

Mel and Enid Zuckerman College of Public Health

University of Arizona

**SYLLABUS**

Maternal and Child Health Epidemiology **EPI630 / CPH630**

# Fall 2018

**Class Time & Locations:** Thurs 9:30 – 12:20 am

Room A119 Drachman Hall

**Instructor:**  Sydney Pettygrove, Ph.D.

626-3704

E-mail: sydneyp@u.arizona.edu1

#### Office address: A244 Drachman Hall

#### Office Hours: By appointment – email to schedule

Preferred means of communication.

**Teaching Assistant**: none

**Catalog Description:**

**EPI 630** (Fall) **– Maternal and Child Health Epidemiology** (3 units)   
This course will cover methodological issues in epidemiologic research on reproduction, childhood conditions, and women's health including topical information specific to conditions in each of these areas. The course will also cover National MCH databases and Surveillance Systems. The class will include classroom lectures, discussions and student presentations.

**Equivalent To/Also Offered As:** EPID 630

**Course Requisites:** EPID 573A, enrolled in the MPH, MS EPI or PhD EPI programs or consent of instructor



**May be repeated:**  No

**Usually offered:**  Fall

**Course Learning Objectives:**

This course will introduce students to methodological issues in epidemiologic research on reproduction, childhood conditions, and women's health and cover information specific to conditions in each of these areas. The class will include classroom lectures, discussion, and student presentations.

Specific objectives are for the student to be able to:

1. Discuss methodological considerations for the conduct of epidemiologic research in areas of Maternal & Child Health
2. Have a general knowledge of the descriptive epidemiology of issues affecting women and children
3. Constructively evaluate research and scientific reports from the literature
4. Formulate a research question, analyze a dataset, and present analytic results in a table.

**MPH/SECTION Competencies** that will be addressed, employed, and encouraged through MCH Epidemiology (EPID 630):

MPH Epidemiology – In-Person Program Competencies

1. Search, describe and summarize findings from the scientific literature to describe the

epidemiology of a public health problem, identify health disparities and identify risk factors.

1. Compare the relative strengths and weaknesses of epidemiological study designs,
2. Identify the most appropriate design for specific research questions.
3. Calculate appropriate measures of disease frequency and excess risk.
4. Recognize and describe potential biases, confounding, and effect modification that can

affect epidemiological studies and analyses.

1. Interpret epidemiological analyses in the context of published literature and

communicate key findings to various audiences.

MS Epidemiology Competencies that will be addressed, employed, and encouraged through MCH Epidemiology (EPID 630):

* Select appropriate study design for assessing the association between a given exposure and an outcome, and then understanding advantages and limitations of these approaches.
* Critique and synthesize appropriate literature and research findings to address an

research question.

* Identify potential sources of bias for various study designs and their effect on study quality.
* Conduct descriptive and analytic analyses, including strategies to assess confounding and effect modification methods, to make statistical inferences.

PhD Epidemiology – Competencies that will be addressed, employed, and encouraged through MCH Epidemiology (EPID 630):

* Design appropriate studies using causal inference principles for testing hypotheses in specific populations, after evaluating specific design advantages and limitations.
* Evaluate the integrity, comparability, and limitations of data to make inferences related to analyses and results.
* Lead group interactions competently, ethically, respectfully and professionally to diverse audiences.
* Understand basic principles of educating professionals and the public on the fundamentals of epidemiological concepts.

These competencies for MCH leaders will be addressed, employed, and encouraged through MCH Epidemiology (EPID 630):

MCH leaders will:

* Demonstrate a working knowledge of the underlying principles of public health, population data collection, and analysis as well as the strengths, limitations, and utility of such data.
* Identify and address ethical issues in human subjects research
* Demonstrate a working knowledge of: Basic statistics, epidemiology, and quantitative research.
* Use population data to assist in determining the needs of a population for the purposes of designing programs, formulating policy, and conducting research or training.
* Formulate a focused and important research question.
* Demonstrate the ability to critically analyze research.
* Share thoughts, ideas, and feelings effectively and with cultural and linguistic proficiency in discussions, meetings, and presentations with individuals and diverse groups.
* Write clearly, effectively, and with cultural and linguistic proficiency to express information about issues and services that affect MCH population groups.
* Listen attentively and actively.
* Tailor information for the intended audience(s), purpose, and context by using appropriate communication messaging.
* Demonstrate the ability to communicate clearly through effective presentations and written scholarship about MCH populations, issues, and/or services.

**Course Notes**: No course notes will be provided, however course information, syllabus, schedule, and readings will be available online via D2L.

**Recommended Texts/Readings**: The course readings will be drawn from the literature on each topic and will be available on D2L. Readings will also be available to purchase from Copy Technology Services Arizona Health Sciences Center Room #3141 formatted as a printed reader (double sided, 3-hole punched) or as a digital version to read on a device. Readings are free to download from D2L. The cost of the digital version from the copy center is less that the printed version, and most expensive is printing by the student.

**Course Requirements:** The course will be organized as a combination of lecture and seminar sessions. Class participation is required. In general, class will begin with an overview of the week’s topic presented by course instructor with student input. The second part of each class will be dedicated to in-depth discussion of the week’s readings. Class will conclude with a discussion of how the specific details of the health condition determine the epidemiologic approach to studying the condition. Students will be required to lead the class discussion at least twice during the term. Each student will be expected to have thoroughly read the material assigned each week and to participate in the weekly discussions.

