

EPIDEMIOLOGICAL METHODS: EPID 573B

SPRING 2008

TIME: Monday & Wednesday: 1:30-2:50

LOCATION: Drachman A-122

FACULTY:

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Office hours: After class and by appointment

COURSE DESCRIPTION

This course will increase the student's understanding of research methods in epidemiology and will provide opportunities for the epidemiology student to design research studies and review epidemiologic research designs and studies.

COURSE PREREQUISITES:

Completion of EPID573A and EPID576A or equivalent courses with approval of instructor.

COURSE OBJECTIVES

This course will extend the basic concepts and principles of epidemiology presented in the first semester (573A) epidemiology course.

Specific objectives for this course are to increase the student's:

- understanding of research methods used in epidemiology;
- ability to develop a unified framework for planning and evaluating epidemiologic studies;
- ability to critically read and evaluate epidemiologic literature.

COURSE FORMAT

The class will be organized with classroom lectures and discussion forums of homework assignments. The homework assignments either represent real or hypothetical situations in which epidemiological concepts must be applied to a study design or data interpretation, or exercises that involve practicing specific quantitative skills, or reading and critiquing published research papers.

RECOMMENDED BOOKS AND READINGS

Readings for the course will be from several different epidemiology textbooks and journals. The recommended textbook is available from the Medical Bookstore:

Koepsell TD and Weiss NS. Epidemiologic Methods: Studying the Occurrence of Illness, Oxford Univ Press, 2003.

Other useful textbooks to consider for this class are:

Kelsey JL, Whittemore AS, Evans AS, Thompson WD. Methods in Observational Epidemiology, 2nd Ed., 1996.

Hennekens CH and Buring JE: Epidemiology in Medicine, 1987.

Rothman, KJ. Epidemiology, An Introduction, 2002.

All other required readings will be available online or made available in class.

Course syllabus, schedule, readings, homework packet, and any classnotes will be made available online: <http://d2l.arizona.edu> Students use Student Link to access the D2L site. Students must enter their student ID and PIN, then a spring 2008 course schedule appears with active links to courses.

COURSE REQUIREMENTS

Homework

Homework assignments are due at the time of the assigned class period and will, in most cases, be graded as 0= not completed, 1= completed satisfactorily. If the homework is partially completed or evidence of little preparation, then ½ credit will be given. Homework assignments will be distributed at least one week prior to the due date or will be in the Homework Packet. The Homework Packet will be available online.

Policy on Class Attendance and Participation

Class attendance is strongly encouraged. If a student misses class, he or she is responsible for meeting all course deadlines and for working with other students and instructor to catch up. If the student knows in advance that he or she will be away, then it is the student's responsibility to make appropriate arrangements for submission of homework or projects on time.

Each student should be prepared to participate in class discussions. Participation will be based on attendance and contribution to the class on a regular basis.

Projects

There are three projects to be completed throughout the semester. Specific instructions for the format and grading criteria of these projects will be provided. Check the online website for further details. Due dates for the projects are listed on the course schedule.

Examinations

The midterm will be a closed book, in-class exam. Students will be allowed to bring in one page of notes and calculators. The final will be a take-home exam.

STUDY GROUPS (*policy on students working together*)

Examinations will be completed by students individually. However, collaboration between students can enhance the learning process at other times. We encourage students to work together to do homework exercises and other project assignments.

GRADING AND EVALUATION

Evaluation will be based upon the student's ability to demonstrate an understanding of the concepts, principles, and methods of epidemiology. The following are requirements and criteria for this course:

- (30%) Homework assignments
- (5%) Participation
- (15%) Midterm
- (30%) Projects: [5% Project 1, 10% Project 2, 15% Project 3
- (20%) Final

The final grades are based on the following point system, although the instructor reserves the right to revise this scale if necessary.

A - 90-100%
B - 80-89%
C - 70-79%

D - 60-69%
E - <60%

OTHER INFORMATION

Academic Integrity: Students are expected to abide by the University of Arizona Code of Academic Integrity found at <http://w3.arizona.edu/~studpubs/policies/cacaint.htm>.

