



AIX CENTER OF HUMANITIES AND SOCIAL SCIENCES

ES201

3 CREDITS

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Principles of Environmental Science & Society

I. COURSE DESCRIPTION

This course will help the student to prepare for living in current and future society's mixture of technology and mythology by presenting ideas and concepts about living systems and their environments. Policy makers and citizens are urgently needed to be aware and have a conscious understanding of environmental science principles when exercising community responsibilities to handle the environmental problems of our times, such as water use, global warming, energy use, conservation of irreplaceable natural resources and the preservation of biodiversity.

An understanding of biological and ecological principles and their application towards environmental challenges should give the student the confidence to be a trustworthy and active citizen, a conscientious steward of nature, and an agent of change for making a healthy, sustainable community and society. Regardless of the students' field of study, as a citizen of both local and global communities some environmental issues will impact their lives.

The course accommodates all students and tailored to suite to be manageable without any particular prerequisite.

II. COURSE OBJECTIVES & LEARNING OUTCOMES

- Understand the basic principles of matter and energy flows.
- Describe fundamental ecosystem and ecological principles.
- List the major sources of pollution and describe the effects on ecosystems and human populations.
- Describe the goals of biodiversity conservation and nature preservation programs.
- Describe the principles of sustainable development and apply them to potential solutions to current issues.
- Develop skills in scientific writing based on field observations
- Present scientific data to a wide and unspecialised public

III. INSTRUCTIONAL METHODS AND ACTIVITIES

- In-class lectures and discussions
- Field-trips and students' observations
- Fieldwork-based written reports
- Oral presentations based on selected scientific readings

IV. PRIMARY TEXTBOOKS (Additional resources will be provided with each section of the course)

Principles of Environmental Science,

By Mary-Anne Cunningham & William Cunningham
6th Edition, 2010
WCB/McGraw Hill
ASIN: B006O1RS90

Principles of Terrestrial Ecosystem Ecology

By F Stuart Chapin III, Pamela A. Matson, Peter Vitousek
2nd Ed., 2012
Springer ed.
ISBN-13: 978-1441995025

V. EVALUATION AND GRADING

- 5% Attendance, in-class activity
- 15% Quizzes and homework
- 20% Written reports (Based on fieldtrips)
- 25% Midterm exam
- 25% Final exam

VI. LECTURES, SHOWS, EXHIBITS, WORKSHOPS, EVENTS, ETC.

Commensurate with your study abroad, we should be constantly prepared to take advantage of any events that would enrich the material of the course and add to your learning experience. Over the semester, the syllabus may be adjusted according to the activities taking place in Aix or organized by IAU.

VII. ATTENDANCE

One of the primary requirements this semester is that you attend class. This is not a lecture class, and its success depends very much on your coming to class on time, prepared for the lesson, and ready to participate in discussion and activities. Attendance will be part of your final grade.

About attendance: unexcused absences have a negative impact on your final grade. Each unexcused absence above two will lower the final grade by a half-letter grade. IAU College excused absences: absences linked to IAU excursions; sickness (a medical certificate is required).

VIII. Courses Schedule

1st Week	Introduction to Environmental Science
2nd & 3rd Weeks	Energy, Matter & Cycles
4th & 5th Weeks	Ecosystems, Biomes & Species
6th Week	Major Terrestrial Biomes & Adaptations
Midterm Exam	
8th Week	Environmental Issues: Humans & the Biodiversity Crisis
9th Week	Environmental Issues: Air Pollution & Climate Change
10th Week	Environmental Issues: Water Use & Pollution
11th Week	Environmental Issues: Land Use & desertification
12th Week	Towards a sustainable future: Sustainability & Sustainable Development
13th Week	Oral Presentations (In alphabetical order of students' surnames)

Final Exam