

**Department of Environmental Health Science
College of Public Health
University of Georgia**

**EHSC 8070
Environmental and Occupational Epidemiology
Spring 2008 Syllabus**

Course Information

Instructor: Lucy A. Peipins, PhD
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Office Hours: Mondays, 2:30-3:30pm, Room 207, Environmental Health Sciences Bldg.

Course Meeting Time and Location

Building: Environmental Health Sciences Building
Room: Room 207, Environmental Health Sciences Building
Day: Monday
Time: 3:35pm to 6:15pm

Textbooks And Other Required Course Materials

Required textbook:

Merrill RM. *Environmental Epidemiology: Principles and Methods*. Jones and Bartlett Publishers, 2008.

Recommended for students who do not have an epidemiology text:

Aschengrau A and Seage GR. *Essentials of Epidemiology in Public Health*. Jones and Bartlett Publishers, 2007, 3rd edition.

2) Selected articles and other supplementary documents will be distributed at least one week prior to class.

Recommended Journals

Students familiarize themselves with relevant environmental and occupational epidemiology journals. Students will have the opportunity to search these journals to select a research article for their final critique and presentation. The following are worth checking out:

Environmental Health Perspectives

Epidemiology
Journal of Environmental and Occupational Medicine
Epidemiologic Perspectives and Innovations
Journal of Industrial Medicine
The Science of the Total Environment
Risk Analysis
Scandinavian Journal of Work, Environment and Health
Archives of Environmental Health
International Journal of Occupational and Environmental Health
Occupational and Environmental Medicine

Course Description

This course will focus on the concepts of epidemiologic methods as they are applied in studies of environmental and occupational exposures. It will be a mixture of lectures, readings, classroom discussions, and presentations that will cover epidemiologic study designs, measurement of exposures and outcomes, issues of validity, risk assessment and important environmental and occupational exposures. The format is that of a seminar with in-depth discussion of substantive and methodologic topic areas as well as individual presentations on current research studies in the literature.

Course Learning Objectives

By participating in the critical evaluation and interpretation of epidemiologic research through class discussions and written reviews, students will 1) develop their oral presentation and discussion skills, and 2) become informed consumers of environmental and occupational epidemiologic research. At the end of the course, students will be able to recognize strengths and limitations of study designs used to examine occupational and environmental exposures, assess the quality of exposure and outcome assessment, and interpret measures of association and results of analyses used in the published literature.

Course Requirements for Grading Purposes

Students are expected to attend and participate in class. Class discussions are an important learning component of the course. Eight written study critiques of recently published studies will be assigned throughout the course, and articles for the written critiques will be distributed electronically at least one week in advance. Critiques will be submitted in writing and discussed in class. For the eighth and final critique, students will search the literature, select a research article, write a critique and facilitate the discussion on that article. A short mid-term quiz will be given during class and graded.

Topical Outline

Outline for a critical review of research
Causal models and diagrams; Hill's criteria for causality

Sources of error: random error, and the role of confounding, selection bias, and misclassification
Measurement and classification of exposure and outcomes: examples from environmental and occupational epidemiologic studies
Research designs: cross-sectional studies, case-control studies
occupational cohorts and the healthy worker effect
ecologic studies
GIS applications to environmental health research: lead exposure past and present
Outbreak investigations: water pollution and related health effects
Disease clusters and environmental causes of cancer
Risk assessment, risk perception and numeracy
Climate change and public health
Environmental justice and community participation in research

Grading Policy

Final grades will be given according to the graduate school's grading system (A, A-, B+, B, B-, C+, C, C-, D). Final grades are determined by individual grades for each written study critique, class participation (weekly contribution to discussion =20 points, regular contribution to discussion=15 points, occasional contribution to discussions=10, rare contribution=0), the mid-term, and final presentation.

Participation in class discussions and critiques	20%
Written study critiques (8)	55%
Mid-term quiz	15%
Final Presentation	10%

Make up Policy

Under some circumstances, extensions for written critiques may be provided. If an extension is needed because of a scheduling conflict, it must be requested in advance.

Attendance Policy

Attendance is important for successful completion of the course, and even more so for a class held once per week. Missing more than one lecture will affect the class participation grade. Attendance and participation will be weighted 20%. If possible, please notify me in advance if you cannot attend a class.

University Honor Code and Academic Honesty Policy

All academic work must meet the standards contained in "A Culture of Honesty." All students are responsible to inform themselves about those standards before performing academic work.

Students with Disabilities

Students with disabilities who require reasonable accommodations in order to participate in course activities or meet course requirements should contact the instructor or designate by appointment.