

Michigan State University
A Multi-Disciplinary Approach to Problems in Global Public Health and Epidemiology
EPI 200, Fall 2020

CLASS MEETING TIME AND LOCATION

Days: Tuesday and Thursday

Time: 6:00 – 7:20 PM

Location: Online – Zoom Web Conference

Zoom Web Conference Information

To join from PC, Mac, iOS or Android: <https://msu.zoom.us/j/2529822372>

To join by phone: 1-408-638-0968, Meeting ID: 252 982 2372

FACULTY

Elizabeth (Betsy) Wasilevich, PhD, MPH

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Office hours: By appointment

TEACHING ASSISTANT

Villisha Gregoire

Office: TBD

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PRE-REQUISITES

Acceptance into the Undergraduate Minor in Global Public Health and Epidemiology.

COURSE DESCRIPTION

This 3-credit course will give students an overview of the global burden of disease, and the many disciplines that help do identify public health problems and potential interventions.

COURSE OBJECTIVES

At the end of the course, students should be familiar with the following:

1. Definitions of public health and epidemiology, and the relation between these two
2. Terminology used to describe a public health problem with respect to what, who, where, and when.
3. Assessments of the quality of information being used to describe a public health problem
4. Study designs used to examine relations between exposures and disease, and the strengths and limitations of the various study designs.
5. Common tools used to describe associations between exposures and diseases.
6. Disease screening and prevention at the population-level.
7. The logical progression from describing a public health problem, identifying unknown and problematic elements, and working towards solutions.
8. The multiple disciplines involved in describing, studying and intervening in public health problems.
9. How science, culture, economics, and politics come together to influence public health problems and solutions.
10. Tools for critical thinking to analyze public health problems and solutions.
11. Methods for gathering information on public health problems and evaluating the credibility of the sources and the quality of the information.

REQUIRED TEXT

- Bonita R, Beaglehole R, Kjellstrom T. Basic Epidemiology, 2nd Ed., World Health Organization, (2006); ISBN 9241547073, 9789241547079
 - Available for free online at: http://apps.who.int/iris/bitstream/10665/43541/1/9241547073_eng.pdf
- Additional assigned readings will be available electronically on D2L, either as PDFs or links.

IMPORTANT NOTE

The instructor may make changes to the syllabus, course schedule, readings, assignments and due dates, as necessary and with notice, within Faculty/University regulations.

OFFICE HOURS/APPOINTMENTS

Meetings with the course instructor or the TA are encouraged for students wishing to discuss course content, grading or other issues that have not been clarified via lecture or discussions. Please arrange meetings with the TA or instructor during office hours. If you cannot meet during regularly scheduled office hours, please email the TA or instructor to make an appointment. If the TA feels he/she can't answer your questions you will be asked to make an appointment with the instructor.

EMAIL POLICY

We receive high volumes of email; to ensure your email is answered, please *begin the subject line with: EPI 200* and we will respond within 2 days, except on weekends. Begin by emailing the TA, and if indicated, the TA will contact the instructor.

COURSE READINGS

Each lecture will require background readings of articles or text available on D2L. Students are responsible for reading each of the assigned readings prior to each class.

COURSE REQUIREMENTS

You will be required to do the following in this course:

1. Attend class during online synchronous sessions and participate in class discussions and other in-class activities.
2. Complete all homework assignments.
3. Read ALL of the assigned materials before coming to class – and have assigned readings and assigned homework available during class sessions online.
4. Scheduled, time-limited online quizzes.
5. Final paper

Course Grading

	Weight
1. Class Attendance and Class Participation	15%
Attendance will be taken at the beginning of each online class session. Students are expected to attend every class on time and participate to receive the full 15% for this portion of the grade. All absences will be discounted equally except for holy days (see "Late Assignments and Missed Quizzes"). Other exceptions may be granted in the highly unusual event of an illness or other unforeseen circumstances that requires a student to miss a class; if this happens, email the TA as soon as you can. Class participation will be assessed based on the level and quality of participation in class in class discussions/activities. Participation scores will be decreased for students who are not participating in discussions, are talking about non-course topics during in-class group activities, or are disrespectful of the classroom environment. <i>Please limit distractions during online class sessions, such as turning off your cell phone, close non-class related windows on your computer, and try to find a quiet location without other people around.</i>	

2. Homework Assignments (10)	20%
There are 10 homework assignments due typically on Thursdays throughout the semester. Your homework grade will be based on 9 of the 10 assignments; the homework assignment with the lowest score will be dropped.	
3. Scheduled, time-limited online quizzes (3)	40%
4. Research Paper	25%
Total	100%

Late Assignments and Missed Quizzes

Homework assignments are due before the start of the online class session. Late assignments will be worth a maximum of 50% of the total points for the assignment. If you are ill or have some extenuating circumstance and cannot make it to the class session when an assignment is due, email the TA before the start of class to avoid late penalties.

