**BRIEF COURSE DESCRIPTION**

This course provides a general review of analytic methods commonly used in the analysis of environmental health data. This is an application-oriented class with an emphasis on working through the analytic steps given the research goal and the data in hand. Much of the discussion is interactive, working through relevant issues in individual student theses or capstones that lead to achieving an appropriate analysis, including the coding of statistical software. Additional topics may be discussed based on the particular interests and research activities of the students. Pre-requisite: Students must bring thesis data to the class.

**LIST SCHOOL LEVEL, DEPARTMENT, AND/OR PROGRAM COMPETENCIES**

Core Competencies for all MPH/MSPH students:

- Use analytic reasoning and quantitative methods to address questions in public health and population-based research
- Integrate the broad base of public health knowledge and skills acquired from coursework, a practicum, and other learning activities into a culminating experience (thesis, special studies project, capstone, etc.).

**MPH in Environmental Health and MPH in Global Environmental Health**

- Apply the principles of epidemiology to assess health effects of environmental exposures
LIST LEARNING OBJECTIVES ASSOCIATED WITH THE COMPETENCIES

Much of the class involves students presenting their data and receiving feedback from the instructor and peers. The goal for the class is to create a supportive environment and to find a way to make each thesis or capstone doable. The specific content and techniques covered in class correspond to the students’ research projects discussed in class. However the general focus will be towards developing critical reasoning and competency in the following areas:

- Developing and clarifying the research question
- Understanding the role of study design and measurement in addressing the research question
- Creating and organizing meaningful descriptive analyses
- Modeling the data appropriately
- Evaluating sources of error
- Developing comfort with basic computational issues involved in getting the data in the desired format and in the running of analyses
- Summarizing and interpreting analytic results
- Presentation of research

EVALUATION

This course has a satisfactory/unsatisfactory grading basis. Students who come to class and participate will pass.

ACADEMIC HONOR CODE

The RSPH requires that all material submitted by a student in fulfilling his or her academic course of study must be the original work of the student.