Department of Epidemiology

EPID 168 - FUNDAMENTALS OF EPIDEMIOLOGY

SYLLABUS, Fall 1990

DAY	DATE	INSTRUCTOR	TOPIC
Th	8/30	Sch./Hulka	Orientation and introduction
M	9/3	HOLIDAY	Labor Day (NO CLASS)
T	9/4	Schildkraut	Historical perspective
Th	9/6	Schoenbach	The Brown Plague -- a contemporary classic
M	9/10*	DDF/NLK	*LAB: Origins (Classic epidemiologic investigations)
T	9/11	Schoenbach	The phenomenon of disease
Th	9/13	Schoenbach	Measuring disease (and related factors)
M	9/17*	DDF/NLK	*LAB: Paper critique - Love Canal
T	9/18	Schoenbach	Measuring disease (continued)
Th	9/20	Schoenbach	Standardization of rates and ratios
M	9/24*	DDF/NLK	*LAB: Standardization of rates and ratios
T	9/25	Schildkraut	Analytic study designs
Th	9/27	Schoenbach	Relating risk factors to health outcomes
M	10/1*	DDF/NLK	*LAB: Measures - Progress against cancer?
T	10/2	Schoenbach	Relating risk factors to health outcomes (continued)
Th	10/4		FALL BREAK (no class)
M	10/8*		*LAB: Epidemiologic measures
T	10/9	Schildkraut	Analytic study designs (Case control studies)
Th	10/11	Schildkraut	Analytic study designs (Intervention trials)
M	10/15*	DDF/NLK	*LAB: Analytic study designs
T	10/16	Schildkraut	Sources of error: Selection bias
Th	10/18	Schildkraut	Sources of error: Selection bias / Information bias
M	10/22	DDF/NLK	LAB: Sources of error
T	10/23	Schildkraut	Sources of error: Information bias
Th	10/25	Schoenbach	Causal inference - philosophy and criteria
M	10/29	DDF/NLK	**MIDTERM EXAMINATION** (in Rosenau Auditorium)
T	10/30	Schoenbach	Multicausality: Confounding
Th	11/1	Schoenbach	Multicausality: Confounding
M	11/5*	DDF/NLK	*LAB: Discussion of midterm examination
T	11/6	Schoenbach	Multicausality: Effect modification
Th	11/8	Schoenbach	Multicausality: Effect modification
	11/12*	DDF/NLK	*Lab: Confounding & effect modification
T	11/13	Schoenbach	Analysis and interpretation of data
Th	11/15	Schoenbach	Analysis and interpretation of data (continued)
M	11/19*	DDF/NLK	*LAB - meetings for student presentations
T	11/20	Schoenbach	Analysis and interpretation (continued)
Th	11/22	HOLIDAY	THANKSGIVING
M	11/26*	DDF/NLK	*LAB: STUDENT PRESENTATIONS
T	11/27*	DDF/NLK	*LAB: STUDENT PRESENTATIONS
Th	11/29*	DDF/NLK	*LAB: STUDENT PRESENTATIONS
M	**12/3**		**PAPERS DUE**
M	12/3*	DDF/NLK	*LAB: Analysis and interpretation
T	12/4	TBA	Context of epidemiologic research
Th	12/6	Schoenbach	Context of epidemiologic research
M	12/10*	DDF/NLK	*LAB: Review of concepts and methods
T	12/11	Schoenbach	Overview and course evaluation
Th	12/13	8:00-11:00am	FINAL EXAMINATION

Lectures are in room 228 Rosenau. On dates with an asterisk (*), the class will meet in separate lab groups in rooms 1302 and 1303 McGavran-Greenberg.

8/28/90

Department of Epidemiology

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GENERAL INFORMATION, Fall 1990

FACULTY:

Victor J. Schoenbach, Ph.D., Associate Professor, Room 2104D, McGavran-Greenberg Hall 966-7436, SCHOENBA@UNCSPHVX, FAX: 966-2089 (Secretary: Edna M. Lennon, 966-7430, EMLENNON@UNCSPHVX).

Joellen M. Schildkraut, Ph.D., Research Assistant Professor, 966-7450, UEPJMS@UNC.BITNET

Barbara S. Hulka, M.D., M.P.H., Kenan Professor and Chairperson

Course Secretary: Edna M. Lennon, Room 2104, McGavran-Greenberg Hall, 966-7430, EMLENNON@UNCSPHVX

Mailboxes for all instructors and staff are outside the Epidemiology Department main offices on the second floor of McGavran-Greenberg

TEACHING ASSISTANTS:

Doren D. Fredrickson, M.D., 966-2505 (day) or 942-9309 (evening)

Nora L. Keenan, M.P.H., 966-2148 (day) or 933-4790 (evening), UEPNLK@UNC.BITNET

PURPOSE OF COURSE:

This course provides an introduction to epidemiologic concepts and methods for students majoring in epidemiology, and for others intending to, as a substantial component of their careers, engage in, collaborate in, or interpret the results of epidemiologic research.

COURSE OBJECTIVES:

After successful completion of this course, students should have:

1. the ability to read, understand, and critique proposed, ongoing or completed epidemiologic studies;

2. a basic understanding of the core concepts of epidemiology (e.g., incidence and prevalence, bias, control of extraneous variables);

3. familiarity with basic methods (e.g., study designs and measures);

4. an appreciation for the application of these concepts and methods in contemporary epidemiologic and public health practice.

