2002 Fall Semester

Course: Introduction to General Epidemiology
M21-500 (Genetic Epidemiology)
M08-500 ((Psychiatric Epidemiology)

Hours: Friday 10:00 a.m. to 12:00 p.m.
Location: 40 N. Kingshighway, Suite 4 Conference Room
Credits: 3.0 Hours

Coursemaster: Linda B. Cottler, M.P.H., Ph.D.
Professor of Epidemiology in Psychiatry

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INTRODUCTION
Epidemiology is the study of the determinants of health and illness in the population. As a scientific discipline, epidemiology has its own theory and methodology. This course will introduce these concepts to you so you can understand more completely who is affected by illness and what factors are associated with illness. Only when we understand these can we develop prevention and treatment methods.

The goals of the course are to enable you to:

1) recognize the importance and purpose of epidemiology in local, national and international arenas;
2) understand epidemiologic analytic concepts such as rates and risk ratios;
3) recognize the contribution of epidemiology to all fields of medicine;
4) develop competence in critical thinking while evaluating epidemiologic studies;
5) critique journal articles and submit the critique for publication in medical journals;

EVALUATIONS AND GRADING
A letter grade will be given based on the following:

- Individual Written Homework Assignments 10%
- Class Participation/Attendance 10%
- Case Assignment 20%
- Letter to the Editor 20%
- Web of Causation 20%
- Questionnaire 20%
CASE ASSIGNMENT

Case assignments are for the purpose of demonstrating principles, stimulating ideas and discussions. A recent journal article which demonstrates some epidemiologic principle (or lack thereof) will be assigned or be chosen by each student. The recency of the article is relevant because of the Letter to the Editor assignment (see below). The student will be expected to present to the class, in 15 minutes, the following:

1) a review of the salient features of the research question addressed.

2) strengths.

3) weaknesses, in terms of the
   a) population used,
   b) methods,
   c) and their impact on results.

4) A brief discussion of the relative contribution of the paper to the field.

5) In addition, copy article for students and LBC.

6) Prepare a Letter to the Editor of the journal in which the article appears. Respond to any points you want to make about the article. Each Letter to the Editor must be submitted for publication in order to receive credit. Thus, in preparing the Letter, you must follow the Journal Guidelines for publication, given in the journal itself. Copy Letter for everyone in class. Give Dr. Cottler the confirmation from the journal that it has been received so that your grade will be entered.

ATTENDANCE AND CONDUCT IN CLASS

Students are expected to attend all classes and to conduct themselves as graduate students while in class. Lack of attendance is reflected in your grade. Inform Dr. Cottler in advance (if possible) if you cannot make class; call otherwise.

ASSIGMENTS

Mathematical problems do not need to be typed; all other assignments must be typed.

REQUIRED TEXT

There is no required textbook, just required reading.

GRANT APPLICATION FORM

The PHS Grant Forms Package and Instructions are available on the internet at http://www.uiowa.edu/~vpr/eforms/. This site allows you to download these files in either a PC or MAC format. If you have any difficulty in obtaining these documents, please contact my assistant.
JOURNALS WHICH CONTAIN EPIDEMIOLOGICAL STUDIES

Addiction (formerly known as British Journal of Addiction)
Advances in Genetics
Alcohol and Alcoholism
Alcoholism: Clinical and Experimental Research
American Journal of Epidemiology
American Journal of Human Genetics
American Journal of Psychiatry
American Journal of Public Health
Annals of Epidemiology
Annals of Human Genetics
Annual Review of Genetics
Archives of General Psychiatry
Biometrics
Biotechnology and Genetic Engineering Reviews
British Journal of Psychiatry
British Medical Journal (BMJ)
Cancer Epidemiology Biomarkers & Prevention
Current Opinion in Neurology
Drug and Alcohol Dependence
Epidemiological Reviews
Epidemiological and Vital Statistics
Epidemiology
Epidemiology and Infection
Ethnicity and Disease
European Archives of Psychiatry and Clinical Neuroscience
Genetic Epidemiology
Genetics
Human Genetics
Human Heredity
International Journal of Methods in Psychiatric Research
International Journal of Epidemiology
Journal of Abnormal Psychology
Journal of Chronic Diseases
Journal of Clinical Epidemiology
Journal of Epidemiology and Community
Journal of Neural Transmission
Journal of Studies on Alcohol
Journal of Child Psychology and Psychiatry
Journal of Mental Health Administration
Journal of American Medical Association (JAMA)
Molecular Genetics and Metabolism
Monographs in Epidemiology and Biostatistics
Nature
Neuroepidemiology
New England Journal of Medicine
Paediatric and Perinatal Epidemiology
Psychiatry Research
Public Health Reports
Reviews in Cancer Epidemiology
Statistical Methods in Medical Research
Weekly Epidemiological Record
MAKEUP CLASSES
If a class must be canceled, efforts will be made to reschedule at the students' convenience.

**ALL READINGS & ASSIGNMENTS ARE DUE ON THE DAY THEY ARE LISTED**

SEPTMBER 6

Discuss:
- Timmreck: Chapter 1, Foundations of Epidemiology.
- Healthy People 2010; 10 Public Health Achievements.

