SYLLABUS
Cancer Prevention Epidemiology - EPID/CPH 615A
Fall 2012

Time:            Wednesdays 1:00 – 3:50 p.m.
Location:        Drachman Hall A-112
Instructor:      Leslie Dennis, MS, PhD
                 Professor of Public Health
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                 Drachman Hall, A238
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Office Hours:    By Appointment via email
Teaching Assistant: None

Catalog description: An overview of the current issues and methods in cancer epidemiological studies. Issues and methods used in cancer surveillance, international studies, observational studies, and intervention trials will be covered.

Course Prerequisites:
- Epidemiology: Epidemiology 573A (Basic Principles in Epidemiology)
- Biostatistics: Epidemiology 576A (Biostatistics for Public Health)

Course Learning Objectives: At the end of the course students should be able to:
- Describe cancer as a public health problem in terms of magnitude, person time, and place.
- Explain the basic concepts in cancer epidemiology, including study design and analytical methods used in the study of exposure-cancer associations.
- Evaluate the strengths and limitations of different epidemiological study designs used in cancer studies, including those that use laboratory methods through the written assignments and oral presentations.
- Formulate an opinion for or against an exposure-cancer hypothesis by evaluating existing published literature on the topic.
Competencies Covered:
The Core MPH competencies and section competencies that will be addresses during the course include the following:

**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 how epidemiologic evidence informs public health practice and policy.

**Domain 2: Problem Identification / Planning**
Identifies steps needed to accurately assess and understand the health status of populations

**Domain 3: Information Skills**
Retrieves and organizes literature from valid sources of the evidence base
Judges, critiques, and interprets research findings

**Domain 6: Professional Conduct**
Recognizes and responds appropriately to ethical issues in the conduct of scientific research

**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

**Course Notes:** No course notes will be provided. Handouts and articles will be posted on D2L.

**Required Textbook:** None

**Recommended Textbook for student continuing in cancer etiology:**
Cancer Epidemiology and Prevention. By Schottenfeld & Fraumeni. 3rd edition. 2006

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

**Course Requirements**
Students are expected to attend each class and participate in class discussions. The smaller class size allows for a good deal of interaction. All assignments are required to be complete on or before the due date and are to be handed in during the class period. Emailed assignments are discouraged (I have had students tell me they emailed me theirs and yet I never received it). Written assignments that are turned in late will result in a lower grade; the magnitude of the grade drop will depend on how late the assignment is turned in (10% reduction per week).

**Grading/Student Evaluation:**

**Grading Scale:**
- A: 90-100
- B: 80-89.9
- C: 70-79.9
- D: <70
1. **Class Participation + Discussions = 20% (40 pts):**
   Each class period will have several readings. Students are expected to read all assigned papers and contribute significantly to discussions related to the readings and lecture.

2. **Written Assignments = 60% (120 pts):**
   Arguments/reviews are due the day of the class period for which they are listed. Each argument/review should be a maximum of three doubled spaced typed pages (not including references), using font size 12, with one inch margins. A minimum of five references in addition to those provided should be used in writing the argument/review. On an additional page, cite all references using the reference format of the Journal of the National Cancer Institute. Please make sure to follow these guidelines. Not doing so will affect your grade.

3. **Student Presentations = 20% (40 pts):**
   Students need to select one paper in the literature that relates to cancer epidemiology. A presentation in class is required that includes the following:
   - Background
   - Research question and hypotheses
   - Research design and methodology
   - Exposure and end-point assessment methodology
   - Strengths and limitations of study design and methods
   - Study findings, conclusions
   - Implications for public health recommendations and/or future studies
     - 15-20 minutes, plus about 5 minutes for questions/discussion
     - Everyone ask questions
   Although the single paper will be the basis of the presentation, students are encouraged to seek additional key papers (3-5) to strengthen their presentation (and reference them accordingly on the appropriate slides). Additionally, add some relevant rates from SEER*Stat in your presentation in context.

**Class Attendance/Participation:** Required. Prior permission from the course director should be received for any absence unless in emergency situations. Students who miss class without an instructor’s permission or who have 2 or more absences during the semester may receive a deducted score for class participation. 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.

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**Course Schedule (as of 8/22/12, check D2L for updates)**

8/22/12
Introduction to Cancer and Cancer Epidemiology

**Readings:**


Go over SEER forms to complete for data and SEER*Stat access
Read: [http://seer.cancer.gov/data/access.html](http://seer.cancer.gov/data/access.html)
Start to complete forms from here: [https://seer.cancer.gov/seertrack/data/request/](https://seer.cancer.gov/seertrack/data/request/)

**Suggested Additional Readings:**
Schottenfeld & Fraumeni, Ch 1: Cause and Cancer Epidemiology
Readings:


8/29/12
Cancer Registries: Arizona Cancer Registry
Georgia Yee, B.S.W., C.T.R.

Readings:

Overview of SEER at http://www.seer.cancer.gov/about/

Assignment 1 (5pts): Pick 2 cancers you are interested in. Write a couple of sentences about why you are interested in each cancer. Also, describe the incidence, mortality and survival rates of each cancer in the US based on the SEER data. What were you able to find out about the rates in Arizona?

9/5/12
Nutritional Epidemiology and Cancer
Elizabeth Jacobs, Ph.D.

