Course Description: This course explores the critical evaluation of public health research, exposing students to research across multiple disciplines of public health including epidemiology, biostatistics, behavioral science, environmental health and health policy. Students will learn to evaluate the strengths and weaknesses in study designs, including critically evaluating methods of data collection, statistical analysis, and data interpretation. Students will also gain experience summarizing public health research for presentation, helping to develop skills used in presenting research to both professional and lay audiences. The course will also foster discussion of research in the group setting.

Course Pre- and Co-requisites: Students must be enrolled in a graduate program at the School of Public Health, University of Maryland College Park, in the department of Epidemiology and Biostatistics. Graduate students from other departments must request departmental permission in order to register for this course.

Course Learning Objectives:
Upon completing this course, the student will be able to:

1. Critically review and evaluate research related to epidemiology, biostatistics, behavioral science, environmental health, and health policy.
2. Evaluate strengths and limitations of epidemiologic reports (Program Competency #1).
3. Draw appropriate inferences from epidemiologic data.
4. Discuss the contributions of epidemiology to public health.
5. Derive satisfaction in their ability to interpret basic epidemiologic measures in the literature.
6. Develop an interest in communicating epidemiologic information to lay and professional audiences (Program Competency #2).
7. Critically review and summarize statistical analyses presented in public health literature (Program Competency #3).
8. Draw appropriate inferences based on statistical analyses used in public health research (Program Competency #4).

Program Competencies Addressed in this Course:
The following competencies for the MPH and PhD in Epidemiology are addressed in this course:

1. Evaluate strengths and limitations of epidemiologic reports.
2. Communicate epidemiologic information to lay and professional audiences.
3. Critically review and summarize statistical analyses presented in public health literature.
4. Draw appropriate inferences based on statistical analyses used in public health research.
Course Requirements and Expectations: Students will be required to critique and discuss original research studies in multiple disciplines of public health. Each student will present a critical evaluation of their selected articles to the class, leading discussions of the key methodological issues. Additionally, students are expected to actively contribute in the discussion of research articles presented by other students.

Course Policies:
Email – The Official University Correspondence:
Verify your email address by going to www.my.umd.edu. For technical support for University email: www.helpdesk.umd.edu or call 301-405-1400.

Grading Procedures:
Active Class Participation and discussions 40%
Presentation and discussion of article critique 60%

General format of article critiques: Students will critically evaluate a research study selected from the peer-reviewed public health literature. The evaluation should include the study objectives, independent and dependent variables, study design, target population, appropriateness of study design for the research objectives, appropriateness of statistical analysis, interpretation of results, and methodological strengths and limitations including potential sources of bias and confounding. Additionally, students should consider and discuss alternative approaches to addressing the stated research objectives. A key element to these assignments is the critical evaluation of the research articles versus a summary of the information already presented by the authors.

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<th>Session</th>
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<td>8/31</td>
<td>Course Overview Reporting: Review of Strobe Guidelines</td>
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<td># 2</td>
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<td>Article on poverty, food insecurity and the behavior for childhood disorder</td>
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<td>The NEJM article on Prevention of HIV-1 infection with early antiretroviral therapy.</td>
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<td># 4</td>
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<td>The NEJM article on DNA testing for colorectal cancer screening</td>
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<td>Cumulative blood pressure in early adulthood and cardiac dysfunction in middle age</td>
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<td># 7</td>
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Additional Literature, Websites and Other Resources: The University of Maryland Libraries has many resources for additional public health research of interest. Examples of scientific journals available at the library that publish epidemiologic findings include the: American Journal of Public Health, Annals of Epidemiology, American Journal of Epidemiology, Journal of American Medical Association, etc.

All University of Maryland-approved course policies are provided at the following website:
http://www.ugst.umd.edu/courserelatedpolicies.html

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MLT LEE
Policy descriptions, resources, and links to official policy documents are provided for:

**Academic Integrity**: What is cheating? What is plagiarism? What is the Honor Pledge?

**Code of Student Conduct**: What behavior is prohibited?

**Sexual Misconduct**: What to do in case of sexual harassment or sexual assault.

**Discrimination**: Procedures to prohibit discrimination, complaints about discrimination, harassment, and retaliation.

**Accessibility**: Information about disability support services (DSS) and accommodations.

**Attendance, Absences, or Missed Assignments**: The student must notify the instructor in a timely manner (typically first week of class). Read this prior to Schedule Adjustment date.

**Student Rights Regarding Undergraduate Courses**: What should I find in the course syllabus? Am I allowed to see my exams after they are graded?

**Official UMD Communication**: Use of email, communication with faculty, communication about cancelled class meetings, and weather-related or other urgent notifications.

**Religious Observances**:
The University System of Maryland policy provides that students should not be penalized because of observances of their religious beliefs; students shall be given an opportunity, whenever feasible, to make up within a reasonable time any academic assignment that is missed due to individual participation in religious observances. It is the student’s responsibility to inform the instructor in advance of any intended absences for religious observance.

**Inclement Weather / University Closings**:
In the event that the University is closed for an emergency or extended period of time, the instructor will communicate to students regarding schedule adjustments, including rescheduling of examinations and assignments due to inclement weather and campus emergencies. Official closures and delays are announced on the campus website (http://www.umd.edu) and snow phone line (301-405-SNOW), as well as local radio and TV stations.