

Imperial Valley College Course syllabus
Environmental /Ag Science 110 (ENVS/AG 110)
CRN 20874 / 20875

Course name and #: **Environmental /Ag Sci 110**

Lectures: **Tuesday, 6:30-9.40 PM**

Instructor: Oli Bachie, PhD

Email: oli.bachie@imperial.edu

Units: **3 lecture units**

Lecture Room – 2700-2733

Office: Room 809

Office hrs: xxxx; by appointment only

Phone (voice mail) : xxxxx

Note: The best way to reach me is through the e-mail. However, if you have questions you can talk to me right after the lecture classes. You may also leave messages for me in my mailbox or on a voice mailbox (ext., xxxx).

FALL CALENDAR

Fall Semester begins

February 17

Holiday/spring break

April 7

Last date of class/final exam

June 9

Withdrawal policy

Last day to withdraw from a semester c
without receiving “W” is March -?

Required Text: Myers, Norman and S. E. Spoolman. 2014. Environmental Issues and Solutions: A Modular Approach. Cengage Learning. ISBN: 978-0-538-73560-5

SCANTRONS (required)

These testing forms are available at the bookstore, if not ask the department where you can get them. **Note:** you must have the correct forms. You will need one scantron form (#882-ES) and #2 pencils for each exam and quizzes. As quizzes may be a popup, make sure you always bring your scantron to class.

Course Description:

The 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 by the humans that have regional and global consequences, and some of the proposed solutions.

Student Learning Outcomes:

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Identify important issues in environmental science at the local, state, national or international levels (such as air and water quality, species diversity, soil and land use etc)including the various causes, possible long term repercussions and possible solutions. (ILO1, ILO2, ILO3 & ILO4)
2. Identify traditional & alternative energy sources including advantages & disadvantages of each. (ILO2 & ILO4)
3. Discuss the growing human population and the related demand for resources (water, power, soil, hunger, etc.) and the impact that it places on agriculture. (ILO1, ILO2, ILO4 & ILO5)

Instructional / Course Objectives:

Upon satisfactory completion of the course, students will be able to:

1. describe the role of science, the use of the scientific method, the importance of stewardship, and the concept of sustainability in the environmental field. The student will also identify local and global environmental challenges.
2. recognize and describe the science, structure, function, dynamics, adaptations of and major threats to local and global ecosystems.
3. describe the environmental impacts of human population growth and material consumption nationally and internationally. The student will also identify some of the solutions that can address the population and consumption challenges.
4. describe the importance of protecting wildlife and habitats and conserving biodiversity. The student will identify endangered species found at the Salton Sea and local deserts and describe efforts to protect them. The student will also describe the characteristics of distinct local habitats (the Salton Sea and the deserts) and the efforts to effectively manage and conserve them.
5. describe the hydrological cycle and identify ways that humans negatively impact the cycle. The student will describe the quality of fresh water globally and identify major sources of water pollution. The student will apply these principles to local water bodies such as the New and Alamo Rivers and the Salton Sea. The

student will also describe the political aspects of water allocations of the Colorado River and its impact on the Imperial Valley.

6. describe the state and federal laws and regulatory agencies that govern environmental concerns of air, water, land, human health, and chemical hazards. The student will also describe the use of cost-benefit analysis in the development of environmental policies.
7. identify common human health effects of environmental exposures. The student will recognize the steps involved in risk analysis, how risk perception affects individual and group decision making, and strategies for managing risks.
8. 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.
9. identify the major sources of air pollution locally and nationally. The student will recognize the benefits and environmental impacts of fossil fuels and describe alternatives to its use such as the development of solar, wind, and geothermal energy and the development of public transportation systems and alternative fuels for vehicles.
10. describe how materials are managed to minimize or eliminate environmental impacts. The student will identify the federal regulations governing the clean-up and handling of chemical and hazardous materials. The student will also describe the process of managing solid waste from source reduction to recycling.
11. identify solutions to local and global environmental problems. The student will also describe how politics, citizen involvement, and personal commitment can shape these solutions.

General Etiquette: As a college student you are an adult and I will treat you with due respect and maturity. I expect you to do the same with me. It is your responsibility to conduct yourself as a mature, professional individual fully responsible for your actions. However, there are a few things we need to emphasize so that we together can create an atmosphere where learning and teaching are possible, an atmosphere that is based on mutual respect. This means behavior on the instructor's and on your part that is appropriate for a lecture and all other class activities. For example, persistent talking during the lecture cannot be tolerated; it is disrespectful and disturbing to me and to your fellow students surrounding you. If such disturbance persists, I may reseat you if necessary. Students repeatedly talking in class while the instructor or a guest is lecturing will be asked to leave. No food or drinks are allowed in classroom. In general, students must comply with all rules and regulations included in the Standard of Student Conduct in the Imperial Valley College General Catalog. If group project(s) are assigned, each student is expected to do their fair share of the work. Let's work together and make it a successful semester for everyone.

Attendance Policy: Attendance is expected in every class meeting. It is very important for you to attend all classes in order to be successful in this course. Lateness per se results in no immediate penalty to you, but I can drop you from the class after *four unexcused absences*. Since you knowingly signed up for this time slot, you planned on being at each class session. However, I do understand that things happen and if you must miss a class I would ask that you let me know ahead of time. In an event of an absence, I strongly encourage you to contact a classmate to obtain materials/information that you may have missed

Arriving late or leaving early, or frequently walking in and out of the class while it is in session is disrespectful, disruptive, and unprofessional. If you find that you need to excuse yourself early on rare occasion you should make every effort to sit close to the door. This will allow you to leave the room without disrupting the learning environment for your fellow students. Similarly, if you have to be late for a reason, it is your responsibility to come in and sit down in a manner that will not be disruptive. Repeat tardiness will be noted and will adversely affect your grade.

