

### Basic Course Information

Semester:	Spring 2023 Online	Instructor Name:	Dr. Michael Kanyi
Course No. & Title	AG/ENVS 110 Environmental Science	Email:	michael.kanyi@imperial.edu
CRN #:	20004/20005	Webpage (optional):	
Classroom:		Office	3114
Class Dates:	Feb 13, 2023 – June 10, 2023	Office hours: Virtual (email, text canvas, pronto, zoom)	MTWR 1:00pm – 2:00pm
Class Days:	Online	Office Phone #:	(760)355-5717
Class Times:	Online	Emergency Contact:	Tisha Nelson, Economic & Workforce Development (760) 355-6361/ (760) 355-6161
Units:	4	Format	Online Asynchronous

### Course Description

This course is designed to provide students with an overview and understanding of the relationships between human populations and the natural environment. The class will focus on basic concepts of science and ecosystem theory, human impacts on the biosphere, air, water, land, and environmental problems faced by the Imperial Valley that have regional and global consequences, and some of the proposed solutions. Field trips and activities may be included in this course. (Same as ENVS 110) (CSU, UC, UofA).

### Course Prerequisite(s) and/or Corequisite(s)

Although there is no prerequisite requirement for this course, adequate knowledge of general high school biology is expected.

### 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. 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)

### Course Objectives

Measurable course objectives and minimum standards for grade of "C."

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.

### Textbooks & Other Resources or Links

#### Main Textbook

Miller, G. T. & Spoolman, S. E. (2019) *Environmental Science* (16<sup>th</sup> ed.) Cengage ISBN-13: 978-1-337-56961-3



#### Other valuable reference textbooks

- Withgott, Jay H., Laposata, Matthew (2019). *Environment: The Science behind the Stories* (7th ed). Pearson. ISBN: 978-0134145
- Myers, N. & Spoolman, S. E. (2014). *Environmental Issues & Solutions: a modular approach*. Belmont: Cengage. ISBN-13: 978-0-538-73560-5

Note: This course will use various open/online educational resources (OERs).

### Course Requirements and Instructional Methods

Learning activities for this class will include, but not limited to, instructor's guided discussions in canvas, lecture notes posted in canvas, instructional YouTube videos, simulated virtual experiments/activities, outside/field practical experience, assignments, quizzes, and tests. **Effective**

**participation in all course activities (discussion in canvas) is highly encouraged and will impact the final grade.** Critical thinking approach to solving agricultural economic issues at the regional, state, national and global level will be emphasized.

**Out of Class Assignments** (mainly f2f): The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester. WASC has adopted a similar requirement. This is an online course, and the mode of instruction is asynchronous. You are therefore advised to dedicate ample time to the daily instructional activities and assignments.

### Course Grading Based on Course Objectives

Students are advised to acquaint themselves with all rules and regulations of Standards of Student Conduct outlined in the [Imperial Valley College General Catalog](#). For writing assignments, it is expected that each student will demonstrate proficiency in the use of the English Language. Grammatical errors and writing that do not express ideas clearly will affect your grade.

#### Assessment and Tests

- There will be discussions in the canvas, and virtual laboratory simulations using Labster.
- There will be module quizzes and a final comprehensive test that will cover all the modules. The due date for each quiz will be indicated in each module. Test questions may include true/false, multiple choice, matching, and short answer questions. All students are advised to strictly adhere to the dates and times for the tests which will be communicated. Late submission of assignments must be communicated to the professor before the due date to avoid loss of points.

#### Late Submission Policy

- Timely submission of all assignments, quizzes, discussion posts, tests and other tasks by the due date is required. Therefore, “no late work and submissions policy” will be followed.
- Minimally, legitimate circumstances that potentially threaten this policy must be communicated and excusal granted in advance of the submission's due date. There will be a 10% deduction of possible points for a late submission with excusal. If a submission is not made by the due date, and there was no prior excusal, then a zero (0) score will result. **There will be no make-up tests.**

#### Distribution of grading points

• Discussion	15%
• Research paper & Assignments	15%
• Quizzes and mid-term	30%
• Comprehensive Final Test	40%
<b>Total</b>	<b>100%</b>

#### Grading Legend

- A= 100-90%
- B = 89-80%
- C = 79-70%
- D = 69-60%
- F =<59%

### Course Policies

#### Attendance and Participation

A student who fails to attend the first meeting of this class will be dropped by the instructor as of the first official meeting. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See [General Catalog](#) for details.

- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused

absence exceeds the number of hours the class is scheduled to meet per week may be dropped. **For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.**

- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as ‘excused’ absences.

### **What does it mean to “attend” an online class?**

Attendance is critical to student success and for IVC to use federal aid funds. Acceptable indications of attendance are:

- Student submission of an academic assignment
- Student submission of an exam
- Student participation in an instructor-led Zoom conference
- Documented student interaction with class postings, such as an interactive tutorial or computer-assisted instruction via modules
- A posting by the student showing the student's participation in an assignment created by the instructor.
- A posting by the student in a discussion forum showing the student's participation in an online discussion about academic matters.
- An email from the student or other documentation showing that the student has initiated contact with a faculty member to ask a question about an academic subject studied in the course.

