

Spring 2018—SYLLABUS
UEP 203, Section 1
Introduction to Public Health

Course description: This course provides a practical and equity-focused approach to the fundamentals of public health. It is organized into two sections: Public Health Fundamentals and Public Health in Practice. The first section covers key concepts in public health: the ecological model of health, history of public health, controversial issues in public health, social determinants of health, biostatistics, epidemiology, and biomedical sciences. The second section of the course, Public Health in Practice focuses on several areas of current public health practice. Students will appreciate how politics and policymaking are inherent to public health in action; they will gain perspective on the range of programs that public health practitioners implement in order to improve health; they will understand that well-designed and conducted research underlie public health work; finally, students will recognize how movements for change have advanced and continue to advance achievement toward public health goals.

Course objectives

- 1) Appreciate that health problems are located within an influential larger context of social, political and economic forces
- 2) Gain exposure to the achievements and failures of public health and the ongoing controversies facing public health
- 3) Introduce **public health fundamentals** such as epidemiology and social determinants of health and **public health in action** through a focused examination of four public health action areas (politics, programs, research, and movements for change)
- 4) Apply public health principles to health problems and develop strategies to address public health problems

Instructor

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Office hours Tue and Thurs 12 – 1:00 pm UEP Room #104 and by appointment

[323-341-4005](tel:323-341-4005) or x4005

Class meeting and location: Tues & Thurs 1:30- 2:55 pm, Johnson 315

Required textbook: Mary Jane Schneider. Introduction to Public Health. 5th edition.

Evaluation criteria

Your final grade will be divided among class participation (15%), small assignments (25%), midterm exam (30%) and final take home assignment (30%).

Criteria	Description	Percent of final grade	Due
Class participation	<p><i>Debate</i> You will engage in a structured debate on the following topic: “Resolved: food stamps should not be used to buy junk food or sugary drink.”</p> <p><i>News briefing</i> You will choose an article from the news on a public health topic, share it with the class and pose two questions in advance, and lead a 5 minute discussion.</p> <p><i>Scientific presentation</i> You will be part of a mock scientific team that will interpret and present results of public health on air pollution and health.</p> <p><i>In-class discussions</i> You are expected to participate in day-in, day-out class conversations and pose questions most importantly to guest lecturers. We will have an in-class discussion of Unnatural Causes.</p>	15	Debate 3/8; scientific presentations 4/17 & 4/19
Small assignments		25	
	<p><i>Personal essay</i> From among the Health People 2020 topics listed at www.healthpeople.gov/2020/topics-objectives, choose the health problem of most relevance or interest to you. In two pages, reflect on the roots of your personal interest in public health and in that specific health problem. How has public health touched your life? Via a personal or family health crisis? Via travel around the U.S. or outside the U.S.? Via your parent’s occupations? Via experiences of your friends?</p>	(15)	2/1
	<p><i>Epidemiology Problem Set</i> Design a study to explore loneliness and health on the Occidental College campus. Clearly state a scientific question (1 sentence) and a hypothesis (1 sentence) based on that scientific question. Provide one to two background paragraphs on the health problem. Propose a study design to test your hypothesis.</p>	(40)	2/22
	<p><i>Field Trip Reflection</i> In two pages, react to the LA Port field trip and describe how you could use the air pollution data to advance a movement to protect community health from pollution from the global movement of goods.</p>	(40)	5/1
Midterm	This in-class exam will cover materials presented in the first half of the semester and it will be composed of multiple choice, short answer and an essay.	30	3/20
Take home final exam	There will be two sections to the exam: 1) description of a public health crisis scenario to which you need to evaluate several potential interventions and 2) short answers covering the second half of the semester.	30	