Attendance for the entire class time, Tuesday and Thursday, is expected. Students who need an alternate due date for an assignment or who must miss a class or quiz in order to observe a holy day for their religion must send the TA an email request for accommodation by the end of the first week of classes. Students will need written evidence of illness signed by a health professional if they miss a quiz. If a student misses a lecture or discussion due to an illness or emergency, the students must notify the TA via email that day. In addition, the student will need to write a one page summary of the readings for that day and turn it in to the TA by the following week. Students are **responsible for obtaining all materials, class notes, etc. from your classmates for any days that are missed.**

Academic Honesty Policy

Academic honesty is essential for maintaining a high standard of academic excellence and integrity. There are many different forms of academic dishonesty. These include plagiarism, such as inadequately recognizing the source of short phrases or ideas or an author in written work submitted for a grade, cheating on quizzes (e.g. during the quiz, looking at someone else's quiz or using electronic communication), submitting another's work as one's own, among others.

Please note: The Department of Epidemiology adheres to the policies on academic honesty as specified in General Student Regulation 1.0, Protection of Scholarship and Grades, and in the University Policy on Integrity of Scholarship and Grades, which are included in the Spartan Life: 1998 Student and handbook and Resource Guide, and on the MSU Web site. ALL acts of intellectual dishonesty are subject to disciplinary action by the University.

Students with Special Needs

MSU recognizes and affirms the rights of students with disabilities who are academically qualified to have full, fair, and equal access to all University services, programs and facilities and to be welcomed as participating members of the University community. Students seeking academic accommodation for a disability should contact the MSU Resources Center for Students with Disabilities. Any student with a disability who would like to discuss any assistance or accommodation that he/she may require should contact the instructor early in the course.

How to Seek Course Assistance

If you have any questions regarding the course materials, grading, or anything else related to this course, please don't hesitate to contact the instructor or the TA. If you have general questions, the syllabus or materials on the D2L website may resolve many of them; however, if you have individual issues feel free to email the TA. If you can't find one of the readings or if you're not sure that you have downloaded the right one, please email the TA immediately and post the problem to other students through D2L Discussion Board. If you have an urgent issue or if you do not receive a response via email within 2 business days, please feel free to email the TA again (it is possible that your email may have been misplaced given the volume of incoming emails), or call the TA on the telephone.

COURSE SCHEDULE (The schedule is tentative and subject to change. This is especially true for the invited guest speakers which may change several times throughout the semester; speakers, topics, and date may change on short notice.)

WEEK	DATE	Topics and Readings
Week 1	Thursday, 9/3	Course Introduction
Week 2	Tuesday, 9/8	Intro to Epidemiology and Descriptive Epidemiology <i>Required readings:</i> <ul style="list-style-type: none"> • <u>Global Health 101</u>, Chapters 1 & 2 • <u>Basic Epidemiology</u>, Chapters 1 & 2
	Thursday, 9/10	Public Health in Your Own Backyard: Selecting a Research Question **Homework Due: Descriptive Epidemiology
Week 3	Tuesday, 9/15	Perspectives on Local Public Health <i>Speaker:</i> Linda Vail, MPA Ingham County Health Department
	Thursday, 9/17	Analytic Epidemiology and Study Design <i>Required readings:</i> <ul style="list-style-type: none"> • <u>Basic Epidemiology</u>, Chapter 2 (pg. 34-35) and Chapter 3 (pg. 39-51) • Principles of Epidemiology, (p3-39 - 3-43) https://www.cdc.gov/ophss/csels/dsepd/ss1978/ss1978.pdf
Week 4	Tuesday, 9/22	Data Collection, Information Quality, and Public Health <i>Required readings:</i> <ul style="list-style-type: none"> • <u>Basic Epidemiology</u>, Chapter 3 (pg. 52-59) • Edward Fottrell, Peter Byass (2010). Verbal Autopsy: Methods in transition.
	Thursday, 9/24	Data Collection using Surveys **Homework Due: Analytic Epidemiology
Week 5	Tuesday, 9/29	Screening and Diagnosis <i>Required reading:</i> <ul style="list-style-type: none"> • <u>Epidemiology Foundations</u>, FOS. Chapter 10 Screening for Disease.
	Thursday, 10/1	Screening and Prevention Strategies <i>Required readings:</i> <ul style="list-style-type: none"> • Rose R. (1985). Sick individuals and sick populations. • Sauvaget et al. (2010). Prognosis criteria of causal systolic and diastolic blood pressure values in a prospective study in India. ** Homework Due: Screening