**Logging onto Canvas alone is NOT adequate to demonstrate academic attendance by the student.**

### **Classroom Etiquette (face-to-face on ground class)**

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor.
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed by the instructor.
- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the [General Catalog](#).
- Children in the classroom: Due to college rules and state laws, no one who is not enrolled in the class may attend; children are not allowed.

### **Online Netiquette**

- What is netiquette? Netiquette is internet manners, online etiquette, and digital etiquette all rolled into one word. Basically, netiquette is a set of rules for behaving properly online.
- Students are to comply with the following rules of netiquette: (1) identify yourself, (2) include a subject line, (3) avoid sarcasm, (4) respect others’ opinions and privacy, (5) acknowledge and return messages promptly, (6) copy with caution, (7) do not spam or junk mail, (8) be concise, (9) use appropriate language, (10) use appropriate emoticons (emotional icons) to help convey meaning, and (11) use appropriate intensifiers to help convey meaning [do not use ALL CAPS or multiple exclamation marks (!!!!)].

### **Academic Honesty**

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another’s work and recognize the importance of acknowledging and safeguarding intellectual property. There are many different forms of academic dishonesty. The following kinds of honesty violations and their definitions are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct.

- Plagiarism is taking and presenting as one’s owned the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing

written materials. If you do not understand how to “cite a source” correctly, you must ask for help.

- Cheating is defined as fraud, deceit, or dishonesty in an academic assignment, or using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or plagiarizing will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the [GeneralCatalog](#) for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to, the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment; (c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment; (e) using a commercial term paper service.

Taking and using the words, work, or ideas of others and presenting any of these as your own work is plagiarism. This applies to all work generated by another, whether it be oral, written, or artistic work. Plagiarism may either be deliberate or unintentional.

## Other Course Information

*Late submissions will not be accepted.*

## IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit <http://www.imperial.edu/studentresources> or click the heart icon in Canvas.

## Anticipated Class Schedule/Calendar

The week of	Topics, subtopics, and Textbook Chapters	Chapters	Module
2/13	<ul style="list-style-type: none"> <li>• Orientation Module</li> </ul>		Orientation
2/13	Introduction to Environmental Science <ul style="list-style-type: none"> <li>• Global and Local Challenges</li> <li>• Sustainability and Stewardship</li> </ul>	Chapter 1	Module 1
2/20	<ul style="list-style-type: none"> <li>• Scientific Method, Matter, Energy, and Systems</li> </ul>	Chapter 2	Module 2
2/27	Ecosystems <ul style="list-style-type: none"> <li>• Biogeochemical Cycles</li> </ul>	Chapter 3	Module 3
3/6	<ul style="list-style-type: none"> <li>• Biodiversity and Evolution</li> </ul>	Chapter 4	Module 4
3/13	<ul style="list-style-type: none"> <li>• Species Interactions, Adaptation, Ecological Succession, Population Control, Natural Selection, and Population Equilibrium</li> </ul>	Chapter 6	Module 5
3/20	Human Population and Urbanization <ul style="list-style-type: none"> <li>• Trends, data</li> <li>• Challenges</li> </ul>	Chapter 6	Module 6
3/27	Climate and Biodiversity Conservation, Sustaining Biodiversity <ul style="list-style-type: none"> <li>• Saving Species and Ecosystems</li> <li>• Desertification</li> </ul>	Chapters 7,8, & 9	Module 7
4/3	<ul style="list-style-type: none"> <li>• Food Production (agriculture) and the Environment</li> </ul>	Chapter 10	Module 8
<b>4/10</b>	<b>SPRING BREAK</b>		<b>BREAK</b>
4/17	Water Resources (Natural Resources) and Water Pollution <ul style="list-style-type: none"> <li>• Fresh water sources -Colorado, Alamo</li> <li>• Ogallala Aquifer</li> <li>• Salton Sea</li> <li>• Water Politics</li> </ul>	Chapter 11	Module 9
4/24	Geology and Nonrenewable Mineral Resources (Natural Resources)	Chapter 12	Module 10
5/1	Energy Resources (Natural Resources)	Chapter 13	Module 11
5/8	Renewable and Non-Renewable Resources (Natural Resources)	Chapter 15	Module 12

5/15	Environmental Hazards, Air Pollution, Greenhouse Gases, Climate Change, and Ozone Depletion	Chapter 11 & 15	Module 13 & 14
5/22	<ul style="list-style-type: none"> <li>• Solid and Hazardous Wastes and Management, Environmental Economics, Politics, and Worldviews</li> </ul>	16 & 17	Module 15 & 16
5/30	Economics and Public Policy <ul style="list-style-type: none"> <li>• Federal and State Regulations, agencies, cost-benefit analysis</li> <li>• Environmental and Human Health</li> </ul>		
	Assignment/Term Paper		
6/5	<b>The final test will cover all the modules, and it will account for 40% of the final grade.</b>	<b>All modules</b>	<b>All modules</b>

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This schedule is very tentative and can change without notice. You are therefore advised to follow the instructions provided at the start of each module or week. Any changes to the schedule, including tests and due dates will be communicated.