Cell Phones and Pagers: *Ringling cell phones really disturb the flow of a lecture and the train of thoughts of everyone in the room.* Therefore, all cell phones, pagers and other noise making devices must be **turned off or put to vibrate** during class. If you must use these devices during class, I ask that you quietly and discretely leave the room.

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

Withdrawing: I will not drop you from the course after the first class meeting. Please be aware of all the deadlines to prevent a “W” from appearing on your transcript. It is your responsibility to fill out the appropriate paperwork. Any student remaining enrolled in this course after the deadline to drop will receive a letter grade.

CHEATING/Academic dishonesty

All exams and quizzes are individual assignments. It is hoped that cheating will not be a problem in this course. Nevertheless, to avoid any possibility if you not recognizing what the consequences may be, my policy is that **if you are caught cheating on an exam, any test or assignment, you will receive a zero** on that particular exam, test or assignment. In addition, **the event will be reported to the campus authorities and may lead to additional actions** by the college. Do not sacrifice your academic career because of your unpreparedness and/or irresponsibility.

EXAMS and GRADING:

Exams will be of the multiple-choice, true/false and / or an essay variety in some cases or a combination of all. Questions for the exams and quizzes will be taken from my lecture and your text book. You will **not** be tested on subjects from the book unless it has been discussed in a lecture. Four lecture exams are scheduled and will have equal weights. The exams are not cumulative. These examinations are primarily concept-oriented and may not cover each and every detail found in the chapters. Exams are obviously mandatory. Therefore, in order to get a high grade, attendance of classes is essential. Please **be on time** for exams; it is discourteous to others to come late because it is distracting to have someone else walk in tardy.

Here are the tentative exam schedules for the semester;

Exam 1: March 24

Exam 3: June 9

Exam 2: April 28

Make-up exams (upon verified excused absence). As can be seen above and the subsequent schedule page, I have given you the dates of the exams well ahead of time (see also attached schedule) to allow you to make appropriate arrangements. Therefore, you must make all possible effort to take the exams on the specified date (s). However, if illness or other serious problems beyond your control prevents you from taking the exam, I expect you to provide some kind of verification of the reason from the student health services or your health provider. You must **bring a valid excuse** to be accorded the privilege of taking a make-up. You must also contact me **no later than two days** after the regular exam that you missed. If there is a make-up exam it will be scheduled at the instructor's convenience during the last week of the fall semester. The make-up exam is of different format from the regular exams and may consist of **essay and short answer questions**. Make-ups will be given **for the first 3 exams only**. If you fail to notify me of the reason for your absence, or neglect to take the make up on the scheduled date, you will receive a zero grade for the exam you missed. Quizzes may or may not be announced in advance. In all cases, there is no make-up on quizzes or assignments you miss. Late submission of assignments will not be accepted or discounted.

I do not give letter grades on individual exams, quizzes, assignments or any other required activities. Your letter grade is calculated at the end of the semester based on points received (tentative) and awarded as follows;

<u>Category</u>	<u>%age</u>
• Individual Class Participation	5
• Assignments and projects	15
• Quizzes (3 to 5)	20
• Exams (3)	60
Total	100

The **letter grades** are **A** (90 - 100%), **B** (80 – 89 %), **C** (65 – 79 %), **D** (50 – 64 %) and **F** (below 50%)

TENTATIVE LECTURE SCHEDULE:

Schedule of topics & text chapters to be covered are subject to change at the discretion of the instructor

week	Date	Lecture	Readings
1	2/17	Welcome and Introduction	
		Environmental Science & sustainability	Module 1
2	2/24	Environmental Science & sustainability	Module 2
3	3/3	Population growth	Module 2
4	3/10	Urbanization	Module 3
5	3/17	Food resources	Module 4
6	3/24	Exam 1	
		Energy efficiency & renewable energy	Module 5
7	3/31	Energy efficiency & renewable energy	Module 5
		Nonrenewable energy	Module 6
8	4/14	Nonrenewable energy	Module 6
		Mineral resources	Module 7
9	4/21	Species extinction	Module 8
10	4/28	Exam 2	
		Land degradation	Module 9
11	5/5	Water resources	Module 10
12	5/12	Water pollution	Module 11
13	5/19	Air pollution	Module 12
		Climate change	Module 13
14	5/26	Wastes	Module 14
15	6/2	Environmental health hazards	Module 15
16	6/9	Exam 3	

Note: Students are responsible for any announced changes during class.

This syllabus and course schedule is legally binding contracts. By remaining enrolled in this class, you are agreeing to all of the class regulations

Supplemental Readings: Students are encouraged to read the following additional text that may provide greater detail on all the topics;

- Richard T Wright & Dorothy E. Boorse. 2011. Environmental Science: Toward a Sustainable Future, 11th Ed, Pearson Education Inc.
- Jay Withgott and Scott Brennan. 2009. *Essential Environment: The Science behind the Stories*, 3rd Edition, Pearson Education Inc.