

UNIVERSITY OF CALIFORNIA SAN FRANCISCO
SCHOOL OF PHARMACY

EPIDEMIOLOGY FOR PHARMACISTS

COURSE SYLLABUS

COORDINATOR:	Karen S. Hudmon, Dr.P.H., M.S., R.Ph. Assistant Clinical Professor School of Pharmacy 3333 California Street Suite 420, Box 0613 San Francisco, CA 94118 UC office tel 415.502.6520 Home office tel 650.969.0155 e-mail khudmon@itsa.ucsf.edu
CLASS TIME AND PLACE:	Thursdays 1:00PM - 3:00PM U-458
OFFICE HOURS:	By appointment
CREDIT HOURS:	2
REQUIRED TEXTS:	Gordis, L. Epidemiology. Philadelphia: W.B. Saunders Co., 2000. Available at UCSF Bookstore Jones, J. Bad Blood: The Tuskegee Syphilis Experiment New York: The Free Press 1981, 1993 [Provided by instructor]
RECOMMENDED TEXT:	Trochim, W. The Research Methods Knowledge Base Cincinnati: Atomic Dog Publishing
TEACHING METHODS:	Lecture; selected readings; class discussion; mastery exercises; case studies and problem-solving exercises
COURSE DESCRIPTION:	To demonstrate proficiency in the basic principles and concepts of epidemiology as they apply to public health and health policy and to develop competency in critical evaluation of the scientific literature for its ability to contribute to decisions regarding public health policy and patient care.

COURSE OBJECTIVES:

- 1** Define and understand key epidemiologic terms and concepts
- 2** List the strengths and limitations of various study designs for epidemiologic research
- 3** Define and calculate measures of disease frequency and association
- 4** Describe types of bias and threats to validity; delineate design methods to control for them
- 5** Identify sources of health statistics and distinguish strengths and weaknesses of various data sources
- 6** Describe concepts and measurement issues for assessing disease occurrence, utilization of health care services, and pharmaceutical outcomes
- 7** Describe methods by which epidemiology can be applied to the study of intervention effects (including medication effects) for the purpose of health care planning and management
- 8** Describe ethical issues underlying the need for Institutional Review Boards for the Protection of Human Subjects in medical research

Week Topics and Assignments

1

9 January

Readings: Chapters 1, 2, 3, and pages 191-201 in Gordis

- Overview of course and discussion of syllabus
- Key definitions; historical background; applications of epidemiology
- Measures of mortality and morbidity
- Incidence and prevalence

➡ Take-home GRADED ASSIGNMENT #1 distributed

2

16 January

Readings: Chapter 4 in Gordis
Chapter 2 in Trochim

- Screening (false +/-, sensitivity, specificity, predictive value)
- Sampling
- Measurement

➡ Take-home SAMPLE EXERCISE SET A distributed

3

23 January

Readings: Chapter 9 (cross-sectional) in Gordis
Chapter 3 in Trochim

- Measurement, cont'd
- Study designs, Part 1: Overview, non-analytical designs (case reports, cross-sectional, ecological)

➡ Take-home GRADED ASSIGNMENT #1 due 1:00PM

4

30 January Guest Lecturer: Kathy Yang, Pharm.D., M.P.H.

Readings: Chapters 6, 7, 8, 9 (cohort), 12 in Gordis

- Study designs, Part 2: case-control, cohort, randomized clinical trials

➡ Take-home GRADED ASSIGNMENT #2 distributed

5

6 February

Readings: Chapters 10, 11, 14 (bias) in Gordis

- Measures of risk (absolute, relative, attributable)
- Bias

⇒ Take-home GRADED ASSIGNMENT #2 due 1:00PM

⇒ Take-home SAMPLE EXERCISE SET B distributed

6

13 February

Readings: Chapter 14 (confounding, interaction) in Gordis

- Confounding and interaction
- Understanding articles on epidemiologic studies

⇒ IN-CLASS QUIZ (at beginning of class)

⇒ REQUIRED READING for written critique and class discussion distributed

7

20 February

Readings: Chapter 6 in Trochim

- REQUIRED READING critique – class discussion
- Program evaluation
 - Internal and external validity
 - Threats to validity

⇒ REQUIRED READING written critique due 1:00PM

8

27 February

- Program evaluation, cont'd
- Survival analysis

⇒ Take-home GRADED ASSIGNMENT #3 distributed

9

6 March

- Pharmacoepidemiology
- Research with human subjects

⇒ Article for FINAL EXAMINATION distributed

⇒ Take-home GRADED ASSIGNMENT #3 due 1:00PM

10

13 March

- Epidemiology and public policy
- Catch up and sum up, Q & A
- Course evaluation

⇒ FINAL take-home examination distributed

Final examination due at 1:00PM, 21 March

EVALUATION:

	% of grade	Date due
Preparedness for class; class participation	15	--
Epi in the media – assignment	5	Weekly
Epi in the media – presentation	5	To be determined
Take-home graded assignment #1	10	Jan 23
Take-home graded assignment #2	10	Feb 6
In-class quiz	10	Feb 13
Required reading written critique	15	Feb 20
Written critique (10)		
Class discussion (5)		
Take-home graded assignment #3	10	Mar 6
Final take-home examination	20	Mar 21

GRADING:	70 or more	Pass
	< 70	No pass

CLASS PARTICIPATION: Attendance and participation is an expectation of adult learners. Students assume responsibility for their own learning by preparing for class, participating in class discussions, and completing assignments.

HOMEWORK ASSIGNMENTS: Must be handed in at the beginning of the following class period. Typed assignments are preferred; otherwise they must be printed.

EPI IN THE MEDIA: Each week, find a media example of a news story that relates to epidemiologic statistics. Each student will be responsible for a one-time oral presentation describing their article (dates to be scheduled at instructor's request). Articles can be located on the Web or in newspapers, but please be sure it is a current event and that you can identify the original, published article.

TAKE-HOME EXAMS: Two exams are scheduled; an in-class quiz and a final. Exams must be submitted on time, on the due date.

DOCUMENT SUBMISSION: Failure to submit class assignments or take-home exams on time will result in a 10% score reduction for the assignment for each 24 hours of tardiness. If there are circumstances under which a student cannot meet a deadline, the instructor should be notified at least 24 hours prior to the deadline.