

Course Director

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Co-Instructors

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Course Description

The first of two required seminar courses for all Ph.D. students in the School of Public Health, this class is intended to provide a context in which public health science, research, and practice are conducted and applied. The course focuses on several broad areas: (1) the key conceptual models of causality in public health research that form the scientific basis for designing and interpreting studies on health in human populations; (2) the foundation of evidence-based public health and how such evidence is collected and used (or not used) for decision making and public health action, including community assessment and program evaluation; (3) the interdisciplinary nature of public health research and practice; and (4) principles and models of public health ethics that are necessary and desirable for fair and effective application within the disciplines of public health science.

Course Prerequisites

1. Enrollment as a PHD student in the School of Public Health
2. A basic understanding of epidemiologic concepts and methods

Teaching and Learning Methods Used

Facilitated teaching/learning methods include interactive lecture; case-base explorations; and in class discussions and exercises. Students will have weekly writing assignments outside of class to demonstrate synthesis and critical thinking of the readings and in-class concepts. Additionally, each student will be required to conduct a critical appraisal of a topic in public health (a research study, or a program or policy intervention) that will include a formal teaching presentation to the class.

Course Learning Objectives

1. Develop a personal conceptual foundation or philosophy of scientific inquiry in public health
2. Learn and apply two key models of causal reasoning to public health science: the counterfactual (potential outcomes) perspective and Rothman's Sufficient-Component Cause Model of multifactorial causation
3. Understand and integrate foundational components of evidence-based public health including community assessment, program or policy evaluation, and public health interventions
4. Analyze and critique ethical principles applied to public health research and practice, including the concept of equipoise and self-appraisal.

Relevant Competencies across the Doctoral Programs in Epidemiology, Social & Behavioral Sciences, or Health Systems and Policy

1. Identify, present, and discuss major public health problems and controversies

2. Demonstrate an appreciation of the history, philosophy, and professional and ethical standards of public health science

Required Text (available at the University of Memphis Book Store)

Brownson RC, Baker EA, Leet T, Gillespie KN, True WR. *Evidence-Based Public Health*, 2nd edition.

Recommended Text (will be used in the second semester of the doctoral seminar series)

Macrina FL. *Scientific Integrity*, 4th edition.

Readings and Required Assignments

1. Articles, or methods for acquiring required readings, will be provided for each topic session
2. Critical thinking briefs, to be discussed in detail during the first class, should be no longer than one page single spaced. They should incorporate your thoughts and personal insights related to the lectures and reading assignments. They are due by Saturday at 5:00 PM prior to the next lecture date
3. The case study assignment will entail a critical review of a controversial public health issue and a teaching presentation to the class. The teaching presentation, including assigning required readings and leading the class discussion, should be approximately 1 hour in length.

Course Evaluation, Grading Criteria and Expectations

(A) Point distribution

Grading is based on class readiness (coming to class prepared and having completed each assigned reading), participation and discussions in each seminar, timely completion of each written assignment (critical thinking briefs), and one case-based critical analysis and teaching presentation to the class. Only the 10 best critical thinking briefs (of the 12 submitted) will be included in your grade.

The final course grade will be computed as follows:

Attendance and active participation	20%
Weekly readings and written assignments	60%
Case study teaching presentation	20%
TOTAL:	100%

Class attendance & participation: As a community of scholars, it is expected that the instructor and students will work together at all times to create an atmosphere that fosters shared discovery and mutual respect. The instructors will be prepared for each class meeting, and, likewise, students are expected to arrive prepared to participate, ask questions, discuss, and learn. Attendance and active participation are essential to the success of a graduate seminar such as this. As such, students are expected to be present for all classes, arrive on time, stay for the entire class session, and participate actively. Because serious illness or competing demands may occasionally interfere with class attendance, a student may miss one class without penalty if absolutely necessary. The penalty for a second missed class is 10% of the total course grade. The penalty for a third missed class is an additional 10% of the course grade. A third missed class will make it impossible to achieve a satisfactory course grade, and is therefore grounds for dismissal from the course.

In the event of an unavoidable absence, please notify the instructor beforehand, if at all possible. Several behaviors are disruptive and disrespectful to the instructor and other students and are not acceptable. These include tardiness, leaving early, use of electronic devices, and engaging in side conversations while others are talking. If arriving late or leaving early is unavoidable, notify the instructor in advance, if possible. Set your cell phone to silent if you must be available for an emergency. Students who engage in any of these disruptive behaviors may be asked to leave and not allowed to return until a meeting with the instructor has occurred during which a plan to avoid future problems has been worked out.