Course schedule

Day	Date	Topic	Notes
PUBLIC HEALTH FUNDAMENTALS			
Tue	1/23	What is public health? Introduction to the course	
Thu	1/25	Public health models for understanding and action	
Tue	1/30	Biostatistics	
Thu	2/1	Nutrient-activated TOR proteins that regulate cell growth, <i>Cheryl Okumura</i>	Essay due
Tue	2/6	Epidemiology I: individual determinants of disease & screening tests	
Thu	2/8	Epidemiology II: risk factors & study design	
Tue	2/13	Epidemiology III: challenges in collecting evidence	
Thu	2/15	Medical care and public health; health care reform	Epi problem set due
Tue	2/20	Controversy in public health	
Thu	2/22	History of public health, part I	
Tue	2/27	History of public health, part II	
Thu	3/1	Social determinants of health: where we live, discussion of Unnatural Causes	
Tue	3/6	Prep for midterm exam & debate	
Thu	3/8	Debate: "Resolved: food stamps should not be used to buy junk food or sugary drink."	
Tue	3/13	Spring Break	
Thurs	3/15	Spring Break	
PUBLIC HEALTH IN PRACTICE			
Tue	3/20	Midterm exam	
Thu	3/22	Practice example #1: Politics & Policy, Childhood obesity	
Tue	3/27	Practice example #1: Politics & Policy, Childhood obesity <i>Guest instructor: Matt Sharp</i>	
Thu	3/29	Practice example #1: Politics & Policy, Childhood obesity	
Tue	4/3	Practice example #2: Programs, HIV/AIDS	
WED	4/4 7:15 pm	Practice example #2: Programs, HIV/AIDS <i>Guest panel: HIV outreach to "special populations", Location TBA</i>	
Thu	4/5	No class	
Tue	4/10	Practice example #2: Programs, HIV/AIDS	
Thu	4/12	Practice example #3: Research, Air pollution <i>Guest instructor TBA</i>	
Tue	4/17	Practice example #3: Research, Air pollution	
Thu	4/19	Practice example #3: Research, Air pollution	
Tue	4/24	Practice example #4: Movements for change, Global movement of goods <i>Guest instructor: Jessica Tovar</i>	
Thu	4/26	Practice example #4: Movements for change, Global movement of goods <i>Guest instructors: Zully Juarez & Wendy Gutschow</i>	Field trip, 11:30 am to 3:00 pm
Tue	5/1	Wrap-up & introduction to take home assignment	Field trip reflection due
		12:00 pm Final assignment due	

Session Learning Objectives and Readings

Part I: Public Health Fundamentals

1/23 *What is public health?*

Learning objectives

- 1) Introduce definitions of public health, current examples of public health in action and key actors in the public health system
- 2) Describe our nation's most pressing public health challenges; compare the U.S. to other nations and explore sub-national health statistics; examine trends in key health outcomes and risk factors
- 3) Introduce ourselves and describe the course requirements

1/25 *Public health models for learning and action*

Learning objectives

- 1) Become familiar with two important models for thinking and acting in public health
- 2) Apply these models to several public health problems

1/30 *Biostatistics*

Learning objectives

- 1) Appreciate how widely statistics is used in public health
- 2) Learn how statistics help public health deal with inherent uncertainty of data
- 3) Introduce the concept of 'rates' and why they are so widely used to describe and understand data
- 4) Understand the some of the sources of data in public health and why we need data to drive public health discovery and action

2/1 *Nutrient-activated TOR proteins that regulate cell growth, Cheryl Okumura*

Learning objectives

- 1) Approach a new and complex topic in basic science and appreciate it's connection to advances in public health.

2/6 *Epidemiology I*

Learning objectives

- 1) Introduce the definition of epidemiology and deepen understanding via examples of epidemiology in practice.
- 2) Explore individual determinants of disease
- 3) Using the breast cancer BRCA gene test as an example, understand the epidemiology of diagnostic and screening tests

2/8 *Epidemiology II*

Learning objectives

- 1) Describe the process at the core of epidemiological investigation: forming a scientific question, generating a hypothesis and designing a study.
- 1) Discuss the concepts of risk and risk factors

2/13 *Epidemiology III*

Learning objectives

- 1) Discern the difference between an association and a causal relationship
- 2) Gain an understanding of the challenges of bias and confounding

2/15 *Medical care and public health; health care reform*

Learning objectives

Current as of 1/22/18

- 1) Outline the organization of the health care and public health systems—institutions and structures of health care and public health systems
- 2) Appreciate the distinct roles and complementary responsibilities of health care and public health systems
- 3) Understand the mechanisms, including insurance systems, for paying for health services.

