Department of Epidemiology and Biostatistics

SYLLABUS
Epidemiologic Methods (CPH 573B)
Fall 2019 Online MPH Program (8-27-19)

Time:   Online course
Location: D2L

Section Instructor:   Jason Roberge, MPH, PhD
                      Available via: D2L Discussion Boards
                      Email: roberge@email.arizona.edu with 573B in the Subject line
                      Office Hour: Thursday 2:30PM Arizona Time (5:30PM Eastern time)
                      (Subject to change with advanced notice)

Instructor Availability: The instructor’s response time to questions will be within 1 day on average. However, the instructor reserves the right to check Discussion boards for questions once a day during the class. Thus, if checked at 7 am on Tuesday it might not be checked again until 8pm on Wednesday. All questions should be posted on D2L discussion boards so all students can benefit.

Developer:   Leslie Dennis, MS, PhD
Professor
Email: ldennis@email.arizona.edu with 573B ONLINE in the Subject line

Teaching Assistants: None

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

Course Prerequisites: EPID 573A, EPID 576A, Applied Epidemiology MPH major

Course Objectives and Expected Learning Outcomes:
This course will expand on basic concepts and principles of epidemiology discussed in 573A and go into more depth in epidemiology methods.

Course Objectives Upon completion of this course students will be able

- To describe the strengths and limitation of various study designs
- To realize the major sources of bias & contrast across study designs,
- To illustrate the methodological characteristics of the most important data collection techniques,
- To describe the strengths and limitation of using existing data,
- To develop skills to use research methods in epidemiologic, and
- To learn to communicate results.
Learning Outcomes (Competencies Obtained): Core MPH competencies that will be addressed during this course from the 22 CPEH required competencies include parts of 1-4.

Applied Epidemiology MPH Program specific Competencies Covered: are listed below:

(3) Compare and contrast bias within study designs and calculate appropriate measures of disease frequency and excess risk.
- Assessment is via several assignments that outline the components of case-control studies; An assignment describing findings from cohort studies; Another assignment describing biases within study designs; An assignment designing a study then discussing and revising with classmates. Then an assignment on reliability and misclassification (also assessed on the midterm). Additional assessment is via calculations for in-class activities on study design. These concepts are then included on quizzes 1 & 2, the midterm and final.
- Later again when calculating disease frequency and excess risk when examining confounding and effect modification. Assignments that include aspects of confounding and effect modification include calculating crude, stratum specific and adjusted ORs/RRs by hand and using logistic regression techniques along with interpreting models presented in published papers and from STATA output. This material is also assessed on quizzes 3 & 4 and the final exam.

(4) Collected data to answer applied epidemiological research questions.
- Partial assessment is via designing a survey to collect data. However, due to the double time (7.5 weeks), students will not actually analyze data from their survey, but use data collected by previous students from similar surveys.

(5) Interpret analyses in the context of published literature and communicate key findings
- Partial assessment is via drafting aspects of a manuscript based on analysis of survey data.

Course Notes: All course material will be available on D2L except for the required textbook, audio/video recording software (required for the Online MPH programs) and STATA statistical software (required for all Epidemiology Practice program students).

Required Textbook and Readings:
*Epidemiology, Beyond the Basics*, 3rd edition, by Moyses Szklo & F. Javier Nieto, Jones and Bartlett Learning, LLC. Copyright 2014. (ISBN 978144960469)
Additional readings provided on the website.

Required Equipment:
As part of the University of Arizona’s Mel and Enid Zuckerman College of Public Health’s Online Masters in Public Health (MPH) program, all students are required to have the proper equipment including audio and video capabilities to participate in the online MPH program regardless of which specific program you were in.

Applied Epidemiology MPH program students are also required for several courses including this course, 573B, to have STATA/IC long with some other 2nd your courses. We will be using STATA to conduct your analyses of the survey you develop.
Students will also need to have access to Qualtrics available to University of Arizona students. Qualtrics is a program that develops online surveys (or data entry programs). It is similar to other online programs such as Redcap. But since we all will be combining surveys everyone must use Qualtrics for this course.