Note: Room numbers refer to McGavran-Greenberg Hall or Rosenau Hall.

MAJOR CONTENT AREAS:

1. Epidemiologic perspectives on health and disease: natural history, classification, and patterns of disease in populations.

2. Epidemiologic measures of extent, association, and impact.

3. Design and methods of observational and intervention studies.

4. Sources, assessment, and control of bias.

5. Strategies for inferring causality.

6. Multicausality of disease, confounding, effect modification.

7. Analysis and interpretation of epidemiologic data.

8. Applications of epidemiologic methods in several areas of current epidemiologic research presented by faculty and students (topics vary each semester).

COURSE STRUCTURE:

The course will consist of lectures, lab assignments and discussion, and in-class examinations, as described below. Each student makes a short oral presentation and submits a written commentary. This course carries four credits.

OFFICE HOURS:

By appointment or as announced in class.

CLASS TIMES and LOCATION (rooms are in Rosenau Hall)

Mondays	2:00 p.m. - 3:50 p.m.	Rooms 1302 and ~~1303~~ 1304 McGavran-Greenberg
Tuesdays & Thursdays	11:00 a.m. - 12:15 p.m.	Room 228 Rosenau

COURSE ANNOUNCEMENTS:

Announcements concerning the course schedule, assignments, errata, and other matters can be sent by electronic mail. Please provide the instructors with your e-mail ID if you use electronic mail.

COURSE MATERIALS:

Course materials are being distributed through Universal Printing and Publishing (NCNB Plaza, Franklin St., 967-8000). The materials include:

- Bibliography
- Lecture handouts
- Readings
- Assignments and solutions
- Sample presentation abstracts and commentary
- Practice examinations and answers.

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Volume one covers the first half of the semester and costs approximately $30. Volume two, covering the second half of the semester, will be available at the end of October.

TEXTBOOKS:

The lecture handouts constitute the required text for this course. Use of one or more of the published epidemiology texts is recommended to complement the course materials. See the bibliography for a discussion of available textbooks.

DEPARTMENTAL SEMINARS:

The Department of Epidemiology Seminar Series provides an excellent accompaniment to this course. Seminars are generally held from 2:00 - 3:30pm on selected Wednesdays. Announcements are posted on bulletin boards in the Department of Epidemiology and elsewhere in the School.

LAB ASSIGNMENTS:

Laboratory sessions provide an opportunity for rehearsal, clarification, discussion, and further exploration of material from lectures. The class meets in lab groups of about 20 students under the direction of an advanced epidemiology student. For most sessions there is a problem set to be completed prior to the lab session in which it will be discussed. Many students find it advantageous to work and discuss the assignments in groups. You are encouraged to write up your answers before consulting the answer sheets provided in the course materials packet. The answers to the second assignment (critique of an epidemiologic study) are to be written up (preferably typed) and handed in. They will be reviewed for diagnostic purposes but not formally graded.

STUDENT PRESENTATIONS:

Presentations by course participants are invariably rated as one of the most stimulating and valuable components of the course. Two formal opportunities are scheduled. At the start of the semester, volunteers present classic epidemiologic investigations. Later in the semester, all students work in small teams to synthesize the research on an issue of current concern and to develop appropriate recommendations. Each member of the class distributes an abstract, makes a brief oral presentation, and submits a short written commentary (guidelines are in the COPYTRON packet) on the topic of the oral presentation and handed in before the end of classes. The set of topics are chosen jointly by the class and the instructors. Examples from previous years include: "Acquired immunodeficiency syndrome--a new epidemic?", "Alcohol consumption during pregnancy--is there a safe limit?", "Low dose ionizing radiation and cancer risk -- is there a threshold?", "Should home delivery be encouraged?", "Do oral contraceptives reduce risk of breast cancer?", "Overweight -- how much is too much?", and "Should mild hyptertension be treated with drugs?".

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EXAMINATIONS:

There will be a midterm examination and a final examination. These will be closed-book (except for dictionaries) and will consist mostly of multiple choice and short answer questions, with some computations. Grading is anonymous. Please bring a calculator and a lined 8 1/2" x 11" notepad to all exams.

Optional class sessions before and after the examination will be held by the teaching assistants if there is interest in assistance in preparation or in discussing the results. Examinations and answers from a previous year are provided in the course packet.

COURSE GRADES:

Course grades will be assigned on the basis of examination performance, with the midterm contributing 30%, the final examination contributing 45%, and the written commentary contributing 25%. Although class participation, lab assignments, and oral presentations will not be graded as such, these activities tend to contribute heavily to mastery of the material and exam performance.

Letter grades will be based on examination scores (rounded to the nearest percent) as follows:

H	90-100%
P+	85-89
P	75-84
P-	65-74
L	50-64

HONOR SYSTEM:

Academic dishonesty in any form is unacceptable, because any breach in academic integrity, however small, strikes destructively at the University's life and work.

The Honor Code and the Campus Code, embodying the ideals of academic honesty, integrity, and responsible citizenship, have for over 100 years governed the performance of all academic work and student conduct at the University. Acceptance by a student of enrollment in the University presupposes a commitment to the principles embodied in these codes and a respect for this most significant University tradition.

Your participation in this course comes with our expectation that your work will be completed in full observance of the Honor Code.

If you have any questions about your responsibility or our responsibility as faculty members under the Honor Coide and as the instructors in this course, please bring them to us, or consult with someone in either the Office of the Student Attorney General or the Office of the Dean of Students.

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