(B) Grading Scale

The letter grades are assigned using the following grading scale:

Percentage Grade	Letter Grade	GPA	Percentage Grade	Letter Grade	GPA
≥97%	A+	4.00	77-79%	C+	2.33
93-96%	A	4.00	73-76%	C	2.00
90-92%	A-	3.84	70-72%	C-	1.67
87-89%	B+	3.33	67-69%	D+	1.33
83-86%	B	3.00	60-66%	D	1.00
80-82%	B-	2.67	<60%	F	0.00

(C) Academic Conduct

All written work submitted must be the student's original work and conform to the guidelines of the *American Medical Association (AMA)* or *American Psychological Association (APA)* which are available online and via their publications. This means that any substantive ideas, phrases, sentences, and/or graphic images, from other people's published or unpublished work, must be properly referenced to avoid even the appearance of plagiarism. Plagiarism includes, but is not limited to, the use, by paraphrase or direct quotation, of the published or unpublished work of another person without full or clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency in the selling of term papers or other academic materials. It is the student's responsibility to know all relevant university policies concerning plagiarism. Plagiarism is a serious violation of the professional standards of public health. Any documented case of plagiarism in this course will result in dismissal from the course with a failing grade, and may result in other more serious sanctions by the School of Public Health and The University of Memphis.

(D) Americans with Disabilities Act

The University of Memphis does not discriminate on the basis of disability in the recruitment and admission of students, the recruitment and employment of faculty and staff, and the operation of any of its programs and activities, as specified by federal laws and regulations. The student has the responsibility of informing the course instructor (at the beginning of the course) of any disabling condition, which will require modification to avoid discrimination. Student responsibility primarily rests with informing faculty at the beginning of the semester and in providing authorized documentation from the Student Disability Services (SDS) Office. Professors are responsible for providing accommodations from the time they receive notice of the disability via memo from SDS.

(E) Promoting a Positive Learning Environment

The School of Public Health recognizes its responsibility to promote a safe and diversity-sensitive learning environment that respects the rights, dignity, and well-being of students, faculty, and staff. Diversity means the fair representation of all groups of individuals, the inclusion of contrasting perspectives and voices, together with the appreciation and valuing of different cultural group practices. Moreover, we aspire to foster a climate of mutual respect and empathy, among and between students, faculty, and staff, by nurturing an atmosphere that is free from discrimination, harassment, exploitation, or intimidation. Departmental courses will strive to provide an opportunity for all students to openly discuss issues of diversity including, but not limited to, age, disability, ethnicity, gender, race, religious beliefs, and sexual orientation.

(F) Awarding an Incomplete Grade

A grade of "I" (Incomplete) may be assigned by the Instructor of any course in which the student is unable to complete the work due to EXTRAORDINARY events beyond the individual's control. The "I" may not be used to extend the term for students who complete the course with an unsatisfactory grade. Unless the student completes the requirements for removal of the "I" within 90 days (for graduate courses) from the end of the

semester or Summer term in which it was received, the “I” will be changed to an “F,” regardless of whether or not the student is enrolled.

(G) Inclement Weather Policy

In the event that inclement weather requires the cancellation of classes at the University of Memphis, local radio and television media will be notified. Additionally, the University of Memphis has established an inclement weather hotline 901-678-0888.

Schedule of Topics and Assignments

Week	Date	Topic	Facilitator	Required readings
1	1/26	Introduction and review of course syllabus <ul style="list-style-type: none"> • Critical thinking writing assignments and developing a personal philosophy • Choosing student case study topics and scheduling presentations Causation 1 – The counterfactual (potential outcomes) model	Gurney/Ward/Bartelli Gurney	
2	2/2	Equipoise and self-appraisal in public health research	Ward	References 9,10,16, 23(chapter 2)
3	2/9	Causation 2 – Paradigms, multicausality, and Rothman’s sufficient-component cause model EBPH: Assessing evidence; Bradford Hill criteria for judging causality	Gurney Gurney	Brownson Ch. 1 & 2 References 11,22(chapter 3)
4	2/16	University closed (inclement weather): No class session held		
5	2/23	EBPH: Community assessment 1 Case study 1: The American drug war: the costs of waging war	Bartelli Adam Alexander	Brownson Ch. 3 & 7 References 4,19
6	3/2	EBPH: Community assessment 2 Case study 2: Controlling sugary beverage consumption: public health problem or individual choice?	Bartelli Lauren Sims	Brownson Ch. 4 & 5 Reference 12
7	3/16	Case study 3: Health benefits of organic foods Case study 4: Genetically modified foods	Akhilesh Kaushal Ray Xue	Brownson Ch. 8, 9 References 3,20,25

8	3/23	EBPH: Public health interventions and systematic reviews Case study 5: Ebola travel restrictions/quarantine: political need or public health issue?	Ward Rumana Siddique	References 6,14, 18, 24,26
9	3/30	EBPH: Evaluation 1 Case study 6: Medical or recreational marijuana: should it be legalized?	Bartelli Yan Shen	Brownson Ch. 10 Reference 7
10	4/6	EBPH: Evaluation 2 Case study 7: HIV: the promise of treatment as prevention	Bartelli Christopher Obong'o	References 2,15,21
11	4/13	Ethics and Integrity Case study 8: Whole milk vs. low-fat milk: the great dairy debate	Ward/Gurney Nabanita Mukherjee	References 5 (chapters 1 & 2), 13
12	4/20	Case study 9: Transplant organ donation: tourism of trafficking? Case study 10: Euthanasia and Public Health	Stella Ukaoma Prachi Chavan	References 1, 8
13	4/27	Case study 11: Obesity: disease or health outcome? Wrap up	Nandini Mukherjee Gurney/Ward/Bartelli	Brownson Ch. 11 Reference 17

No class on 3/9: university spring break. Last day of regular university classes is 4/29.