**Course Requirements:**

This course is in double time (7.5 weeks instead of 15 weeks). For a UA 15-week course you are expected to spend 3 hours per week in class plus 6-9 hours outside of class for a 3 credit course. **For an Online Course this translates 18-24 hours a week during our 7.5 week period for an average student for this 3 credit course.**

Please note some lectures mention a class project. To reduce the workload, it has now been broken into subparts with reduced work. So please disregard the mention of a class project in any personation.

Typically each Week will have:

- **Practice problems** – that need to be completed to aid in learning. These are given suggested completion times, but will not be graded. Practice problems are also a study aid for the quizzes. Typically a discussion board will be available to talk to your fellow students. But occasionally a discussion board will carry a few points for discussing a specific topic in the practice problems.
- **Assignments** – to be turned in for credit, some turned in under D2L Quizzes for auto grading. Points are listed for each Assignment. Due Saturday at 11:59pm.
- **Discussions** – are helpful to expand upon some ideas. Assignment 1.2 will be submitted and graded under the Discussion board.
- **Quizzes** – these cover materials in the Practice problems and/or Assignments. They are timed. Points are listed for each Quiz. Due Sunday at 11:59pm.

The order, due dates and points for each of these vary from module to module. Often within a Module the Assignment and the Discussions are interlinked.

**Practice Problems:**

Most weeks you will be given a selection of problems to work through to test your understanding of the material. These are ungraded assignments; however, those who do not complete the practice problems generally do not do well on Assignments, Discussions and Quizzes.

- These cover key concepts.
- Work may mimic the Assignments. Some work here leads into Assignments.
- Some work leads to required Discussions.
- Some work prepares you for the Quizzes.

**Assignments (33.3% of grade; 200 points):**

- Points and due dates are listed for each Assignment.
- D2L lists the due dates and time. Times tend to be 11:59 pm, but please note some assignments are dependent on each other with the same due date.
- The Assignments walk students through class concepts.
- Download the homework assignment in Word.
- Answer the homework in blue or bold font within the Word document.
• Upload the Assignments in one file unless otherwise specified, Word or PDF file to the Discussion Box by the due date. Several exceptions include assignments where questions and answers have been programmed into D2L Quizzes for faster grading. Assignments setup in D2L Quizzes:
  o Are set for the maximum time of 120 minutes and 10 attempts.
  o These have been set up to give you faster feedback, however, the posted answer keys will have more detail and more closely parallel the final exam.
  o It is recommended that students still complete many of these on paper. After the due date you can compare details of your calculations with the answer keys.
  o Some assignments under D2L quizzes will have text answers that the instructor will need to grade. Students may find it more efficient to prepare these in Word ahead of time and paste into the Quiz format.
• All writing assignments should be uploaded in Word so that the instructor can provide feedback through track changes. Feedback will not be provided for any non-Word documents submitted. Points will be taken off for not using the required fonts and margins.
• Due to the pace of this course no late Assignments will be accepted/graded.

Discussion (1.7% of grade):
• Points and due dates are listed for each Discussion.
• Assignment 1.2 will be posed and graded via discussions (10 pts).
• Late discussion comments will not receive a grade. However, it might be a way in which students can effectively communicate for progress on the class project.

Quizzes (16.7% of grade; 100 points):
• A quiz will be administered for weeks 1, 2, 5 and 6. Check each week for the varying points for the quizzes.
• Quizzes are timed with only 1 attempt and require Browser Lock Down.
• They are to be completed on your own without the help of others.
• You must complete your quiz within the specified time window. No late quizzes will be allowed.
• Since assignments are due on Saturdays, the quizzes will be due on Sundays after answer keys have been posted.

Exams (48% of grade; 290 points):
Both exams require Examity. Contact Examity following the instructions on D2L ASPA.

Week 4 will be a mini-midterm covering study design along with reliability and validity (60 pts). There will also be a final exam in the last half of a week (230 pts). The exams will account for 290 points out of 600 points.

Students with disabilities are responsible for informing the instructor via UA policies at the beginning of the semester, then can provide the instructor with a copy of their documentation.

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

A: > 90%
B: > 80-89.99%
C: > 70-79.99%
D: > 60-69.99%
E: ≤ 60%
If you think the instructor has made an error in grading, please email the instructor in a polite manner as soon as possible (and not at the end of the course).

