



**Mel and Enid Zuckerman College of Public Health
University of Arizona**

**SYLLABUS
Basic Principles of Epidemiology (EPID 573A; CPH 573A)
FALL 2008**

Time: Monday, 2:00-3:30
Wednesday, 2:00-3:30

Location: Drachman Hall, A-118

Instructor: Eyal Shahar, MD, MPH
Professor
Phone: 626-8025
Email: Shahar@email.arizona.edu
Office: Drachman Hall, Room 236
Personal website: <http://www.u.arizona.edu/~shahar/>

Office Hours: By appointment (send an email). You may also try to stop by.

Teaching Assistant: Kelly M. Cupell
Phone: 626-6560
Email: kcupell@email.arizona.edu
Location: Drachman Hall, Third Floor A324

TA Office Hours: 3:30-5:00 Monday & Wednesday

Course Description: *“The course will introduce students to the basic concepts and principles of epidemiology and how these concepts are applicable for their own particular interests and career in epi related fields.”*

Course Prerequisites: EPI major or minor, MPH major, or consent of instructor.

Course Learning Objectives: Understand basic ideas of epidemiological research

Course Notes: All course material will be available via the U of A Health Sciences library. The link is <http://reserves.ahsl.arizona.edu/eres/courseindex.aspx?&page=instr>. Search under the instructor name (Shahar). The password is epi573a.

Recommended Texts/Readings (OPTIONAL): Kenneth J. Rothman: *Epidemiology: An Introduction* (Oxford University press, 2002)

Course Requirements: Complete homework assignments; prepare for, and participate in, class discussions; take a mid-term exam and a final exam; prepare for class and study the material after class.

Grading/Student Evaluation: Regular grades are awarded for this course (A, B, C, D, E.)

A: $\geq 90\%$

B: $\geq 80\%$

C: $\geq 70\%$

D: $\geq 60\%$

E: $< 60\%$

Homework assignments (6) 30%

Mid-term exam 30%

Final exam (cumulative) 40%

If you think we made an error in grading an assignment or an exam, please tell us soon (and not at the end of the course.) There are no extra-credit tasks and no “make-up” for a higher grade.

Class Attendance/Participation: Regular attendance is expected. If you miss a class, you should find a way to learn the material I taught. All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion. Absences pre-approved by the UA Dean of Students (or Dean’s designee will be honored.)

Course Schedule: shown below

Required Statements:

Communications: You are responsible for reading emails sent to your UA account from your professor and the announcements that are placed on the course web site. Information about readings, news events, your grades, assignments and other course related topics will be communicated to you with these electronic methods. The official policy can be found at: <http://www.registrar.arizona.edu/emailpolicy.htm>

Disability Accommodation: If you anticipate issues related to the format or requirements of this course, please meet with me. I would like us to discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you be registered with Disability Resources (621-3268; drc.arizona.edu) and notify me of your eligibility for reasonable accommodations. We can then plan how best to coordinate your accommodations. The official policy can be found at: <http://catalog.arizona.edu/2008%2D09/policies/disability.htm>

Academic Integrity: All UA students are responsible for upholding the University of Arizona Code of Academic Integrity, available through the office of the Dean of Students and online: The official policy found at: <http://dos.web.arizona.edu/uapolicies/scc5308abcd.html> and <http://dos.web.arizona.edu/uapolicies/cai1.html>.

Classroom Behavior: (Statement of expected behavior and respectful exchange of ideas)
Students are expected to be familiar with the UA Policy on Disruptive Behavior in an Instructional Setting found at <http://web.arizona.edu/~policy/disruptive.pdf> and the Policy on Threatening Behavior by Students found at <http://web.arizona.edu/~policy/threatening.pdf>

Grievance Policy: Should a student feel he or she has been treated unfairly, there are a number of resources available. With few exceptions, students should first attempt to resolve difficulties informally by bringing those concerns directly to the person responsible for the action, or with the student's graduate advisor, Assistant Dean for Student and Alumni Affairs, department head, or the immediate supervisor of the person responsible for the action. If the problem cannot be resolved informally, the student may file a formal grievance using the [Graduate College Grievance Policy](http://grad.arizona.edu/catalog/policies/academic-policies/grievance-policy) found at <http://grad.arizona.edu/catalog/policies/academic-policies/grievance-policy>

Grade Appeal Policy: <http://catalog.arizona.edu/2008%2D09/policies/gradappeal.htm>

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.

