

OESM 106: INTRODUCTION TO ENVIRONMENTAL HEALTH

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COURSE DESCRIPTION

An overview of the variety and extent of environmental issues affecting human health. Students will be introduced to ecosystem interactions, biological and chemical toxins in the general environment, environmental epidemiology, and relevant environmental regulations. Critical thinking and risk assessment strategies will be emphasized along with the specific relevance of Environmental Health topics to Hawaii's population.

COURSE OBJECTIVES

Upon completion of the (OESM 106) course, students will be able to:

- Identify environmental health issues of importance to individuals, communities, and nations
- Define classes of environmental health hazards
- Identify environmental diseases and their etiology
- Describe chemical and environmental pathways for toxins
- Identify naturally occurring environmental health hazards
- Describe classes of chemical health hazards
- Classify human health responses associated with specific chemicals in the environment
- Explain sources and health effects of ionizing radiation
- Identify types and sources of air pollution
- Describe potential acute and chronic health effects resulting from air pollution
- Identify types of water pollution and its significance to human health
- Describe several major environmental health disasters in the world
- Analyze pollution incidents and accidents to determine type and extent of potential human health effects
- Assess U.S. environmental legislation and its significance for human health
- Describe enforcement mechanisms for environmental laws
- Predict environmental pathways and health outcomes for pollution problems
- Describe options for hazardous waste management and their significance to health
- Classify environmental monitoring and pollution control techniques
- Describe environmental epidemiology methodology
- Assess health risks as determined by epidemiological studies
- Define types of biological and chemical weapons and their potential for disease causation
- Identify alternatives to the introduction of chemicals into the environment
- Use prevention techniques and policies as a basis for minimization of negative environmental impacts on health

REQUIRED TEXTBOOK

Our Global Environment: A Health Perspective, Sixth Edition. Nadakavukaren, Anne. Waveland Press, Inc., Prospect Heights, Illinois, 2006.

STUDENT REQUIREMENTS

Students are expected to attend each class, to read the assigned textbook chapters, and to participate in class discussions. Current environmental health literature will also be distributed to the students as part of the required reading for this course. Students must complete the following for a possible 100 points:

Three examinations	30 points each
One written Case Study report	
2-4 pages	10 points
Extra Credit-news articles	4 points possible (4 articles)

GRADING

A: 90-100 B: 80-90C: 70-80D: 60-70 F: below 60

Final grades are permanent. Final "I" grades will not be allowed in this class. Final "N" grades will be given only in extreme circumstances.

HCC Grading Policies:

- a. No Show Policy: Students must attend both of the first two class sessions of the semester or may be dropped unless they notify the instructor or the Division Chair of their absence.
- b. Disappear Policy: Students may receive an "F" grade if they do not officially drop their course by the drop deadline listed in the Academic Calendar of the current HCC catalogue or the Schedule of Classes.

STUDY TIPS

- Reading chapters and handouts are assigned for the week following each lecture. Read the assignments and review class notes before coming to class.
- Take notes during the lecture. Do not hesitate to ask questions at any time during the class. If you are absent, please request the handout from the instructor, and borrow lecture notes from a classmate.
- Spend at least two hours per week reviewing coursework and reading current event articles relating to environmental health.
- Contact the instructor via e-mail if there is a problem or question.
- Begin work on assignments as soon as they are explained and study the material thoroughly for each exam.

EMERGENCY PROCEDURES:

- a. Location of First Aid Kit: Near sink at the back of the classroom
- b. Evacuation of building: Use Diamond Head and Ewa stairs and proceed to parking lot #2 (by the cafeteria). Assemble and wait for further instructions from the instructor.
- c. Accident or injury:
 1. Call 911 for an ambulance. Give essential information:
 - Location-building and room number, road to enter campus
 - Type of emergency and victim's condition
 - Your name and phone number
 2. Call 284-1270 (Campus Security)
 - To notify Campus Security that an ambulance has been summoned
 - To have Campus Security escort the ambulance to the location
 - To request other assistance

SERVICES FOR STUDENTS WITH DISABILITIES

Students with disabilities may obtain information on available services online at: honolulu.hawaii.edu/disability
For specific information, contact Student ACCESS office in Bldg. 2, room 409.

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<u>Lecture</u>	<u>Lecture Topic</u>	<u>Reading Assignment</u>
1	Introduction, Definitions Routes of exposure	Chap. 6
2	Environmental pathways Food web, Chemical cycles	Chap. 1 Skip p.13-22
3	Naturally occurring environmental health hazards	Chap. 9 & p.310-312 & p. 237-245
4	Chemical health hazards of human origin	Chap. 7 & Chap. 8 p. 234-266
5	Information gathering	Review
6	MID-TERM EXAM 1 Sources and health effects of radiation	Chap. 10
7	Air pollution: types, sources acute and chronic health effects	Chap. 12
8	Water pollution: types, sources health effects	Chap. 14 & 15
9	Environmental health legislation and enforcement	Handout Appendix A
10	Environmental health disasters	Handout & Review
11	MID-TERM EXAM 2 Case-study Assignment	Handout
12	Solid and liquid waste generation and disposal	Chap. 16 up to page 562
13	Field Trip	Handout
14	Environmental epidemiology assessing health risks	Handout Chap. 16 p. 562-588
15	Biological and Chemical weapons Disease and prevention	Handout
16	Pollution cleanup and prevention	Chap.8, p. 266-274, Rvw
17	END OF TERM EXAM 3	