Students’ activities:

Preliminaries

* Take the Syllabus Quiz. Students may retake this quiz as often as necessary to score 100% but may not submit any assignments until a perfect score has been achieved.
* Complete an online instructional module on recognizing plagiarism. All written work will be submitted through D2L Assignment folders with TurnItIn.com plagiarism checking enabled – TurnItIn results are available to students.
* Complete Human Subjects Training through the Collaborative Institutional Training Initiative (CITI).
* Sign a Data Confidentiality Agreement.

Detective Work

* Locate specific information on health topics covered in the course and present during the discussion of those topics (2 times during the semester).

Class Participation

* In each week that a health outcome is discussed, class will begin with a clicker quiz on the course readings.
* Students will present information on a specific aspect of one of the health conditions discussed in class as assigned.
* Students will lead the discussion of an epi paper once during the term.

Data Analysis Project

* Formulate a research question to be addressed through analysis of birth certificate data (provided by the instructor), determine which variables are needed for the analysis, conduct the analysis, and produce a table of the results.

Directed Writings

* Students will form pairs, agree on a topic in Maternal & Child Health on which to focus for the semester, and write a series of essays on this topic covering:
  + Health condition – biology, pathology (each member of the pair writes and **submits separately and independently**)
  + Magnitude – prevalence and incidence (**Student A**)
  + Spatial OR Temporal Aspects – changes in magnitude through time or across space that give clues about causes of the health condition (**Student B**)
  + Exposures / Risk Factors – this is a table summarizing the literature on environmental exposures and host characteristics that influence the health condition (Students A&B **collaborate to submit 1 table**)
  + Methodological Issues – the implications of the specific characteristics of the health condition and populations that affect epidemiological work on the topic (each member of the pair writes and **submits separately and independently**)
* Respond to instructor comments on each essay then assemble these sections into a final review of the epidemiology of the chosen health condition (~10 pages, maximum of 2800 words)
* Each pair of students will work together to make a voicethread presentation to teach the class about their health condition at the end of the semester.
* Student voicethread presentations will be the source of questions for the final exam.

**Grading/Student Evaluation**:

Assignment grades will be weighted as follows:

|  |  |  |
| --- | --- | --- |
| **18%** | **Contributing in Class** | |
|  | Points | Assignment |
|  | 30 | Class Participation – measured through quizzes on the readings |
|  | 50 | Facilitate Discussion |
|  | 50 | Detective Work – bringing in specific information |
|  | 50 | Final Presentation - VoiceThread |
| **20%** | **Data Analysis (Students will work independently)** | |
|  | 20 | Univariable/Descriptive Analysis |
|  | 30 | Exposure – Outcome Relationship |
|  | 50 | Potential Confounder Relationship to Exposure and to Outcome |
|  | 50 | Stratified Analysis |
|  | 20 | Results Table |
|  | 30 | Abstract |
| **60%** | **Writing on your Chosen Topic (Students will work in pairs)** | |
|  | 100 | Health condition (Each Student works/submits independently) |
|  | 100 | Magnitude (Student A) / Spatial OR Temporal (Student B) |
|  | 100 | Exposures / Risk Factors (Students A & B collaborate to submit 1) |
|  | 200 | Methodological (Each Student works/submits independently) |
|  | 100 | Final Submission (Each Student works/submits independently) |
| **2%** | **20** | **Final Exam** |
|  | 1,000 | TOTAL POINTS POSSIBLE |

Points will correspond with letter grades:

A 900-1,000

B 800-899

C 700-799

D 600-699

E 500-599

There will be NO ROUNDING (899.9 is a “B”)

Note: **All** student submissions **must include the student’s name**. Post assignments to the Assignment folder in D2L. The **name of the file must start with the student’s last name** and then have an indication of the assignment (e.g. *Pettygrove Health condition.docx*) **AND** the **document within the file** must also include the student’s name – scores will be docked 10% of the value of the assignment for variance from these guidelines.

**Late Assignments:** Assignments submitted after the time they are due will be docked 10% **for each day/partial day they are late**. The late policy will apply under all circumstances unless specifically waived by the instructor ***in writing***.

**Extra Credit:** No extra credit will be available for this course.

**Class Attendance/Participation**:

Students are reminded that they cannot participate in a discussion if they are not present and will be graded accordingly. However, students who are ill with an infectious disease should not come to class. Each student will be expected to contribute to the in-class discussions. All holidays or special events observed by organized religions will be honored for those students affiliated with that particular religion. Holidays or special events observed by disorganized religions will be honored with preapproval case by case. Absences pre-approved by the UA Dean of Students (or Dean’s designee will be honored.)

**Telephone and Computer Use:** Please turn your cell phones to silent or vibrate in order to not disrupt the class and I will try to remember to do this as well. Permission to use your computer during class may be rescinded if the instructor determines that it is problematic.

**Course Schedule**: Attached.

**Required Statements:**

[URLs are provided here as a courtesy, they are subject to CHANGE]

**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/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**:

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 Settingfound 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\_2**0**12.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.

**Plagiarism:**  What counts as plagiarism?

* Any 10 consecutive words in your paper that match 10 consecutive words anywhere on the internet will be considered plagiarism – with the exception of citation information included as references for your paper. **Consequences of plagiarism: the first offence will be the last offence: students who violate the 10 word rule will immediately receive an E in the course.**
* 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. Students are required to write their papers ENTIRELY in THEIR OWN WORDS.
* 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.