

Biology 105: Environmental Biology

Spring 2008

Instructor: Dr. R. Craig Stillwell

Pima Community College Desert Vista Campus

General Course Information

Biology 105IN; CRN 23701

Monday-Wednesday 10:10 am – 12:50pm

Room C122

Instructor Information

R. Craig Stillwell, Ph.D.

Office phone: 206-5147

Email: rcstillwell@pima.edu

Office hours: by appointment

Integrated Lecture/Lab

This is an integrated lecture and lab course combined for 4 units. Please note that the **lecture and lab do not earn individual credit**. Your overall grade will be determined from points earned in both the lecture and lab portion of the course.

Course Description

Environmental biology explores the fundamentals of ecology and their relevance to human impact on natural systems. This includes ecosystem structure and function, population dynamics, human impacts on the earth's natural resources, and "green" economics.

Course Objectives:

- To gain an appreciation for biology and the environment
- To describe ecological principles of how the Earth functions
- To apply ecological principles in understanding the human impact on the environment
- To critically evaluate the scientific basis of environmental issues
- To understand how science interacts with society and politics to affect the environment
- To describe possible causes and to offer potential solutions to current environmental problems
- To demonstrate skills necessary for life-long learning, critical examination and personal decisions relative to environmental biology
- To perform activities to demonstrate improvement in the general education goals of oral communication, written communication, and critical thinking

Prerequisites

None.

Required Text

Environment: The Science Behind the Stories by Jay Withgott & Scott Brennan, 2nd Edition, 2007

Other required reading materials will be provided to you or will be on reserve in the library.

Philosophy

I want this course to be fun, interesting, and challenging for you. I expect each of you to work hard and be successful in this class. At the end of the course, you will have gained knowledge that you can use in a positive way to help our society and our environment.

We will tackle many current environmental issues that people will have strong opinions on. You may voice your own opinion, but you must also respect others' opinions. We will all gain something by listening to and critically examining each point of view.

Note: Please check your email regularly for class announcements.

Important Dates

Classes begin	Jan. 22	Spring Break	March 17-23
Add period	Jan. 22-28	Withdrawal	April 14
Drop/refund	Feb. 4	Final Exam week	May 14-20
Audit deadline	Feb. 4	Classes end	May 20
Rodeo Holiday	Feb. 21-22 (Thurs. & Fri.)		

Course Evaluation

Exams & Quizzes	35%	Readings	10%
Labs	30%	Semester projects	10%
Assignments	10%	Participation	5%

Grading Criteria

A = 90 – 100%	D = 60 – 70%
B = 80 – 90%	F = below 60%
C = 70 – 80%	

Incomplete (I)

No incompletes will be given.

Official Withdrawal (W)

Students may officially withdraw from the class by April 14. Forms are available in the Registration Office.

Official Withdrawal (W) After April 14

An Official Withdrawal can be granted by the instructor after the April 14 deadline. The Official Withdrawal must be requested by the student in writing. I will grant the request if you submit it by the last day of class. This is meant for the student that has missed the Official Withdrawal deadline.

Make-up & Late Assignment Policy

I will not allow any make-up exams, quizzes, or labs, except in very serious situations that I deem appropriate (death of a family member, etc.). Note that you will need to provide me with some sort of proof. If you encounter such a situation please contact me immediately so we can make arrangements. **Any attempt to abuse this policy will result in a zero for the entire course.**

Your exams will be taken in the testing center and should be available for 3-4 days. If you fail to take the exam during this time period, you will not receive a grade for the exam.

Late assignments will be penalized 30% for each day they are late. As a result, assignments more than 4 days late will receive no points.

Support Services

Advising, Academic Planning, and Goal Setting: 206-5030

Career and Transfer Center: 206-5042

Assessment and Testing Center: 206-5047

Disabled Student Resources: 206-5030

Susan Zimmerman, DV DSR specialist: 206-5151

Child Care: 206-5203

Library Services: 206-5095

Counseling: 206-5030

Students with disabilities: If you have a disability that requires special accommodations, you are strongly urged to contact the Disabled Student Resources (DSR) office at the beginning of the semester so that reasonable accommodations can be made in a timely manner. The DSR office is located in the Plaza Bldg. or contact 206-5151.

