Division of Epidemiology and Biostatistics  
Department of Environmental Health  
University of Cincinnati College of Medicine

26 - BE – 842  
Neuroepidemiology  
Spring Quarter, 2009

Course Information

3 Graduate Credits  
Tuesdays, 12:30 – 3:00 PM  
Room 121, Kettering Laboratory

Course Coordinator

Kim N. Dietrich, Ph.D., M.A.  
Professor of Environmental Health  
Director, Division of Epidemiology and Biostatistics  
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Office Hours

By appointment

Prerequisites

26 – BE – 776, Introduction to Epidemiology
Course Description

Neuroepidemiology is the investigation of the distribution and dynamics of neurological disease in free ranging human populations. This course explores the scope and methods of neuroepidemiology. Students will receive an introduction to the history and systems of neuroepidemiology, test theory and measurement in neuroepidemiology, the epidemiology of neurodegenerative diseases, seizure disorders, neurodevelopmental disorders, cerebrovascular disease and stroke, and environmental neuroepidemiology.

Course Objective

Students will gain an understanding of the application of epidemiologic methods to the study of neurological disease across the lifespan. This should aid in their comprehension of the published literature and ultimately the design of their own studies in this important area of the health sciences.

Course Requirements

For each lecture there will be selected readings to support the material presented. Attendance is vitally important for successful completion of the course, and even more so for this class which only meets once per week.

The grade for this course will be based (50%) on a 20 minute student power point presentation that is focused on a current topic in neuroepidemiology. Power point presentations must include a detailed outline and students will prepare handouts based on their presentation.

The grade for this course will also be based (50%) on a take-home, written final examination.

Required Textbook


Optional Text

Neurology for Non-Neurologists (2000). Wiederholt, W.C.. Philadelphia: W.B. Saunders Company. (This is a good reference for the major neurological illnesses with a particular emphasis on evaluation and treatment). This book is available from all major online bookstores like Amazon.com, etc.
**Optional Readings** (for inspiration)


**Schedule of Lectures** (Guest Lecturers Noted)

**Unit 1 (March 31)**

**An Introduction to the Human Nervous System**
Jerzy P. Szaflarski, M.D., Ph.D.
Professor of Neurology
University of Cincinnati College of Medicine

Readings: Handout

**Unit 2 (April 7)**

**An Introduction to Neuroepidemiology: History and Systems**

Readings: Nelson Chapters 1, 2, 4, and handout.

**Unit 3 (April 14)**

**Neurodegenerative Diseases**

Readings: Nelson Chapters 5, 6, 7, 8, and handout.

**Unit 4 (April 21)**

**Test Theory and Measurement in Neuroepidemiology**
Kim M. Cecil, Ph.D.
Professor of Radiology, Pediatrics, & Neuroscience
Cincinnati Children’s Hospital Medical Center

Nelson Chapter 3 and handout.
Unit 5 (April 28)

Neuroepidemiology of Seizure Disorders
David M. Ficker, M.D.
Associate Professor of Neurology
University of Cincinnati College of Medicine

Readings: Nelson Chapter 12 and handout.

Unit 6 (May 5)

Neurodevelopmental Disorders

Readings: Nelson Chapter 15 and handout.

Unit 7 (May 12)

Clinical Neuroepidemiology of Stroke
Dawn Kleindorfer, M.D.
Associate Professor of Neurology
University of Cincinnati College of Medicine

Readings: Nelson Chapter 9 and handout.

Unit 8 (May 19)

Environmental Neuroepidemiology

Readings: Nelson Chapters 10, 11, 14, 17, and handout

Unit 9 (May 26)

Student Presentations

Unit 10 (June 2) Take-home final examination.

Student Presentations

TAKE-HOME FINAL EXAMINATIONS DUE WEDNESDAY, JUNE 10.