Readings:


Assignment 2 a (5 pts): Completed the Diet History Questionnaire (DHQ) which is a food frequency questionnaire (FFQ) designed by the National Cancer Institute (NCI).

Assignment 2 b (5 pts): Think about misclassification you learned about in ‘Basic Principles of Epidemiology” 573A. Consider if you were a researcher looking at high fat consumption. Would you expect dietary intake of fat consumption quantified by the DHQ to be differentially misclassified among cancer patients and controls. Why or why not. (No references needed)

9/12/12
Overview of Types of Cancer
Leslie Dennis, MS, PhD

Readings:
Look up 3 cancers & their DETAILED GUIDE or OVERVIEW GUIDE
Also read “What Causes Cancer?”


**Suggested Additional Readings:**
Schottenfel & Fraumeni, Ch 9: International patterns of Cancer Incidence and Mortality


**Assignment 3 (20 pts):** Write a summary of cancer incidence, mortality and survival among US African Americans, Hispanics, and Native Americans compared to rates in non-Hispanic whites. Select two cancers to focus on from the following list: lung, breast, prostate, colorectal, cervical or gastric. Briefly discuss implications of your findings.

9/19/12
**Skin Cancer**

**Readings:**


**Assignment 4 (10 pts):** Arizona has high rates of skin cancer due to the climate. While we have not talked about conducting interventions, consider possible ways to reduce exposure to UV radiation. Propose a possible intervention that would not be overly cost prohibitive.

9/26/12
**Cancer Screening**

**Tentative Readings:**


**Suggested Additional Readings:**


**Assignment 5 (15 pts):** Review the controversy on mammography screening for asymptomatic women age 40-49. Suggestion: Write 100-150 words summarizing why women should or should not get screening, and 1000 words defending your opinion.

**10/3/12 Drachman Hall, 3rd floor, room A319 (the computer lab)**
SEER Stat Leslie Dennis, MS, PhD

**Readings:**
- Review the fact sheet on your assigned cancer(s) [http://seer.cancer.gov/statfacts/](http://seer.cancer.gov/statfacts/)
- http://www.cancer.org/Cancer/index


After discussion in class, run the SEER-Stat tutorial

**10/10/12**
Tobacco and Cancer Judith Gordon, Ph.D.

**Readings:**


See D2L for Tobacco Control State Highlights, 2010

**Assignment 6 (20 pts):** Based on the readings, describe what tobacco control strategies (interventions) do you feel has had, or will have, the greatest impact on reducing tobacco-related disease in Arizona and/or the US. How would you prioritize those strategies given the type of monetary and feasibility constraints we face in Arizona and the US as a whole.
10/17/12
Breast Cancer Epidemiology
Cynthia Thomson, Ph.D.

Readings:


Assignment 7 (5 pts): In assignment #1, you picked 2 cancers and looked at what the SEER reports reported for incidence, mortality and survival rates. Now, use SEER*Stat to run rates for each of those 2 cancers for a) initial 9 SEER sites, b) for New Mexico only, and c) for Native Americans. Write up what you found and one page on how these differ from what you found in assignment #1 and why.

10/24/12
Environmental Exposure and Cancer Etiology
Leslie Dennis, MS, PhD

Readings:

TBA – see D2L website updates in October

Suggested Additional Readings: Schottenfeld & Fraumeni, Ch 18: Occupation

Assignment 8 (15 pts): Using relevant supporting literature, form an argument for or against the role of EMF and childhood leukemia addressing whether EMF causes childhood leukemia.

10/31/12
Other Cancers
Leslie Dennis, MS, PhD

Readings:
TBA – see D2L website updates in October

11/7/12
Biomarkers and Cancer
Patricia Thompson, PhD

Readings:
TBA – see D2L website updates in October

Suggested Additional Readings:
Schottenfeld & Fraumeni, Ch 6: Application of Biomarkers In Cancer Epidemiology
11/14/12  
Infectious Etiology of Cancer: HPV and Cervix Cancer  
Francisco Garcia, M.D.

Readings:  
[http://jnci.oxfordjournals.org/content/87/11/796.long](http://jnci.oxfordjournals.org/content/87/11/796.long)


Infectious Etiology of Prostate Cancer: Is it real?  
Leslie Dennis, PhD


**Assignment 9 a (15 pts):** Write a position paper on whether the availability of the prophylactic HPV vaccine will increase or decrease disparities? (2 pgs maximum)

**Assignment 9 b (5 pts):** Do you think the prophylactic HPV vaccination should be used as preventative measure for prostate cancer. Defend your answer. (1 pg maximum)

11/21/12, 11/28/12, 12/5/12

Student Presentations – Dr. Dennis will randomly order the presentation, then you can trade among yourselves.

Check D2L website for updates

**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](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](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](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](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](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](http://grad.arizona.edu/academics/policies/academic-policies/grievance-policy)

**Grade Appeal Policy:** [http://catalog.arizona.edu/2012-13/policies/gradappeal.htm](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.

**Laptops and Electronic Devices (including cell phones):** Laptops 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. Laptops should not be used during the class period, unless there is a documented need for their use. For most lectures, hard copies of presentations are provided. You may use your laptops prior to the beginning of class or during the break.

**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.