course, students will:

- A.** depict ecosystem levels and food chains in different habitats.
- B.** discuss and evaluate the biodiversity in flora and fauna in local and foreign locals.
- C.** classify pollutants, identify their sources, and identify potential remediation actions.
- D.** describe the basic physical and biological processes which determine ecosystem function.
- E.** gain familiarity with environmental legislation and future directions for local and global environments.
- F.** understand the interrelationships among air, land, and water environments.
- G.** explain how energy and nutrients cycle through ecosystems.
- H.** correctly use and appropriately select different environmental tests and equipment.
- I.** define the characteristics of major biomes and identify land use issues related to each.
- J.** identify factors influencing weather and climate and specify human actions related to change.
- K.** relate human population growth to environmental degradation.
- L.** differentiate renewable and non-renewable resources and identify possible alternatives.

III. REQUIRED MATERIALS:

1. Text: Berg, L., Hager, M. & Hassenzahl, D.; Environmental Science, 3rd edition; Wiley. 2011.
2. Text: Environmental Science, 2nd edition; Wagner, T., & Sanford, R.; Wily. 2010.
3. Scantron form 886 (X6) and quiz strips
4. E-mail address. This can be obtained free through the school
5. Camera – for field trips

IV. NO FOOD, BEVERAGE, CELLULAR PHONES OR PROFANITY AT ANY TIME!!!

Hint!! Be sure to always put your name, code & lab day on all papers to insure you will not get 5 points deducted! Thanks!!

V. ATTENDANCE:

You are expected to be on time for each laboratory and lecture session. Tardiness may be construed as an absence from the class. It is the students' responsibility to sign in when late and then to see the instructor after class to be sure that an absence has been changed to a tardy! Be aware that 3 tardies = 1 absence. This is very important because **if you miss more hours than 10 hours of class or lab, you will be dropped** unless your instructor has been informed of the extenuating circumstances causing your absences.

Reasons for being dropped from the course...

1. Student fails to attend the first laboratory or lecture session of the course.
2. 10 hours of absences during the first 9 weeks of the course.

VI. TESTS AND EVALUATIONS:

A. Grading

<u>Description</u>	<u>Points Possible</u>
Syllabus Tour	15
Textbook Tour	15
Lab Exercises (approx. 17)	200
Problem Sets (10)	100
10 Unannounced Quizzes (10 @ 10 pts. each)	100
4 Exams (100 pts. each)	400
Research Project	100
Approximate Total Points =	930

B. Grading scale:

90% = A 80% = B 70% = C 60% = D 59% and below = F

At any point you can check your grades on [webgrade](#) via our Blackboard site through the Reedley College homepage: www.reedleycollege.edu Your

Blackboard username and password is your 7 digit student ID number. The 24/7 helpdesk address is: <http://d2.parature.com/ics/support/default.asp?deptID=8032> and phone is 1-866-401-7784.

Choose the webgrade link on the left hand side of the Bb screen. You will need a webgrade password which can be obtained from your teacher. You are encouraged to check this site regularly and keep track of your own grades!

- C. *Exams* will include multiple choice questions and usually 3-5 short essay questions. Many times these essays will be the main objectives of each chapter. **Policy for missed exams:** If you know you will miss class during an exam, you may arrange to take the exam early with no penalty. If you miss class on an exam day, you will have one week to make up the exam. Your exam score will have 10 percentage points deducted as a penalty for late work. If you have a medical excuse you will be exempt for the point deduction. It is the students' responsibility to arrange a time for the make-up exam.
- D. *Lab Exercise Grades* will come from your lab work itself. These are to have the answers to laboratory questions on handouts or from your lab guide as well as any problems to work or tables to fill in. Be sure these are neatly done and in the same order as the handouts. Forgotten lab work means no score – as you are responsible for your work. **Policy for missed labs:** Attending the lab is mandatory. No points will be given for lab work if you were not present during the lab meeting.
- E. *Laboratory/Lecture Quizzes* will consist of questions concerning the previous labs/lectures and/or the current day's lab/lecture. Stay caught up and these will be welcome bonus points! Missed quizzes **may NOT be made up**. Quizzes may be given at the beginning or end of a laboratory or lecture.
- F. *Problem Sets* will be due at the beginning of the next lab. Approximately 10 problem sets will be collected throughout the semester. Extra time and neatness as well as accuracy are very important to a successful laboratory grade.
- G. There will be one research assignments requiring you to research an environmental topic and write a formal research paper. More will follow on this later.

