

Syllabus

Imperial Valley College – Spring Semester 2014 Science, Math and Engineering Division

Environmental Science – AG 110 (CRN – 20202)
Agricultural Sciences- ENVS 110 (CRN – 20203)
Build 2700 Room 2733 Wednesday 6:30 pm – 9:40 pm
Spring term January 22nd – May 14th, 2014
3.00 Credits/Units

Instructor

David Bradshaw, CAIS

Contact Information

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Course Description

This course is designed to provide students with an overview and understanding of the interrelationships between humans and the natural environment. The class will focus on basic concepts of science and ecosystem theory, human impacts on the air, water, and land, environmental problems faced in the Imperial Valley that have regional and global consequences, and some of the proposed solutions.

Course Objectives

Student will:

- Describe the role of science, the use of the scientific method, the importance of stewardship, and the concept of sustainability in the environmental field;
- Identify local and global environmental challenges;
- Recognize and describe the science, structure, function, dynamics, adaptations of and major threats to local and global ecosystems;
- Describe the environmental impacts of human population growth and material consumption nationally and internationally;
- Identify some of the solutions that can address the population and consumption challenges;
- Describe the importance of protecting wildlife and habitats and conserving biodiversity;
- Describe the characteristics of distinct local habitats (the Salton Sea and the deserts) and endangered species found there and the efforts to effectively manage and conserve them;
- Describe the hydrological cycle and identify ways that humans negatively impact the cycle.
- Describe the quality of fresh water globally and identify major sources of water pollution;
- Apply these principles to local water bodies such as the New and Alamo Rivers and the Salton Sea;
- Describe the political aspects of water allocations of the Colorado River and its impact on the Imperial Valley;

- Describe the state and federal laws and regulatory agencies that govern environmental concerns of air, water, land, human health, and chemical hazards;
- Identify common human health effects of environmental exposures;
- Recognize the steps involved in risk analysis, how risk perception affects individual and group decision making, and strategies for managing risks;
- Describe agricultural practices in the Imperial Valley with regard to the following concepts: soil characteristics, use of irrigation, the benefits and drawbacks of fertilizer use and pest control, the environmental impacts in air, soil, and water, and the economic impact regionally and nationally;
- Identify the major sources of air pollution locally and nationally;
- Recognize the benefits and environmental impacts of fossil fuels and describe alternatives to its use;
- Describe how materials are managed to minimize or eliminate environmental impacts;
- Identify the federal regulations governing the clean-up and handling of chemical and hazardous materials;
- Describe the process of managing solid waste from source reduction to recycling;
- Identify solutions to local and global environmental problems

Required Textbook

Environmental Issues and Solutions: Myers and Spoolman

© 2014 Brooks/Cole, Cengage Learning ISBN-13: 978-0-538-73560-5

General Expectations

Students must comply with all rules and regulations of Standards of Student Conduct outlined in the Imperial Valley College General Catalog. For writing assignments I expect you to demonstrate proficiency in the use of the English Language. Grammatical errors and writing that do not express ideas clearly will affect your grade. Students who are unable to write correctly and have trouble expressing ideas clearly are urged to contact the appropriate campus resources for assistance.

Cell Phones/tablets

I require that all cell phones and other noise making devices be turned off or silent during class. If you must use these devices during class, I ask that you quietly and discretely leave the room. Failure to comply with such rules will result in a deduction of points from your overall course grade.

Disability Information

Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible.
 DSP&S, Room 2117
 Health Sciences Building
 (760) 355-6312

Late & Absent Policy

If you find that you need to excuse yourself early on rare occasion you should make every effort to get to class early so that you can sit close to the door. This will allow you to leave the room without disrupting the learning environment of your fellow students. Similarly, if you will not be

able to avoid being late, it is your responsibility to come in and sit down in a manner that will not be disruptive.

It is the student's responsibility to obtain notes for any missed class time.

Class Requirements Class grading will be based on points in the following distribution:

Presentation	50 points
Position Paper	100 points
Group Work	50 points
Quizzes	150 points
Exams	200 points
Total	550 points

Class Participation Each student is expected to read the assigned material before coming to class. This will enable you to participate in the class discussions. Being able to interact in this manner will have positive effects on your quiz and exam performance.

Position Paper During this semester you will be required to write a paper on local environmental issues. Papers must be two pages typed in 12 point font, double spaced. The paper is worth 100 points. There will be a deduction of points for grammar, margins, format and spelling.

Group Presentation You will be required to work in a group on one class presentation. I will provide class time to do group work. However if you feel your group needs more time then you will need to make arrangements with your group to work outside of class.

Quizzes There will be around 15 pop quizzes given this semester. The quizzes will mainly be over your assigned reading, previous regular/guest lecture. Each quiz is worth 10 points. **No make-up quizzes will be given.**

Exams Two exams will be given. Exams may include true/false, short answer, multiple choice, and short essay questions. Exams will be worth 100 points each.

Lecture Topics Focus on local renewable energy including solar and geothermal with an emphasis on water resources in the Imperial Valley.

Student Learning Outcomes

Institutional Student Learning Outcomes: ISLO1 = communication skills; ISLO2 = critical thinking skills; ISLO3 = personal responsibility; ISLO4 = information literacy; ISLO5 = global awareness

Course Student Learning Outcomes: upon completion of this course, the student will be able to: Demonstrate a basic understanding and working knowledge of the interaction between the student and his or her environment.

Class Schedule – Note: Dates are subject to change.

<i>Date</i>	<i>Topic</i>	<i>Type</i>
01/22/14	Introductions, Syllabus, <u>Tapped DVD</u>	lecture
01/29/14	Mod. 1: Environmental Science and Sustainability	DVD quiz, lecture
02/05/14	Mod. 2: Population Growth	Mod. 1 quiz, lecture
02/12/14	Mod. 3: Urbanization	Mod. 2 quiz, lecture
02/19/14	Mod. 4: Food Resources, <u>Food Inc. DVD</u>	Mod. 3 quiz, lecture
02/26/14	Mod. 6: Non-Renewable Energy (note module order)	Mod. 4 and DVD quiz, lecture
03/05/14	Mod. 5: Renewable Energy <u>Power Surge DVD</u>	Mod. 6 quiz, lecture
03/12/14	Mod.10: Water Resources, IV Water Issues	Mod. 5 and DVD quiz, lecture
03/19/14	Midterm , Imperial Valley Water, Salton Sea	Midterm Exam , lecture
03/26/14	Mod.11: Water Pollution, I.V. Water Quality	I.V. Water quiz, lecture
04/02/14	<u>Cadillac Desert DVD 1</u> , Term Paper Assignment	Mod. 11 quiz, lecture
04/09/14	Class Presentations 1	DVD quiz, presentations
04/16/14	Class Presentations 2	lecture, presentations
04/23/14	Spring Break	Spring Break
04/30/14	Mod.12: Air Pollution, <u>Gas Land DVD</u>	lecture
05/07/14	Mod.15: Environmental Health Hazards, Final Prep.	Mod.12 and DVD quiz, lecture
05/14/14	Final	Final Exam