



SYLLABUS  
**Basic Principles of Epidemiology – EPID/CPH 573A**  
**Spring 2015**

**Time:** Tuesday & Thursday 8:30-9:45 a.m.

**Location:** Drachman Hall A-118

**Instructor:** Leslie Dennis, MS, PhD  
Professor of Public Health  
1295 N. Martin  
Drachman Hall, A238  
Tucson, AZ 85724  
Telephone: 626-6408  
[ldennis@email.arizona.edu](mailto:ldennis@email.arizona.edu)

**Office Hours:** Tuesday after class or by Appointment via email

**Teaching Assistant:** None

**Catalog 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:** This course will introduce students to the basic concepts and principles of epidemiology and how these concepts are applicable for their own particular interests and careers. By the end of the course, students will be able to:

- explain considerations for establishing the association between an attribute and a health outcome as causal,
- calculate and interpret various measures of disease frequency and association,
- explain the usefulness and relative advantages and limitations of various epidemiological study designs,
- identify potential sources of bias which can occur in various study designs, and
- constructively evaluate research and scientific reports from the literature.

**Competencies Covered:**

Competencies that will be addressed on some level during the course include the following:

Domain 1: General Knowledge

Domain 2: Problem Identification / Planning

Domain 3: Information Skills

Domain 6: Professional Conduct

Domain 8: Study Design

Domain 9: Study Conduct

Domain 11: Data Analysis

Domain 12: Data Interpretation

**Textbook**----none required

Recommended if you work better with a book: Epidemiology (5<sup>th</sup> edition) Leon Gordis, 2014.

**Course Notes:** All other course material will be posted on D2L.

**Readings** for educational purposes will be posted on D2L

**Course Requirements:** Complete homework assignments and submit via D2L. Take quizzes on D2L prior to the class listing the quiz. Take exams on the scheduled date and time.

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

<b>Grading Scale:</b>	A: 90-100
	B: 80-89.99
	C: 70-79.99
	D: 60-69.99
	E: <60

**1. Class Participation:**

It is expected that students attending class will arrive on time so as not to be disruptive. Students are expected to contribute to the discussion of homework assignments as a learning tool. Each class period may have several readings. Students are expected to complete the readings and homework prior to class.

**2. Homework Assignments = 17% (85 points total):**

The assignments will be posted on D2L by the instructor at least 1 week prior to their due date. The purpose of homework is to apply lecture and readings concepts promptly as a method of learning the concepts. Homework assignments are titled based on the concept(s) covered with the due dates listed on the most recently posted schedule.

All of your homework assignments should be typed in a word processor using Arial font 11 or 12 with 1 inch margins and should be spell-checked. They should be labeled at the top of page 1 with your name, CPH573A, date due and the assignment title. Your homework answers should be numbered according to the homework assignment layout. To accomplish this, download the assignment in Word from D2L, add your name as indicated at the top, and then type your answers after each question in either bold font or blue font.

All homework assignments are required to be completed and submitted via D2L prior to the beginning of class (8:30am) on the due date. It is the student's responsibility to check that the file uploaded to D2L worked and is not corrupted. If the instructor finds that the homework file is corrupted, you will have 2 hours from receiving an email from the instructor to re-upload the file. Therefore, check that the file is not corrupted. Files tend to get corrupted when using word processing software other than Word for PCs.

Homework will typically be discussed in class, thus will not be graded in detail.

The 17 homework assignments will be graded on a 5 point scale: 5 for attempting all questions with most correct, 3 point if at least 50% of the assignment is attempted and correct, 4 points for work in-between that for 3 or 5 points at the discretion of the instructor; 1-2 points for completing less than 50% of the homework. The instructor reserves the right to credit 5 points to homework answers submitted prior to class (8:30 am) without reviewing the assignments when the homework is gone over in class and/or a detailed answer key is provided for students to check their work. Thus, it is the student's responsibility to compare their answers with the answer key and/or class discussion of the homework answers. The quiz and last homework prior to an exam typically are review questions that will be discussed in class rather than posting an answer key.

Since homework is discussed in class **no late assignments will be given credit.**

**3. Quizzes = 12% (60 points total):**

There will be **4 out-of-class quizzes** on D2L that due to be completed before the class dates for which they are listed. These quizzes will typically consist of multiple choice questions, true/false and short answer questions. Students are responsible for completing these prior to class. It is recommended that complete the quizzes no later than the day before they are due. The purpose of the quizzes is for the student to gauge how well they know the material. Students will receive 5 points for completing the quiz on time and 10 points times the percentage they receive on the quiz (rounded up to the nearest point). Thus, each of the 4 quizzes is like a higher points homework assignment. Each of the quizzes will be paired with a homework assignment that is also covering review material but not easily administered in D2L. The review sessions will go over the relevant quiz and homework assignment.