Attendance Policy

I will take attendance at the start of each class. If you miss 3 or more classes, you may be dropped from the course. Attendance also means showing up on time. Being more than a few minutes late may be counted as an absence.

This is an integrated lecture/lab course, so attending class is to your advantage. Missing too many classes will affect your final grade because there are many activities we will do in class that you cannot make up. Also, there may be unannounced quizzes during the first 10 minutes of class, so being prompt is to your advantage.

Class Participation

Participation in class is essential. 5% of your grade will be determined by your wiliness to ask and answer questions, your ability to work well in groups, and participation in class discussions. You will be given either a plus (participated) or a minus (did not participate) for each day of class. Showing up for class and participating is an easy way to boost your final grade.

Academic Ethics

I expect you to follow the Pima College Student Code of Academic Ethics:

Students assume full responsibility for the content and integrity of the coursework they submit. The following is a guide to assist students in observing positive behavior in scholastic ethics:

1. Students must do their own work and submit only their own work on essays, examinations, reports, and projects, unless otherwise permitted by the instructor.
2. Students can benefit from working in groups. They may collaborate or cooperate with other students during take-home examinations or projects only if specifically authorized by the instructor in the class syllabus or at the time of the examination.

Details concerning the Code of Academic Ethics, including disciplinary action, can be viewed online at:

<http://www.pima.edu/studentserv/studentrights/code/index.shtml>

I will not tolerate cheating of any kind in my class. If you are caught cheating on an exam or a quiz, you will be given a zero for that exam or quiz. You will most likely be dropped from the course as well. Your work must be your own. You can discuss lab work, homework, or other group related activities with your fellow students, but your final work must be your own.

Classroom Behavior

I expect you to adhere to the Pima Student Code of Conduct, which can be viewed here:

<http://www.pima.edu/studentserv/studentrights/student-conduct/index.shtml>

When you are in class, make sure your cell phones are turned off. Also, text messaging in class is not allowed. If you get caught sending or receiving a text message during a quiz or exam, it will be considered cheating and you will receive a zero.

Laboratory Safety

1. No food or drinks are allowed while we are doing laboratory activities.
2. You must wear sound footwear to protect yourself against any glass breakage and chemical spills. Any open-style shoes are prohibited in labs where we will be handling glassware and/or chemicals. This includes sandals, flip-flops, etc. However, you can wear open-style shoes in lectures, and in labs in which we will not be handling glassware or chemicals.
3. Long hair should be safely tied back with a clip or elastic.
4. Wear appropriate dress for laboratory activities. Mini-skirts, low-cut/low-rise tops, etc. should be avoided.

NOTE: I reserve the right to change the syllabus at any time. You will be notified of any changes in class.