Classroom Behavior: Students are expected to be respectful of the instructor and other students at all times (including limited talking, no reading newspapers, etc). Cell phones may be brought to class but should be in the mute or vibrate position.

Students are expected to be familiar with the UA Policy on Disruptive Behavior in an Instructional Setting found at http://hr2.hr.arizona.edu/dos/pol_disrupt.htm and the Policy on Threatening Behavior by Students found at http://hr2.hr.arizona.edu/dos/pol_threat.htm.

COPH Grievance Policy: College of Public Health students who believe they have been subjected to unfair treatment in the administration of academic policies may seek resolution of their complaints through the College of Public Health Grievance Process found at http://w3.publichealth.arizona.edu/newcoph/students/3_greivance.htm

Disability Accommodation: Students who are registered with the Disability Resource Center must submit appropriate documentation to the instructor if they are requesting reasonable accommodations: <http://drc.arizona.edu/instructor/syllabus-statement.shtml>

Syllabus Changes: Information contained in the course syllabus, other than the grade and absence policies may be subject to change with reasonable advance notice, as deemed appropriate.

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	<i>Date</i>	<i>Topic</i>	<i>Readings Koepsell-Weiss (K&W)</i> <i>Also be sure to check Exercises for additional readings</i>
1	Wed., Jan 16	Nature of Epidemiologic Research Causation & Etiologic Research	
	Mon., Jan 21	Holiday	
2	Wed., Jan 23	Measures of Disease Frequency	Chptr 1,2, 3-4
3	Mon., Jan 28	Literature reviews & literature searches	Room Change Drachman 319
4	Wed., Jan 30	Hypotheses & Study Design Strategies	K & W: Chptr 5-7
5	Mon., Feb 4	Exercise #1 & 2	K & W: Chptr 8
6	Wed., Feb 6	Measures of Disease Association & Impact -1	K & W: Chptr 9
7	Mon., Feb 11	EpiInfo tutorial / data entry for Project #2	Room Change: Drachman 319
8	Wed., Feb 13	Measures of Disease Association & Impact -2	
9	Mon., Feb 18	Exercise #3	
10	Wed., Feb 20	Research Ethics and Ethical Considerations in Epidemiological Studies - Exercise # 4	Note: Wacholder lecture at noon
11	Mon., Feb 25	Classification & Categorization	
12	Wed., Feb 27	Exercise # 5	
13	Mon., Mar 3	Project #1: Subject Selection Presentations	Project #1 due
14	Wed., Mar 5	Project #1: Subject Selection Presentations	

15	Mon., Mar 10	Role of Chance – Sample Size & Power Exercise # 6	Room Change: Drachman 319
16	Wed., Mar 12	Midterm	
	Mon., Mar 17	Spring Break	
	Wed., Mar 19	Spring Break	
17	Mon., Mar 24	Role of Bias/Measurement Error -1	K & W: Chptr 10
18	Wed., Mar 26	Role of Bias/Measurement Error -2	
19	Mon., Mar 31	Exercise # 7	
20	Wed., Apr 2	Review of Project 2 - Descriptive & Ecological studies	Project #2 due K & W: Chptr 12
21	Mon., Apr 7	Cohort studies & Randomized trials	K & W: Chptr 13-14
22	Wed., Apr 9	Case-control Studies	K & W: Chptr 15
23	Mon., Apr 14	Exercise # 8	
24	Wed., Apr 16	Confounding & Effect Modification -1	K & W: Chptr 11
25	Mon., Apr 21	Exercise # 9	
26	Wed., Apr 23	Confounding & Effect Modification -2	
27	Mon., Apr 28	Exercise # 10	
28	Wed., Apr 30	Confounding & Effect Modification -3	K & W: Chptr 17
29	Mon., May 5	Exercise # 11	
30	Wed., May 7	Review	Project #3 due Final out
	Wed., May 14	Final due	