

CHRONIC DISEASE EPIDEMIOLOGY: EPID670 and CPH 670 FALL 2012

TIME: Tuesday: 1:00-3:50
LOCATION: Drachman A-112
FACULTY: Robin Harris, Ph.D., M.P.H.
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Office hours: After class and by appointment

COURSE DESCRIPTION

This course will reinforce epidemiological concepts, research skills and public health concepts in the context of the study of chronic diseases and associated risk factors.

COURSE PREREQUISITES:

At least one basic epidemiology and one basic biostatistics course (or approval of instructor)

COURSE LEARNING OBJECTIVES

Upon completion of the course, students should be able to:

- 1) Describe trends in the epidemiology of selected chronic diseases.
- 2) Describe patterns of major etiologic (risk) factors and their relationship to these selected chronic diseases.
- 3) Locate data from chronic disease registries and databases on a state and national level and identify key methodological considerations for chronic disease surveillance
- 4) Review the scientific merit of articles within the chronic disease epidemiologic evidence-base, and synthesize information from a variety of epidemiologic and related studies.
- 5) Select appropriate clinical outcomes for evaluating chronic disease research questions.
- 6) Select appropriate research instruments for assessing exposures in chronic disease research.
- 7) Design effective chronic disease studies by applying epidemiological methods across the spectrum of chronic disease problems.
- 8) Design a methodologically sound and well-organized epidemiologic research proposal.

EPIDEMIOLOGY COMPETENCIES

This course provides information on the following Epidemiology Competencies.

Domain 1: General Knowledge

- Describes major national and international public health problems
- Describes risk factors for well established health problems and the evidence in support of these factors
- Understands basic research designs used in health issues
- Understands how epidemiologic evidence informs public health practice and policy.

Domain 2: Problem Identification / Planning

- Defines a research or health problem by identifying gaps in the knowledge of a health issue
- Identifies steps needed to accurately assess and understand the health status of populations

- Identifies determinants of health and illness, factors contributing to health promotion and disease prevention, and factors influencing the use of health services

Domain 3: Information Skills

- Retrieves and organizes literature from valid sources of the evidence base
- Judges, critiques, and interprets research findings
- Develops and maintains an electronic database
- Develops and implements a plan for monitoring data as it is collected, and implements appropriate corrective actions to ensure data quality

Domain 11: Data Analysis

- Determines appropriate uses and limitations of data
- Conducts descriptive analyses and tests hypotheses for basic statistical inference
- Recognizes potential sources of bias and applies appropriate analytic techniques to assess and adjust for these biases
- Calculates and interprets fundamental measures of association (OR, RR, AR, etc.)
- Conducts appropriate stratified and multivariate statistical analyses
- Demonstrates a broad familiarity with a variety of analytic statistical software packages

Domain 12: Data Interpretation

- Evaluates the integrity, comparability of data, and limitations of data
- Makes relevant inferences from data analyses
- Understands and applies the principles of causality
- Identifies areas of further research

COURSE FORMAT

The class will be organized as an interactive seminar designed to prepare students for the skills required for chronic disease research consultancy. Learner-centered methods will include individual and small group work and discussion, guest lectures, and student presentations.

RECOMMENDED BOOKS AND READINGS

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 Fall 2010 course schedule appears with active links to courses.

Readings for the course will be from several different epidemiology textbooks and journals. Required readings will be available online or made available in class.

The following book is recommended for the course, but not required.

Chronic Disease Epidemiology and Control, 3rd Ed. Patrick L. Remington, Ross C. Brownson, MV Wegner. Published by American Public Health Association, 2010.

COURSE REQUIREMENTS

Projects

There are five projects to be completed throughout the semester: 1) description & review of a classical epidemiological study, 2) review of population selection strategies, 3) literature review of a chronic disease, 4) completion of a secondary data analysis project (portfolio of analysis), and 5) development & presentation of an epidemiological research proposal. 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.

Homework & Course Readings - Participation

Per Graduate College guidelines, 2-3 hours of out-of-class preparation is expected for each course unit each week to include: literature or data searches, reading, grant planning, or other exercises.

Class attendance is strongly encouraged. If a student misses class, s/he is responsible for meeting all course deadlines. If the student knows in advance that s/he will be away, then it is the student's responsibility to make appropriate arrangements for submission of class assignments or projects on time.

Course readings and homework will be assigned throughout the semester. Students are expected to have read all assigned readings and completed any assigned homework. Each student should come prepared to participate in class discussions. Participation will be based on attendance and contribution to the class on a regular basis.