**Incomplete Grades not allowed:** Since this is an Online Program and the class is only taught once a year and is required for 573D, taught the session after 573B in the fall, incomplete grades are not allowed except for extreme medical emergencies.

Late Assignments will not be excepted unless revised dates are posted for the whole class.

NOTE: This class is being taught in Arizona which does not honor Daylight Saving time. Thus, for the class term we will be in Pacific Daylight Time (PDT) which is equivalent to Mountain Standard Time (MST). It is your responsibility to know what time it is in Arizona. If students meet online to discuss the class project they should use Arizona Time.

**Class Attendance/Participation:** Regular online participation is expected, with defined due date for each Practice Problem, Assignments, Discussions, Quizzes and Exams. Attempting to complete all assignments one day a week will not work for this course. Review the suggested and the required due dates for each week.

All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion. These need to be identified to the instructor in week 1 of the course. Extensions in due dates pre-approved by the UA Dean of Students (or Dean’s designee) will be honored. Therefore, they need to be brought up during the first week of class.

**Course Schedule:** shown within each week in D2L.

**Classroom Behavior:** Expected behavior is to allow for respectful exchange of ideas: these include being respectful towards your fellow student and instructor(s) when communicating in class, or via Discussion boards and email. This includes not using cell phones and other mobile devices in class.

**Communications:** You are responsible for reading emails sent to your UA account from your instructor 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: [https://www.registrar.arizona.edu/personal-information/official-student-email-policy-use-email-official-correspondence-students](https://www.registrar.arizona.edu/personal-information/official-student-email-policy-use-email-official-correspondence-students)

**University Course Policies:** [https://academicaffairs.arizona.edu/syllabus-policies](https://academicaffairs.arizona.edu/syllabus-policies) These policies include Threatening Behavior Policy, Accessibility and Accommodations, Code of Academic Integrity, and Nondiscrimination and Anti-Harassment Policy

**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 by the instructor.

**UA Smoking and Tobacco Policy:** The purpose of this Policy is to establish the University of Arizona’s (University) commitment to protect the health of University faculty, staff, students, and visitors on campuses and in its vehicles. The official policy can be found at: [http://policy.arizona.edu/ethics-and-conduct/smoking-and-tobacco-policy](http://policy.arizona.edu/ethics-and-conduct/smoking-and-tobacco-policy)

**Plagiarism:** Plagiarism can occur when a student copies text word-for-word (direct quoting should rarely be used in epidemiology) instead of paraphrasing and correctly referencing 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 or plagiarism of the final manuscript will result in automatic course failure. All these actions will be reported to the Program Director, 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 & Cheating: What counts as plagiarism or cheating?**

- Copying and pasting information from a website or another source.
- Copying and pasting information from a website 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.
- Asking someone else the answers to the assignments then using those answers.
- 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 offline sources.

The Epidemiology Program 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:

- use respect (including disagreeing respectfully) both when posting and responding to posts
- listen to discussions/posts and involve others
- resist the temptation to dominate discussion by waiting for others to contribute
- 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”
- appreciate a small amount of tension (too much “sameness” means dull discussion)
- 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 website regularly for announcements.
3. Read all recommended readings.
4. Participate in class discussion.
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
Gender Pronoun Guideline
It is already UA policy that class rosters are provided to instructors with a student’s preferred name. Students may share their preferred name and pronoun with members of the teaching staff and fellow students, as desired, and these gender identities and gender expressions will be honored in this course. As the course includes group work, it is critical to create an educational environment of inclusion and mutual respect. In this class, to be inclusive of all gender identities and expressions, students will be referred to by their first or last names, the pronoun of their choice, or by default, the pronoun “they”.

Content Warning
This course addresses topics including sexually transmitted infections (STIs) and sexual active practices (that may be related to STIs), often leading to valuable discussions on topics such as confounding and causal pathways. Course material includes content that is explicit in its depiction of number and type of sexual partners. Advance Notice: such materials will be included as topics in data assigned to some students for analyses of survey data. Please contact the instructor to discuss any content-related concerns, as alternative materials may be available.