

Department of Public Health Sciences
Course #: PH681 (CRN 73856)
Course Title: Environmental Determinants of Health
Semester & Year: Fall, 2007

Meeting Place: Biomedical Science Building C104

Meeting Time: Monday 2:30-4:20 pm

Instructor Information:

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A. Course Description: Environmental health deals with the impact of the environment on human health. It is a multidisciplinary area encompassing a range of scientific disciplines. The course will cover environmental health laws, food and water safety, environmental microbiology and toxicology, water and air pollution and control, waste management, environmental protection and safety, and occupational safety. This course is intended to provide students with very basic and essential information related to these disciplines in class. A field trip to a wastewater treatment center and term paper and presentation on selected environmental health topics will also be parts of this course to enhance more in-depth learning and skill development.

B. Course Learning Objectives: to discuss the general federal and state environmental health policy and regulation; define different environmental agents/hazards and occupational risk factors and their potential impact on human health and safety, and also ecology; and describe the general principles and mechanisms of these risk factors posed to public health and safety; discuss varied methodology/technology to be used for assessing, monitoring, preventing and controlling environmental agents/hazards with an emphasis on the newly developed technology.

C. Learning Goals: at the end of the course, the students should know not only to identify different environmental problems but also to understand measures and management that can be implemented to reduce or prevent further environmental pollution; the student should have an appropriate level of knowledge and understanding of the key concepts involved in environmental awareness and some technical knowledge which can help them to work as an environmental health specialist in industry and government or to conduct more advanced graduate study in environmental health related subject.

D. Text: *Essentials of Environmental Health*, 2006, by Robert H. Friis.

E. Course Policies:

- Students are required to attend class and participate in class discussions.
- Students must join the field trip and discussion to receive the credit.
- Students should familiarize themselves with the university of Hawai'i Student Conduct Code.
- Term paper must be received when due to be considered to receive full credits.
- Presentation should be brief, objective and clear, and follow the timeline to receive full credit.

- There will be no extra credit given in class.

F. Grading: The final course grade will be based on total points the student has received from two exams, term paper presentation, class attendance/discussion and field trip discussion as detailed in the Table below.

Grading Points	Points	Due Date
Class attendance/participation/reading	10	On-going
Field trip/discussion	5	October 1
Mid-term Examination	35	October 15
Term paper/presentation	15	December 3
Final Examination	35	December 10
Total	100	

Grading Scale: A+ = 97-100%, A = 93-96%, A- = 90-92%, B+ = 87-89%, B = 83-86%, B- = 80-82%
 C+ = 77-79%, C = 73-76%, C- = 70-72%, D+ = 67-69%, D = 63-66%, D- = 60-62%
 F = unacceptable work

G. Specialization Competencies Addressed

Define a public health problem (AS1)

Identify the epidemiological dimensions of the major causes of morbidity and mortality regionally, nationally and internationally with particular emphasis on chronic and infectious disease (E1)

Identify public health practices for disease control including surveillance, screening and outbreak investigation (E2)

Identify practices for disease detection including the use of biomarkers, and molecular biology (E3)

Demonstration in an original research project that makes a contribution to the body of knowledge in epidemiology (EMS2)

H. MPH Competencies Addressed

Communicate effectively with professional and lay audiences both in writing and orally (CO1)

Work effectively in a team environment (CO4)

Relate historical development and structure of local, state, and federal public health agencies to current public health practice issues, policies and program development (PP1)

Interact sensitively, effectively and professionally with persons from diverse cultural, socioeconomic and professional backgrounds (CS1)

Define, assess, and describe the health status of populations, determinants of health and illness, factors contributing to health promotion and disease prevention and factors influencing the use of health services (PHS1)

I. Detailed Course Schedule

Date	No.	Lecture topic	Chapter
Aug 20	1.	Introduction	Handout
Aug 27	2.	Fundamentals of Environmental Health	1
Sept 3	3	Labor day	No class
Sept 10	4.	Environmental Policy and Regulation	4
Sept 17	5.	Air quality and Air-borne Hazards	10
Sept 24	6.	Water Quality and Waste Water Treatment	9, 12
Oct 1	7.	Field Trip – Sand Island WWTC	
Oct 8	8.	Food safety	11
Oct 15	9.	Midterm Exam	
Oct 22	10.	Environmental Toxicology	3, 6
Oct 29	11.	Occupational Health and Safety	13
Nov 5	12.	Zoonotic and Vector-Born Diseases (VBD)	5
Nov 12	13.	Veterans' Day	No class
Nov 19	14.	Solid Waste and Management	12
Nov 26	15.	Principle of Risk Assessment	handout
Dec 3	16.	Term Paper Presentation	Handout
Dec 10	17.	Final Exam	