Tentative Lecture & Lab Schedule

	Date	Topics	Lab/Activities	Text Chapters	Assignments
1	W 1/23	Introduction & Syllabus	Lab 1: Hypothesis Testing: Grape Expectations		
2	M 1/28	Introduction to Environmental Science	Lab 2: Environmental Science and the Media	1	Reading 1 analysis due Interpreting Graphs & Data (IGD) p. 24; Calculating Ecological Footprint (CEF) p. 25
	W 1/30	Environmental Ethics & Economics	Lab 3: Bottle biosphere introduction	2	
3	M 2/4	Environmental Policy	Lab 3: Work on Bottle Biospheres Set up World biome project groups	3	Reading 2 analysis due IGD p. 86; CEF p. 87
	W 2/6	Environmental Policy	Lab 3: Work on Bottle Biospheres- SEAL ONE		
4	M 2/11	Environmental Systems & Ecosystem Ecology	Lab 4: DV Biome B biodiversity field work Exam 1 available in testing center	7	Reading 3 analysis due IGD p. 213; CEF p. 214
	W 2/13	Environmental Systems & Ecosystem Ecology	Lab 4: DV Biome B biodiversity analysis		
5	M 2/18	Evolution, Biodiversity, & Population Ecology	Lab 4: DV Biome B biodiversity analysis Present World biome projects	5	Reading 4 analysis due IGD p. 146; CEF p. 147
	W 2/20		Ironwood Picnic Area (Biome C) – Lab 5&6: Biodiversity Analysis & Plant Associations		
6	M 2/25	Evolution, Biodiversity, & Population Ecology	Present World biome projects Lab 5: Biome C biodiversity analysis		Reading 5 analysis due IGD p. 180; CEF p. 181
	W 2/27	Species Interactions & Community Ecology Kaibab deer	Present World biome projects Lab 6: Biome C biodiversity analysis	6	
7	M 3/3	Biodiversity & Conservation Biology	Lab 6: Plant association data analysis Part 1	11	Reading 6 analysis due IGD p. 340; CEF p. 341
	W 3/5	Biodiversity & Conservation Biology	Lab 6: Plant association data analysis Part 2		
8	M 3/10	Human Population	Lab 6: Plant association data analysis Part 2 Exam 2 available in testing center	8	Reading 7 analysis due IGD p. 242; CEF p. 243
	W 3/12	Soil & Agriculture	Lab 7: Topo Maps	9	
9	M 3/17	SPRING BREAK			
	W 3/19	SPRING BREAK			
10	M 3/24	Agriculture, Biotechnology,	Lab 8: TBA	10	Reading 8 analysis due

		&the Future of Food			IGD p. 306; CEF p. 307
	W 3/26		ASDM Field Trip		
¹¹	M 3/31	Resource Management, Forestry, Land Use, & Protected Areas	Lab 9: No Point to This Pollution	¹²	Reading 9 analysis due ASDM Field Trip Assignment
	W 4/2	Urbanization & Creating Livable Cities	Lab 9: No Point to This Pollution	¹³	IGD p. 398; CEF p. 399
¹²	M 4/7	Urbanization & Creating Livable Cities	Lab 10: GM Study		Reading 10 analysis due
	W 4/9	Environmental Health & Toxicology	Lab 10: GM Study Exam 3 available in testing center	¹⁴	
¹³	M 4/14	Environmental Health & Toxicology	Lab 10: GM Study		Reading 11 analysis due
	W 4/16	Freshwater Resources	Lab 11: 3 Techs Toxicology	¹⁵	IGD p. 463; CEF p. 464
¹⁴	M 4/21	Freshwater Resources	Lab 11: 3 Techs Toxicology		Reading 12 analysis due
	W 4/23	The Oceans	Lab 11: 3 Techs Toxicology	¹⁶	IGD p. 494; CEF p. 495
¹⁵	M 4/28	Film: An Inconvenient Truth	Lab 12: Food Toxicology	¹⁸	Reading 13 analysis due IGD p. 554; CEF p. 555
	W 4/30	Global Climate Change	Lab 12: Food Toxicology		
¹⁶	M 5/5	Conventional Energy Alternatives	Lab 12: Food Toxicology	²⁰	Reading 14 analysis due
	W 5/7	Renewable Energy Alternatives	Lab 12: Food Toxicology	²¹	
¹⁷	M 5/12	Sustainable Solutions		²³	IGD p. 698; CEF p. 699
	W 5/14		FINAL EXAM		
¹⁸	M 5/19		Presentations of Toxicology Projects		

NOTE: You need to choose 5 of the 14 available reading analyses

Course Agreement

I have read the syllabus for BIO 105 with Dr. Stillwell. I agree to all the rules set forth in the syllabus. I also agree to do my best to attend every class, show up on time, and participate in class discussions and activities. In addition, I agree to wear appropriate footwear and clothing for the laboratory.

It is my responsibility:

1. to ask questions and participate in class.
2. to inform Dr. Stillwell when I need to be absent from class.

Signed _____

Printed name _____

Date _____

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