

**Epidemiology 786:
Community-Driven Epidemiology and Environmental Justice
Spring 2015**

Time: Wednesdays 1:25 - 3:15 PM

Location: 2303 McGavran-Greenberg Hall

Instructor: Steve Wing, office: 2101F McGavran-Greenberg Hall, 919 966 7416

Objectives:

Low income communities and communities of color have challenged public health scientists to conduct research on environmental and occupational hazards that impact their health. Such community-driven research requires epidemiologists and other researchers to modify approaches used in more traditional research conducted for clients in government and industry. This class introduces concepts and methods in community-driven environmental justice research, presents current research and research needs, and offers opportunities for active involvement in problem-solving in environmental justice research. Methodological topics include public health and social justice, study design and analysis in environmental and occupational epidemiology, development of community-driven research questions, community-based participatory research, and preparation of reports that address community and policy needs. Possible topics for 2015 are industrial livestock production, solid waste disposal, coal ash, aluminum production, and energy production from biomass.

Organization:

Several introductory class sessions will provide background and identify conceptual and methodological issues related to environmental justice research, issues of race and class in environmental health, and the environmental justice movement. Substantive topics will be addressed during the semester in pairs of classes. In the first class of each pair, speakers from communities experiencing environmental exposures or health problems will present background information about their situation. In the second class of each pair, students and faculty will discuss the community problems and identify possible research questions, study designs, measurement techniques, and ethical issues involved in addressing community research needs (see section on *Research Response* below). In addition to responses to community presentations, students will work on their own or in small groups to develop papers on epidemiologic topics related to environmental justice. Topics may be based on community presentations, your own prior work, or other aspects of the health consequences of environmental injustice (see section on *Paper & Presentation* below).

The syllabus and readings are posted at sakai.unc.edu. Topics and readings are subject to changes, which will be announced in class, by email, or on Sakai. This class is offered in coordination with the [North Carolina Environmental Justice Network](#), Naeema Muhammad, co-director.

Course Requirements:

Participation: Participation is an important part of this class. The quality of our experience as a group depends on everyone contributing their own knowledge, ideas, and questions. In order to participate actively in class discussions, students are expected to complete assigned readings prior to class. In addition, participation and class discussion depend on preparation done outside of class following each community presentation. This preparation may consist of review of scientific literature, on-line data bases, government documents, or reports in the press.

Participation in sessions with community guests is especially important. Our community guests come from outside academia. Please take care to be respectful by being in class on time and by paying close attention to community presenters.

Research Responses (3): Following community presentations on Feb 4, Feb 18 and Mar 4, students prepare a 1-2 page Research Response. Research Responses should consist of 3 parts: (1) a summary of the problem and issues described by the community members; (2) identification of research questions or testable hypotheses that respond to community concerns; and (3) description of research methods that could be used to address the research questions or hypotheses. Research methods can be broadly construed to include any of the following:

- literature review about health effects of the relevant exposure(s);
- methods to define or measure environmental or occupational hazards;
- approaches to quantify inequities in exposure;
- methods for evaluating health conditions or occurrence of disease;
- designs for evaluating the relationship between an exposure and a disease;
- approaches for enhancing participation in research or protecting confidentiality.

You will be asked to summarize your Research Response in class. Responses will serve as a basis for class discussion and should be turned in some time on the day of the research design class. Email or paper is fine.

Paper & Presentation: A final paper and in-class presentation are required. The format may be a literature review, research proposal, methodological investigation, ethical analysis, or data analysis. Examples of past projects and a description of requirements for the papers will be discussed in class.

A one-page description of the proposed paper topic is due March 18. The proposal should include (1) a title, (2) a statement of the problem and its significance in an environmental justice context, and (3) a description of the research approach (e.g., literature review, analysis of existing records, research protocol, analysis of a methodological or ethical problem).

Class presentations will be scheduled for April 8, 15 & 22.

Papers are due by April 24. *If you need an extension on this due date please make arrangements with the instructor by April 22.*