Assignment Due: Prepare a one-page essay on the most urgent health issue facing the nation, in your opinion. Give your reasons for choosing it and several ideas for preventing it.

Introductions.
LBC Lecture.
Jot down your interest areas for a case presentation, give to LBC.

SEPTMBER 13 -need to reassign

Discuss:
- Timmreck: Chapter 10, pages 325-339.
- Timmreck: pages 410-411 and 390-393.
- John Snow handout.

Assignment Due: Create a "Web of Causation" for an illness which afflicts the minority population. To complete this assignment go to the Library and scan the relevant epidemiologic journals (listed previously) for help in creating an authentic "Web". Prepare a transparency of the "Web" and be prepared for a class discussion which will focus on factors in the "Web" and prevention of the illness. [No purely genetic diseases should be chosen; try not to duplicate diseases.]

LBC Lecture.

SEPTMBER 20

Discuss:
- Timmreck: Chapter 9, pages 263-323.
- Eleven Blue Men, pages 86-99.

LBC Lecture.
SEPTEMBER 27

Discuss:
- Reporting Preliminary Results, Case Report B1. Read and write up your response.

Assignment Due: Visit http://medweb.wustl.edu/irb-educate/menu_med.html and complete from 1 to 5. Bring certificate to class.

Guest Lecture--Pat Scannell - Human Studies Committee, Washington University School of Medicine.

Submit a one-page thought piece on this lecture next week.

OCTOBER 4

Discuss:
- Friedman: Chapter 2.
- Timmreck: Chapter 4, only pages 99-121.
- Fletcher: Chapter 4.
- Gambling Odds Worksheet 1 and 2.

LBC Lecture.

OCTOBER 11 - need to reassign

Discuss:
- Lilienfeld and Stolley: Chapters 10 & 11.

Assignment Due: Friedman problems 2.1 to 2.3.

Give out homework assignment.

LBC Lecture

OCTOBER 18

Discuss:
- CDC AIDS: 20 Years.

Distribute AKQ, condoms and show Reality female condom.

Turn in RR and Odds Ratios Assignments
OCTOBER 25 - need to reassign

Discuss:
- Timmreck: Chapter 6, pages 161-191.

Assignment Due: Prepare answers to the “source of data” exercise.

Assignment Due: Prepare a list of 4 sources of data for epidemiological data from the Internet. Be prepared to visit that site in class.

LBC Lecture.

NOVEMBER 1

INFECTIOUS DISEASES, ENVIRONMENTAL EPIDEMIOLOGY

Discuss:
- Timmreck: Chapter 2, pages 23-51.
- Rothman: Chapter 28, pages 555-583.

Assignment Due: Look up childhood immunization requirements on Internet.

LBC Lecture.

NOVEMBER 8

EXPERIMENTAL STUDIES

Discuss:
- Lilienfeld: Chapters 8 & 9.

LBC Lecture.

NOVEMBER 15

RELIABILITY/VALIDITY AND SCREENING

Discuss:
- Cottler et al.: Concordance of DSM-IV alcohol and drug use disorder criteria and diagnoses as measured by AUDADIS-ADR, CIDI and SCAN. Drug Alcohol Depend 1997; 47:195-205.
- Fletcher: Chapter 3.

LBC Lecture.

NOVEMBER 22

ADDITIONAL ISSUES
Download:  [www.who.int/bulletin/tableofcontents/2000/vol.78no.4.html](http://www.who.int/bulletin/tableofcontents/2000/vol.78no.4.html). Scroll down to theme papers and print out *Psychiatric Epidemiology* – pages 464-474, by Kessler.

Discuss:
- Rothman - Chapter 11, Field Methods in Epidemiology.

Assignment Due: Sensitivity/Specificity Problems.

LBC Lecture

**NOVEMBER 29**  
**NO CLASS - THANKSGIVING RECESS**

**DECEMBER 6**  
**CONDUCTING A STUDY, GRANT WRITING**

Discuss:
- Timmreck: Chapter 11, pages 365-373.
- Brownson and Petitti: Chapter 11.

Assignment Due: Visit the Health and Human Services Grant application site and print out a copy of the R-01 application for class.

Assignment (Due Next Week): Begin working on developing a 20 question interview to elicit information about the issues shown below. State how the interview is to be used, and in what population. Do not include questions on the demographics as part of the 20 questions. PRETEST THE INTERVIEW. FAILURE TO PRE-TEST RESULTS IN INFERIOR QUESTIONS, WHICH WILL AFFECT YOUR GRADE.

Dr. Cottler will assign the topic from among the following:

Choices:
- Exposure to Violence  
- Marijuana Use  
- Child Abuse  
- High Risk Sexual Behaviors  
- Cigarette Smoking  
- Homelessness  
- Mental Health Services  
- Depression  
- Gambling Addiction  
- Firearm Use  
- Exercise Patterns  
- Nutrition  
- Binge Drinking  
- Insomnia  
- Life Events and Stressors  
- Neighborhood Environment  
- Parental Monitoring  
- Caregiving

Discuss questionnaire design and Danya website.

**DECEMBER 13**  
**QUESTIONNAIRE DUE BY 9:00 A.M.**