Quizzes are to be taken with closed books, closed notes, and only a calculator for you to simulate the exam. Quizzes may not be taken with another student or person; this is defined as cheating and will result at a minimum of a zero for the quiz or dismissal from the class.

**4. Exams – 2 exams = 20% (100 points) each:**

There will be 2 in-class exams on the scheduled dates (plus a final exam). It is the instructor's policy not to give make-up exams. In unusual cases the instructor may agree to give a harder make-up exam prior to the scheduled exam. Typically exams will consist of some multiple choice, some true/false and mostly short answers or calculations for a short answer. Please note that concepts build so exams may on some level cover any prior topic.

The class time for an exam is 75 minutes. Exams will be aimed for an average completion of 50-60 minutes and cannot last longer than 85 minutes to allow the next class in the room.

Exams will be closed books, closed notes, with no laptops, notebooks, tablets or phones. Please bring a calculator other than on a laptop, notebook, tablet or phone. Exams may not be taken together; this is defined as cheating and will result at a minimum of a zero for the exam or dismissal from the class.

**5. Comprehensive final exam = 31% (155 points):**

The final will be comprehensive on the scheduled date. (See Exams above) the format will be similar to other exams. The length will be longer as it is comprehensive, thus will be aimed for an average completion of 90-100 minutes and cannot last longer than 120 minutes per the exam schedule.

In summary,

1. Homework – 17 assignments	17%
2. Quizzes - 3	12%
3. Exam 1	20%
4. Exam 2	20%
5. Final exam	<u>31%</u>
	100%

**Class Attendance/Participation:** Expected for lectures and required for exams. 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.

**Exam Attendance:** Required on the scheduled date. Exams will be given only on the scheduled day. It is the instructor's policy not to give make-up exams. The exams have been schedule in an attempt to avoid religious holidays and to maximize content learning. Any conflicts need to be identified and discussed with the instructor by January 27<sup>th</sup>, 2015. It is at the discretion of the course instructor to approve such exceptions so that the student may take the scheduled exam early.

In true emergency situations, the student should provide the instructor or MEZCOPH Dean of Students with validated information in a timely manner of a missed exam for verification of a potential exception.

**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](http://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/2014%2D15/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>

**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](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/2014-15/policies/gradappeal.htm>

**UA Smoking and Tobacco Policy:** The University's "Smoking and Tobacco Policy" is designed to promote the health and wellness of all members of the University community, including visitors to campus, and it will prohibit the use of tobacco- and nicotine-containing products on property owned or controlled by the UA. This includes the main campus, the Arizona Health Sciences Center, the Phoenix Biomedical Campus, UA South, all satellite campuses, University vehicles, and any property leased by the UA. Smoking cessation aids, such as nicotine gum, patches, and nasal sprays, will be permitted, **but all other forms of tobacco or nicotine - including pipes, cigars, cigarettes and e-cigarettes, all types of smokeless tobacco, and water pipes - will be prohibited.** The latest version of the policy is available at: <http://policy.arizona.edu/sites/default/files/Tobacco-Free.pdf>

**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.

**Cell phones and other Electronic Devices:** Cell phones and other electronic devices can interfere with class, so please turn them off. Phones can be left on vibrate if needed, but no phone calls or texting are allowed during class. Please leave the room if you need to take an emergency phone call. Laptops

may be used for taking notes or reviewing class notes, however, searching the internet during class is not allowed and distracts fellow students. Internet websites such as Facebook and other social media should not be visited during our short class time. This is extremely distracting to other students and faculty sitting in on the class. If such use continues, you may be asked to leave class.

**Plagiarism:** Plagiarism can occur when a student copies text word-for-word without quoting, fails to paraphrase, or fails correctly reference materials used for preparing a written assignment. This includes fictitious or incorrect references. If plagiarism is detected on an assignment, it will result in automatic failure for that assignment.

A second offense will result in automatic course failure. All these actions will be reported to the Section Chair, the Dean of the College of Public Health, and the Dean of Students. This policy is in place for this class because scientific writing is a fundamental skill at both the undergraduate and graduate level in this field, and for this course. If you feel you are unsure as to what might constitute plagiarism, there are numerous resources at the University of Arizona, including the writing lab, to help you understand and avoid plagiarism.