Reading Assignments (referenced in the table by number):

1. Akoh JA. Key issues in transplant tourism. *World J Transplant.* 2012;2:9-18.
2. Bassett MT, Brudney K. Treating our way out of AIDS? *Am. J. Public Health.* 2014;104:200-203.
3. Bayer R. The continuing tensions between individual rights and public health. Talking Point on public health versus civil liberties. *EMBO Rep.* 2007;8:1099-1103.
4. Billings JR, Cowley S. Approaches to community needs assessment: a literature review. *J. Adv. Nurs.* 1995;22:721-730.
5. Nuffield Council on Bioethics: *Public Health: Ethical Issues* (Full Report). Cambridge UK, 2007.
6. Bogoch, II, Creatore MI, Cetron MS, et al. Assessment of the potential for international dissemination of Ebola virus via commercial air travel during the 2014 west African outbreak. *Lancet.* 2015;385:29-35.
7. Bostwick JM. Blurred boundaries: the therapeutics and politics of medical marijuana. *Mayo Clin. Proc.* 2012;87:172-186.

8. Emanuel EJ, Fairclough DL, Emanuel LL. Attitudes and desires related to euthanasia and physician-assisted suicide among terminally ill patients and their caregivers. *JAMA*. 2000;284:2460-2468.
9. Freedman B. Equipoise and the ethics of clinical research. *N. Engl. J. Med.* 1987;317:141-145.
10. Galton F. Statistical inquiries into the efficacy of prayer. *Int. J. Epidemiol.* 2012;41:923-928.
11. Hill AB. The Environment and Disease: Association or Causation? *Proc. R. Soc. Med.* 1965;58:295-300.
12. Kass N, Hecht K, Paul A, Birnback K. Ethics and obesity prevention: ethical considerations in 3 approaches to reducing consumption of sugar-sweetened beverages. *Am. J. Public Health*. 2014;104:787-795.
13. Kratz M, Baars T, Guyenet S. The relationship between high-fat dairy consumption and obesity, cardiovascular, and metabolic disease. *Eur. J. Nutr.* 2013;52:1-24.
14. Liberati A, Altman DG, Tetzlaff J, et al. The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. *J. Clin. Epidemiol.* 2009;62:e1-34.
15. MacQueen KM, Buehler JW. Ethics, practice, and research in public health. *Am. J. Public Health*. 2004;94:928-931.
16. Maldonado G, Greenland S. Estimating causal effects. *Int. J. Epidemiol.* 2002;31:422-429.
17. Mechanick JI, Garber AJ, Handelsman Y, Garvey WT. American Association of Clinical Endocrinologists' position statement on obesity and obesity medicine. *Endocr Pract.* 2012;18:642-648.
18. Moher D, Liberati A, Tetzlaff J, Altman DG, Group P. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *J. Clin. Epidemiol.* 2009;62:1006-1012.
19. Moore LD, Elkavich A. Who's using and who's doing time: incarceration, the war on drugs, and public health. *Am. J. Public Health*. 2008;98(9 Suppl):S176-180.
20. Nicolai A, Manzo A, Veronesi F, Rosellini D. An overview of the last 10 years of genetically engineered crop safety research. *Crit. Rev. Biotechnol.* 2014;34:77-88.
21. Orians CE, Abed J, Drew CH, Rose SW, Cohen JH, Phelps J. Scientific and public health impacts of the NIEHS Extramural Asthma Research Program: insights from primary data. *Research Evaluation*. 2009;18:375-385.
22. Rothman KJ. *Epidemiology: An Introduction*. 2nd ed. New York: Oxford University Press; 2012.
23. Schick T, Vaughn L. *How to Think About Weird Things: Critical Thinking for a New Age*. 4th ed. New York: McGraw-Hill Higher Education; 2004.
24. Shamseer L, Moher D, Clarke M, et al. Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015: elaboration and explanation. *BMJ*. 2015;349:g7647.
25. Smith-Spangler C, Brandeau ML, Hunter GE, et al. Are organic foods safer or healthier than conventional alternatives?: a systematic review. *Ann. Intern. Med.* 2012;157:348-366.
26. Thomas BH, Ciliska D, Dobbins M, Micucci S. A process for systematically reviewing the literature: providing the research evidence for public health nursing interventions. *Worldviews Evid Based Nurs*. 2004;1:176-184.