Course Schedule:

Basic Principles of Epidemiology (EPID 573A; CPH 573A) Mondays & Wednesdays 2:00-3:30, Drachman Hall A-118 Fall 2008						
Date	Week #	Topics	Suggested supplemental reading*	In-class exercise (Read before class)	Homework assignment	Homework due
Aug 25 Aug 27	# 1	Historical perspective; "Descriptive epi": person, place, time Measures of freq (measures of "risk")	Chapter 1, pp 1-7 "On rate" (PDF file)	Snow on cholera	HW #1: Computation of probability, odds, rate	
Sep 1 (Holiday) Sep 3	# 2	Incidence and prevalence Causes	Chapter 3, pp 24-33			HW #1 (9/3)
Sep 8 Sep 10 (away, NC)	# 3	Study design and data layout (overview) Measures of association (TA)	Chapter 3, pp 44-52 Measures of association handout	Study tables (from articles); Create 2x2 tables; Compute measures of frequency and association	HW #2: Identify the study design; Compute measures of association	
Sep 15 Sep 17	# 4	Association vs. effect Randomized trials		Review an article (a randomized trial): "Prevention of stroke by antihypertensive drug treatment in older persons with isolated systolic hypertension"		HW #2 (9/17)
Sep 22 Sep 24	# 5	Cohort studies	Chapter 4, pp 57-67	Review an article (a cohort study): "Stroke incidence and survival among middle-aged adults"		

Sep 29 Oct 1	# 6	Causal diagrams The idea of bias Confounding bias	Chapter 5, pp 101-111	Draw causal diagrams		
Oct 6 Oct 8	# 7	Methods to handle confounders (I)	Chapter 8, pp 158-162	Standardization	HW #3: Standardization	
Oct 13 Oct 15	# 8	Cross-sectional studies Ecological studies		Pre-exam Q&A		HW #3 (10/15)
Oct 20 Oct 22	# 9	Screening Mid-term exam	Chapter 11, pp 198-203	Calculations of various screening-related measures		
Oct 27 Oct 29	# 10	Case-control studies (I)	Chapter 4, pp 73-75, 77-83	Review an article (a case control study): "The association between head trauma and Alzheimer's disease"	HW #4: Select a good control group	
Nov 3 Nov 5	# 11	Case-control studies (II)	Chapter 4, page 91	Discuss control groups		HW #4 (11/5)
Nov 10 Nov 12	# 12	Methods to handle confounders (II)	Chapter 8, pp 144-151, 163-166	Computation of Mantel- Haenszel estimates	HW #5: Compute Mantel- Haenszel estimates	

Nov 17 Nov 19	# 13	Selection bias Information bias	Chapter 5, pp 94-101 Article: "Causal diagrams for encoding and evaluation of information bias"	Information and selection bias		HW #5 (11/19)
Nov 24 Nov 26 (pre-Thanksgiving)	# 14	Insight into "real" epidemiological research: the story of the Sleep Heart Health Study as an example				
Dec 1 Dec 3	# 15	Effect (measure) modification	Chapter 9, pp 168-180	Detection by stratification Pre-exam Q&A	HW #6: Abstracts on effect modification	
Dec 8 Dec 10	# 16	Measures of "disease impact" Infectious disease epidemiology		Outbreak investigation Pre-exam Q&A		HW #6 (12/10)
Dec 12 (Friday)		Final Exam: 2:00-4:00 PM				

*All of the chapters were taken from the recommended textbook, which is optional (Kenneth J. Rothman: *Epidemiology: An Introduction*, Oxford University press, 2002)

You do not need to read the book to succeed in this course! All of the material will be taught in class. Nonetheless, if you decide to follow some, or all, of my suggested reading, keep the following in mind (to avoid unnecessary frustration):

1. Don't expect to find the same content that I teach, or even the same approach. There are different methods to present epidemiological ideas.
2. You may occasionally read material that was not covered in class. That should give you an opportunity to appreciate deeper stories than I can teach under the time constraints.
3. Try to look for similarities and differences between my approach and Dr. Rothman's approach to the same issue.
4. Don't worry (and don't get frustrated) if some material seems too difficult to follow. Skip to the next paragraph or to the next section.