2/20 *Controversies in public health; the role of government*

Learning objectives

- 1) Introduce the broad powers of public health and the tension between individual liberties and public health
- 2) Explore why vaccination programs are controversial

2/22 *Public health history, I*

Learning objectives

- 1) Appreciate the major achievements and failures of public health in the recent era
- 2) Consider the main attributes of key eras in the public health history and acknowledge how public health mirrors it's societal context over time
- 3) Confront two unethical public health studies: Tuskegee Study on Syphilis and Guatemala

2/27 *History of public health, II*

- 1) Explore evolution of stricter ethical guidelines overseeing public health research
- 2) Examine the influence of political and economic forces over adequate protection of the public against lead poisoning.

3/1 *Social determinants of health: Where we live*

Learning objectives

- 1) Detail the social and social environmental factors that are key determinants of health
- 2) Discuss how the topics, people and places presented in Unnatural Causes relate to the social determinants of health
- 3) Explore the biological pathway between stress and poor health
- 4) Examine the life and death of Freddie Gray as a case study in social determinants of health—and the role of lead poisoning in hindering child development.

3/6 *Preparation for midterm & debate*

3/8 *Debate: "Resolved: food stamps should not be used to buy junk food or sugary drink."*

Learning objectives

- 1) Thoroughly consider both sides of a volatile public health issue
- 2) Gather and package facts on debate topic and develop debate strategy
- 3) Work in teams in a fast-paced situation

3/13 & 3/15 *No class, Spring Break*

3/20 *MIDTERM*

Part II: Public Health in Practice

3/22 *Politics & Policy: Obesity*

Learning objectives

- 1) Attempt to match the scientific consensus on the causes of obesity with the political and policymaking reality.
- 2) Describe the actors and stake holders forces shaping obesity-related policymaking.

3/27 *Politics & Policy: Obesity*

Learning objectives

Current as of 1/22/18

- 1) Hear directly from a policymaker how California legislation related to child obesity was crafted and implemented.

3/29 *Politics & Policy: Obesity*

Learning objectives

- 1) Learn the history and basic features of the federal food programs that aim to prevent child undernutrition as well as child obesity
- 2) Explore in depth the federal School Lunch Program and the complex negotiations surrounding this Program

4/3 *Programs: HIV/AIDS*

Learning objectives

- 1) Introduce the HIV/AIDS virus and global, national and local epidemiological trends.
- 2) Analyze options for HIV/AIDS interventions using a framework including *when*, *who*, and *how* to intervene.

4/4 *Programs: HIV/AIDS (guest panel)*

Learning objectives

- 1) Appreciate the diversity of approaches real-life public health organizations use in order to prevent HIV/AIDS in special populations.

4/5 *No class*

4/10 *Programs: HIV/AIDS*

Learning objectives

- 1) Become familiar with the HIV/AIDS epidemic among people who inject drugs.
- 2) Analyze two very different approaches to HIV prevention among people who inject drugs (Indiana vs Vancouver).
- 3) Appreciate powerful sociocultural and political forces influence public health programs.

4/12 *Research, Air pollution*

Learning objectives

- 1) Introduce the causes of and health consequences of air pollution.

4/17 & 4/18 *Research, air pollution*

Learning objectives

- 1) Conduct critical reading of scientific journal articles on air pollution; identify the study design, data collection methods, discern the main results and the implications of the research. Identify possible limitations to the research.
- 2) Present a summary of the journal article to your classmates at a mock scientific conference.

4/24 *Movements for change: global movements of goods*

Learning objectives

4/24 *Movements for change: global movements of goods (Jessica Tovar)*

Learning objectives

- 1) Approach a new and complex topic: health impacts of the global movement of goods. Become familiar with new terminology related to the logistics industry.
- 2) Trace the journey of a doll from China to Chicago and relate that seemingly innocuous journey to serious health impacts.
- 3) Introduction to array of community-based groups who have mobilized to protect their health.

Current as of 1/22/18

- 4) Develop an understanding of the links between public health, global trade, environmental rules and regulations, community organizing and system change
- 5) Learn about the Zero Emissions Now campaign of the Moving Forward Network. A leader of the campaign will describe the goals, strategies, tactics, challenges and successes of this campaign.

4/26 Movements for change: global movements of goods (bus tour & air pollution monitoring activity)

Learning objectives

- 1) Experience the reality of the global movement of goods by observing the freeways, rail yards and Port facilities
- 2) Participate in an air pollution monitoring activity in a Long Beach public park
- 3) Hear first-hand from residents of Port communities and members of community organizations.

5/1 Wrap-up & final assignment