Week 6	Tuesday, 10/6	<p>Reading and Reporting Epidemiology</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> • Blettner M (2001) Critical Reading of Epidemiological Papers <p>** QUIZ 1</p>
	Thursday, 10/8	<p>Community-based Approaches to Address Chronic Disease Risk in Vulnerable Communities</p> <p>Speaker: TBD</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> • TBD <p>** Homework Due: Data Quality and Reporting Epidemiology</p>
Week 7	Tuesday, 10/13	<p>Policy and Health</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> • <u>Basic Epidemiology</u>, Chapter 10 • Taber et al. (2012). Weight status among adolescents in states that govern competitive food nutrition content.
	Thursday, 10/15	<p>Policy and Health</p> <p><i>Required reading:</i></p> <ul style="list-style-type: none"> • Carlo et al. (2010). Newborn care training of midwives and neonatal and perinatal mortality rates in a developing country <p>** Homework Due: Public Health Policy</p>
Week 8	Tuesday, 10/20	<p>Health Disparities: Approaches to Race and Class</p> <p><i>Speaker:</i> Linda Hunt, PhD Department of Anthropology (MSU)</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> • Fine M, Ibrahim S, and Thomas S. (2005). The Role of Race and Genetics in Health Disparities Research • Hunt L, Truesdell N, and Kreiner M. (2013). Genes, Race, and Culture in Clinical Care
	Thursday, 10/22	<p>Social Epidemiology and Health Disparities</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> • Krieger N (2001). A Glossary for Social Epidemiology • Carter-Porkas O and Baquet C. (2002) What is a Health Disparity? <p>**Homework Due: Health Disparities</p>

Week 9	Tuesday, 10/27	<p>Public Health Ethics Speaker: Ian Horste MI Department of Health and Human Services, IRB</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> • TBD
	Thursday, 10/29	<p>Public Health Intervention – <i>Should we intervene?</i></p> <ul style="list-style-type: none"> • Kass NE (2001). An ethics framework for public health. <p>** QUIZ 2</p>
Week 10	Tuesday, 11/3	<p>Global Burden of Disease <i>Required readings:</i></p> <ul style="list-style-type: none"> • Dominguez et al. (2006). Aging, lifestyle, and cardiovascular disease in developing countries. • Hueveline et al. (2002). The uneven tides of the health transition.
	Thursday, 11/5	<p>Global Burden of Disease <i>Required reading:</i></p> <ul style="list-style-type: none"> • Stevens et al. (2008). Characterizing the epidemiological transition in Mexico. <p>** Homework Due: Global Burden of Disease</p>
Week 11	Tuesday, 11/10	<p>Tuberculosis and HIV/AIDS Co-infection: Epidemiology and Public Health Challenges. <i>Speaker:</i> John Kaneene, DVM, MPH, PhD University Distinguished Professor of Epidemiology and Director, Center for Comparative Epidemiology (MSU)</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> • Dye & Williams (2010). The population dynamics and control of tuberculosis. • Corbett et al. (2006). Tuberculosis in sub-Saharan Africa: opportunities, challenges, and change in the era of antiretroviral treatment.
	Thursday, 11/12	<p>Making a Plan for Analysis and Using Data</p> <p>** Homework Due: Descriptive Epidemiology - Research Paper Topic</p>
Week 12	Tuesday, 11/17	<p>Occupational Health <i>Speaker:</i> Melissa Millerick-May, PhD Division of Occupational & Environmental Medicine</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> • <u>Basic Epidemiology</u>, Chapter 5

		<ul style="list-style-type: none"> Bradford-Hill (1965). The environment and disease: Association or causation? Jamrozik et al. (2011). Asbestos-related disease Olsen et al. (2011). Increasing incidence of malignant mesothelioma after exposure to asbestos during home maintenance and renovation.
	Thursday, 11/19	Causal Inference and Environmental Epidemiology <i>Speaker:</i> TBD <i>Required readings:</i> <ul style="list-style-type: none"> TBD
Week 13	Tuesday, 11/24	Vaccination Programs (Case Study: Autism Spectrum Disorders) <i>Speaker:</i> Nicole Talge, PhD <i>Required readings:</i> <ul style="list-style-type: none"> Rutter (2005). Incidence of autism spectrum disorders: Changes over time and their meaning.
	Thursday, 11/26	No Class – Thanksgiving
Week 14	Tuesday, 12/1	Malaria <i>Speaker:</i> Terrie Taylor, DO, MPH School of Osteopathic Medicine (MSU) <i>Required reading:</i> <ul style="list-style-type: none"> Taylor et al. (2004). Differentiating the pathologies of cerebral malaria by postmortem parasite counts.
	Thursday, 12/3	Public Health Prevention and Evidence-Based Public Health **Homework Due: Malaria Prevention
Week 15	Tuesday, 12/8	“Small Fixes” <i>Required readings:</i> <ul style="list-style-type: none"> Colwell et al. (2003). Reduction of cholera in Bangladeshi villages by simple filtration. Decroo et al. (2011). Distribution of anti-retroviral treatment through self-forming groups of patients in Tete Province, Mozambique. **QUIZ 3
	Thursday, 12/10	“Small Fixes” to Address Campus Public Health Issues

		**Homework Due: Interview
		<i>There is no final exam</i> <i>Final Paper Due December 11 by 5:00 PM</i> <i>Extra Credit Due December 11 by 5:00 PM</i>