VII. Other information:

Drops: You have until the end of the 9th week of school to drop. If you elect to do so, be sure to drop yourself. Do not assume you have been automatically dropped. This is very important, as after the 9th week a grade must be given, by state law, whether you attend class or not.

Adds: If you are given an add slip, be sure to turn it into Student Services within two days of receipt. After this date, you will not be allowed to add the class with that add slip.

Extra Credit: Extra credit is recommended if you feel that you are a borderline grade and that you need 25 points to get you over the hump. Extra credit should be viewed like an insurance policy. You're never quite sure when it may be needed. All extra credit is due at the beginning of the 17th week. **If you have**

over four absences within the semester you will not be eligible for these points.

VIII. Help:

If you should have difficulty grasping the material presented during the course be sure to see your instructor at the first sign of trouble. Often, a few minutes can clear up many problems! If you are having trouble studying, perhaps you need a few study hints or a tutor at the Tutorial Center. Please come in for help!

Always keep in mind that this is a four-unit course. As a general rule, each hour of lecture requires two hours of additional study outside of the classroom each week. Each hour of lab requires one hour of study time, outside the laboratory each week. This equals eight hours of study each week in order to pass this class. Do your planning accordingly. Success comes before work only in the dictionary. Overall, I hope you have a fun semester and learn Environmental Science along the way. Good Luck.

IX. Academic Dishonesty

Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entire honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences. See college catalog for details.

X. Accommodations

If you have a verified need for an academic accommodation or material in alternate media (i.e. Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

Tentative Lecture & Lab Schedule

Biology 2 – Fall 2012

Lecture	Readings	Lab Assignments
Week 1: 8/15-8-17 The environmental challenges we face	Ch. 1	Lab one- Environmental awareness
Week 2: 8/22-8/24 Environmental Sustainability & Human values	Ch.2	Lab two- Science & popular media <i>Problem set #1</i>
Week 3: 8/29-8/31 Environmental history, politics & economics	Ch.3	Lab three- Greening of the campus <i>Problem set #2</i>
Week 4: 9/5-9/7 Risk analysis & environmental health hazards	Ch.4	Lab four- Environmental site inspection <i>Problem set #3</i>
Week 5: 9/12-9/14 How ecosystems work Exam #1 (ch.1-4 & labs)	Ch.5	Lab seven- Experimental design: Range of tolerance
Week 6: 9/19-9/21 Ecosystems & Evolution	Ch.6	River walk <i>Problem set #4</i>
Week 7: 9/26-9/28 Human population change & the environment	Ch. 7	Lab ten- Human survivorship changes <i>Problem set #7</i>
Week 8: 10/3-10/5 Air & air pollution	Ch. 8	Lab seventeen- Global climate change & cars <i>Problem set #6</i>
Week 9: 10/10-10/12 (drop day) Global atmospheric changes	Ch. 9	Inconvenient Truth Film <i>Problem set #8</i>
Week 10: 10/17-10/19 Freshwater resources & water pollution Exam #2 (ch.5-9 & labs)	Ch.10	Lab twelve- Aquatic species diversity
Week 11: 10/24-10/26 The ocean & fisheries	Ch. 11	Guest speaker <i>Problem set #10</i>
Week 12: 10/31-11/2 Mineral & soil resources Land resources	Ch.12 Ch.13	Lab TBA
Week 13: 11/7-11/9 Agricultural & food resources	Ch.14	Food Inc. movie <i>Problem set #16</i>
Week 14: 11/14-11/16 Biological resources Exam #3 (ch.10-14 & labs)	Ch.15	No lab due to field trip
Week 15: 11/21-11/23 Solid & hazardous waste	Ch.16	Lab Twenty-one- Pollution prevention:

F: Thanksgiving Holiday		Solid waste
Week 16: 11/28-11/30		<i>Research paper due</i>
Nonrenewable energy resources	Ch. 17	Field trip <i>Problem set #9</i>
Week 17: 12/5-12/7		
Renewable energy resources	Ch.18	Guest speaker Extra Credit Due
Week 18: Wednesday 12/12/10 12:00 pm		Exam #4 (ch.15-18 & labs)