### **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.

The Epidemiology Section faculty members reserve the right to check assignments or papers with TurnItIn for plagiarism.

Classroom civility: In this interactive course it is expected that students and the instructor will:

- a. use respect (including disagreeing respectfully) both when speaking and being responded to
- b. listen and involve others
- c. resist the temptation to dominate discussion by waiting for others to speak before speaking again
- d. consider everyone's opinions to be "valid" or at least interesting or a reference point for examining one's own opinions; allow thinking broadly, "outside the box"
- e. appreciate a small amount of tension (too much "sameness" means dull discussion)
- f. stay focused on the subject (anyone can raise the possibility that discussion is getting too tangential, that too much time is being spent on a small issue, that other issues are being neglected. Others can challenge this and defend spending more time.)

### Recommended Learning Strategies

To be an effective learner in this course the following are strongly encouraged:

1. Continuously monitor the course outline. The course outline includes all deadlines for the course. Do not expect to be reminded of any of the due dates on the course outline. Unless otherwise notified, students are accountable for meeting all deadlines as listed on the outline.
2. Check the course web site regularly for announcements.
3. Read all recommended readings.
4. Participate in class discussion. If you feel uncomfortable with this, please see the instructor who can help with strategies for your participation.
5. Ask questions.
6. Answer questions.
7. Use the discussion boards.
8. Listen to your classmates; their insights are an important source of learning in this course. A general rule of thumb is to let at least two other people have a chance to say something before you speak again.

Week	Date			Homework (HW) Title on the Due Date	Gordis Reading
<b>Module 1 - Descriptive epidemiology</b>					
# 1	Jan 15	L1	Overview of the Course Requirements & Descriptive Epidemiology		Chap 1&3
# 2	Jan 20	L2	Overview of Study Designs	HW#1: Measures of Frequency	
	Jan 22	L3	Disease Frequency & Excess Risk	HW#2: Study Design	Chap 4
# 3	Jan 27	L4	Confounding & Standardization	HW#3: Measures of Excess Risk	Chap 4
	Jan 29	L5	Standardization & Excess Risk		Chap 11&12
# 4	Feb 3	L6	Selection Bias & Misclassification	HW#4: Standardization & Confounding	Chap 14
	Feb 5	L7	Causality & Deriving Inferences & Distortion of Associations (Bias)	Homework #5	Chap 15
# 5	Feb 10	L8	Bias & review	Quiz 1 due 7 am 2/10/15	
	Feb 12	L9	<b>Exam 1</b>		

**Module 2 - Confounding & effect modification**

# 6	Feb 17	D1	Confounding		
	Feb 19	D2	Effect Modification (EM)	HW#6: Confounding #1	
# 7	Feb 24	D3	Confounding & Effect Modification	HW#7: Confounding & EM #2	
	Feb 26	D4	Work through problems		
# 8	March 3	D5	Confounding & Effect Modification	HW#8: Confounding & EM #3	
	March 5	D6	More on Confounding & Effect Modification	HW#9: Confounding & EM #4	
# 9	March 10	D7	Review	HW#10 & Quiz 2 due 7 am 3/10/15	
	March 12	D8	<b>Exam 2</b>		

March 17  
March 19

SPRING BREAK

**Module 3 - Study design in-depth & other topics**

# 10	March 24		Randomized Clinical Trials (RCT)		Chap 7 & 8
	March 26		Cohort	Homework #11	
# 11	March 31		Cohort	Homework #12	Chap 9
	April 2		Case-Control		Chap10
# 12	April 7		Case-Control	Homework #13	Wacholder articles Chap 13
	April 9		Case-Control		
# 13	April 14		Review	HW#14 & Quiz 3 due 7 am 4/14/15	Chap 10
	April 16		Other Study Designs		
# 14	April 21 & 23		External and Internal Validity, Reliability & Validity, Screening		Chap 5 Chap 18
# 15	April 28		The Concept of Causal Relationship	HW#15: Reliability & Validity	
	April 30		Other Aspects of Epidemiology	HW#16: Causal Diagrams	
# 16	May 5 & 7		Other Aspects of Epidemiology & Review	HW#17 & Quiz 4 due 7 am 5/5/15	
	<b>May 14</b>		<b>Final Exam (Exam 3): 8:00-10:00 AM Thursday</b>		