

ENVIRONMENTAL HEALTH ISSUES: PUBH 7150

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Course Description

The study of the interface of environmental health issues, epidemiology, and risk assessment. The course will emphasize the nexus of population-based practice, environmental health, and the epidemiology of disease.

Course Philosophy

This course will emphasize the interaction of environmental factors and epidemiologic, demographic, socioeconomic, biohistorical, and sociopolitical trends.

Course Objectives

The student will be able to:

- A. Describe the scope and historical development of environmental health.
- B. Explain the role of toxicology in environmental health practice.
- C. Interpret basic calculations related to risk assessment.
- D. Explain the interaction of occupation, lifestyle, and community standards with environmental health.
- E. Describe the epidemiology of common pathogens associated with a foodborne disease outbreak.

- F. Trace the primary steps involved in the investigation of a suspected foodborne outbreak.
- G. Describe the manner in which liquid and solid waste products are processed by modern sanitation methods.
- H. Describe the epidemiology of unintentional injuries within an occupational context.
- I. Trace the evolution of environmental policy and regulation in the United States.
- J. Explain the basic principles of risk assessment within the context of environmental health.
- K. Describe the epidemiology of common pathogens associated with zoonotic diseases.
- L. Describe the basic principles of vermin control within an urban environment.
- M. Describe the potential role of an environmental health officer in a bioterrorism emergency.

Prerequisite: Graduate Student Status

Texts:

GT Miller, Jr. *Living in the Environment: Principles, Connections and Solutions*, 14th ed. (Pacific Grove, CA, 2005).

Morgan MT. *Environmental Health*, 3rd ed. (Belmont, CA, 2003).

Riis, J. *How the Other Half Lives: Studies Among the Tenements of New York* (New York, 1997).

Calculators: Buy a calculator that will perform basic statistical functions. The TI-30 (about \$10.00) is a good choice. **BRING IT TO CLASS. YOU WILL NEED IT FROM TIME TO TIME.**

Course Requirements: Graduate Student Status

Textbook, handouts, and reading assignments.

Midterm (Test 1) = 45%

Final Exam (Test 2) = 45%

Review of Riis, *How the Other Half Lives: Studies Among the Tenements of New York* = 10 % of Final Grade

The review of Jacob Riis *How the Other Half Lives: Studies Among the Tenements of New York*, is due by 17 March 2006.

The minimal requirements for the book review are:

- 1) 3-5 pages of text, typed, double-spaced
- 2) Use of conventional rules of Standard American or British English. Be correct and be consistent with spelling, grammar, syntax: Words should be spelled correctly, sentences should be sentences, paragraphs should be paragraphs, etc.

PROCTORED TESTS will be a combination of essay and short-answer questions (e.g., multiple choice, true-false, and matching), all of which will be closed-book. They will be available for a designated time period during the Midterm and Final Exam Weeks via WEBCT.

Grading Criteria

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

Class Meeting Times: On-line via WebCT

Class Attendance: Class attendance is designed to facilitate learning. Lack of attendance in class is likely to impair learning, and thus performance on exams.

Academic Dishonesty

Students are expected to complete their exams and other assignments independently, without assistance from other persons. Any allegations or evidence of academic dishonesty on exams will be referred to the Student Affairs Office to be dealt with according to AASU policy.

MAKE-UP EXAMS: Students will receive a makeup exam only in the case of personal illness or crisis. If one misses an exam or cannot submit an assignment as scheduled, then one will need to bring written documentation (e.g., a note from a physician, etc) in order to schedule a make-up exam.

Plagiarism: Whether done innocently or on purpose, plagiarism is using someone else's words and/or thoughts and can have serious implications from the guilty party failing an assignment to failing a course or being dismissed from the program or university (see AASU Student's Illustrated). When in doubt, ask.

TOPICS:

Now is a good time to start reading *How the Other Half Lives*. The analysis of this book will be due by 27 April 2005, 5:00pm, Eastern Standard Time.

Use the following as starting points for your analysis of Riis:

1. How does “The Other Half” live?
2. Who are they?
3. What are their circumstances?
4. Assume that you have been given the task of improving the environmental conditions (in the broadest sense) that impact the health of the population that Riis describes. What specific environmental issue (as Riis describes them) do you consider the *most* significant to their health? What specific environmental issue (as Riis describes them) do you consider the *least* significant to their health?
5. Explain, based on the readings in the textbooks by Miller and Morgan, why you selected these two factors (i.e., the most and least significant).

Week 1 (January 2): The Environment and Population Health

Reading Assignments:

Miller, Chapter 28

Morgan, Chapter 2

Week 2 (January 9): Environmental Problems, Their Causes, and Issues of Sustainability: Where’s the Health?

Reading Assignments:

Miller, Chapter 1 and 2

Morgan, Chapter 13 and 15

Week 3 (January 16): Principles of Ecohealth: An Overview

Reading Assignments:

Miller, Chapter 3 and 4

Week 4 (January 23): Biodiversity and Human Health Issues

Reading Assignments:

Miller, Chapter 5, 6, and 7

Week 5 (January 30): Population Ecology: Vector-Borne Disease

Reading Assignments:

Miller, Chapter 8

Morgan, Chapter 3

Week 6 (February 6): Population Ecology: Human Herds

Reading Assignments:

Miller, Chapter 9 and 10

Morgan, Chapter 1

Week 7 (February 13): **MIDTERM EXAM**

Week 8 (February 20): Risk Assessment and Toxicology

Reading Assignments:

Miller, Chapter 19

Morgan, Chapter 9 and 11

Week 9 (February 27): Air Pollution and Climate Change

Reading Assignments:

Miller, Chapter 20 and 22

Morgan, Chapter 14

Week 10 (March 6): Water Pollution and Human Health

Reading Assignments:

Miller, Chapter 15 and 22

Morgan, Chapter 6

REMEMBER: The Riis paper is due by April 27th.

Week 11: (March 13): SPRING BREAK

Week 12: (March 20): Pest Management

Reading Assignments:

Miller, Chapter 4 and 23

Morgan, Chapter 8

Week 13 (March 27): Hazardous Waste Disposal

Reading Assignments:

Miller, Chapter 24 and 25

Morgan, Chapter 7 and 10

Week 14: (April 3): Economics of Sustainable Environments

Reading Assignments:

Miller, Chapter 26 and 27

Morgan, Chapter 13 and 15

Week 15: (April 10): Politics of Sustainable Environments

Reading Assignments:

Morgan, Chapter 17

Week 16 (April 17): Environmental Ethics and Human Health

Reading Assignments:

Miller, Chapter 28

Morgan, Chapter 12 and "Appendix A"

Week 17 (April 23): Bioterrorism

The Riis paper is due by April 27th.

Reading Assignments:

Victoria Sutton, "A Multidisciplinary Approach to an Ethic of Biodefense and Bioterrorism," *Journal of Law, Medicine & Ethics* Summer2005, Vol. 33 Issue 2, p310-322.

FINAL EXAM: WEDNESDAY, MAY 3rd