STUDENT EVALUATION

Evaluation will be based upon the student's ability to demonstrate an understanding of the concepts, principles, and methods of chronic disease epidemiology through the completion of course projects and participation in class activities

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CHRONIC EPIDEMIOLOGY 670 GRADING SCHEME	
Project 1- Classical Chronic Disease cohorts	5%
Project 2- Strategies for identifying populations & data	5%
Project 3 - Chronic Disease Literature Review	25%
Project 4 - Data Project Portfolio	25%
Project 5 - Research Proposal & presentation	25%
Homework-Participation	15%
	100%

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

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/2012%2D13/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://deanofstudents.arizona.edu/codeofacademicintegrity>

Plagiarism: What counts as plagiarism?

- Copying and pasting information from a web site or another source, and then revising it so that it sounds like your original idea.
- Doing an assignment/essay/take home test with a friend and then handing in separate assignments that contain the same ideas, language, phrases, etc.
- Quoting a passage without quotation marks or citations, so that it looks like your own.
- Paraphrasing a passage without citing it, so that it looks like your own.
- Hiring another person to do your work for you, or purchasing a paper through any of the on- or off-line sources.

Classroom Behavior: (Statement of expected behavior and respectful exchange of ideas)

The Dean of Students has set up expected standards for student behaviors and has defined and identified what is disruptive and threatening behavior. This information is available at:

<http://deanofstudents.arizona.edu/disruptiveandthreateningstudentguidelines>

Students are expected to be familiar with the UA Policy on Disruptive and Threatening Student Behavior in an Instructional Setting found at: <http://policy.arizona.edu/disruptive-behavior-instructional> and the Policy on Threatening Behavior by Students found at:

http://deanofstudents.arizona.edu/sites/deanofstudents.arizona.edu/files/Disruptive_threat_bklt_2012.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 found at:

<http://grad.arizona.edu/academics/policies/academic-policies/grievance-policy>

Grade Appeal Policy: <http://catalog.arizona.edu/2012-13/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.

**MEL AND ENID ZUCKERMAN COLLEGE OF PUBLIC HEALTH
UNIVERSITY OF ARIZONA**

**CHRONIC DISEASE EPIDEMIOLOGY: EPID670 and CPH 670
FALL 2012 - SCHEDULE**

	<i>Date</i>	<i>Topic</i>	<i>Speaker</i>	<i>Assignments</i>
1	August 21 st	Introduction to Chronic Disease Epidemiology	Harris	
		Chronic Disease in a Global Context		

2	August 28 th	Surveillance & Data Sources	Harris	Remington, Chptrs 1 -4 Readings #1: Overview & surveillance.
		Design Issues: study design		Homework #1 – article critiques
3	September 4 ^h	Class Presentations – Classical Studies	Harris	Project #1 DUE
		Design Issues: classification & misclassification		Homework #2 –article & critique
4	September 11 th	Epi Table/Discussions		Readings #2 Journal questions
5	September 18 th	Meta-analyses	Dennis	
6	September 25 th	Nutrition & Dietary Assessments	Sardo	Remington, Chptr 6
		Physical Activity & Physical Inactivity as Risk Factors for Chronic Diseases	Going	Remington, Chpt 7
7	October 2 nd	Asthma – Issues with estimating prevalence & Cost Effectiveness Analyses	Gerald	Readings-D2L
8	October 9 th	Project #2 presentations		Project #2 DUE
		Epi Table-journal discussions	Harris	Readings – see D2L
9	October 16 th	Chronic Disease Surveillance and Prevention		Visit to ADHS Phoenix
10	October 23 rd	Vision	Twelker	Readings-D2L Project #3 DUE
		Epilepsy & Neurological Diseases	Labiner & Chong	Remington, Chpt 17
11	October 30 th	Using BRFSS & other national survey samples	Nuno	
12	November 6 th	Consultation on Research Proposal	Harris	Specific Aims section for research proposal due.
		Epi Table-Journal Discussions		Readings-D2L

13	November 13 th	Smoking as a Risk Factor	M. Muramoto	Project #4 DUE Readings D2L Remington, Chptr 5
		Environmental Assessments	Loh	Remington Chpt 15
14	November 20 th	Surrogate Biomarkers	Elizabeth Hibler	Readings D2L
15	November 27 th	Stroke/CVD	Ritter	Remington, Chpt 13 Readings D2L
16	December 4 th	Student Presentations		Project #5: DUE

* There is no final examination. If student presentations are not completed on the 4th, then examination period is available for completion of presentations.