OVERVIEW
Despite significant advances in medicine and public health, inequities in health persist. Understanding health on a population level is an approach that seeks to improve the health of the whole population, unravel variations in health outcomes, and to identify effective strategies for reducing or eliminating inequities both within and between population groups.

The purpose of this course is to provide students with a foundation for understanding: 1) how population health is defined and measured; 2) the biological, cultural, social, economic, and healthcare determinants of population health; 3) research development and design for studying population health; and 4) prevention and intervention strategies for improving population health.

This course will be divided into four distinct modules. The first module will explain how population health is defined and measured. The second module will examine the multiple
determinants of population health and their complex inter-relationships. The third module will help students understand how to approach population health research questions and how to design studies to answer these questions. The fourth and final module will focus on how research can be effectively translated into practice. The course will consist of two weekly lectures and a weekly discussion group session (or “lab”). The weekly discussion session will allow students to further explore and apply the concepts raised in the lectures.

COURSE OBJECTIVES

By the end of this course, students will be able to:

- Discuss various definitions of population health
- Describe methodological approaches for measuring population health
- Identify and explain the multiple determinants of population health and their interrelationships
- Understand and discuss research design and development in population health
- Explain various preventive and intervention strategies for improving population health

COURSE ADMINISTRATION

Dr. Witt will be responsible for all administrative issues and grading. A course website is set up on the LEARN@UW system. This is the electronic course home. A main purpose of this website is that it will be a repository of downloadable copies of the course readings and, where appropriate, copies of lecture slides (not all lectures will have slides made available in this manner, so good note taking will be important). Occasionally, announcements will be posted under the "News" heading on the course homepage. Students should check the course website frequently. Students may audio record lectures for their own personal use (i.e. not for distribution) with permission of the lecturer.

The lecture will be held in HSLC 1345 on Tuesday/Thursday 9:30-10:45am. A required discussion session (“lab”) will be held prior to lecture in 1345 HSLC on Tuesdays from 8:30-9:20am.

COURSE ENVIRONMENT AND ACADEMIC INTEGRITY/MISCONDUCT

Collaborative Environment & Academic Misconduct
Students are encouraged to discuss course material and content with each other. However, unless otherwise indicated, assignments, exams, and quizzes should be representative of your own work. Please refer to this website if you have questions about student misconduct: http://www.wisc.edu/students/saja/misconduct/misconduct.html

Non-Discrimination Policy
The UW–Madison is committed to creating a dynamic, diverse and welcoming learning environment for all students and has a non-discrimination policy that reflects this philosophy. Disrespectful behaviors or comments addressed towards any group or individual, regardless of
race/ethnicity, sexuality, gender, religion, ability, or any other difference is deemed unacceptable in this class.

**Special Needs or Disabilities**
We wish to fully include persons with special needs or disabilities in this course. Please let Dr. Witt or Jill Baumgartner know if you need any special accommodations in the curriculum, instruction, or assessments of this course to enable you to fully participate.

**STUDENT EVALUATION**

The grading for the course is based on three elements:

1. **Exams** (65% of course grade)
   - Two exams will be given in the course-- a midterm will given in place of the lab on **Oct 13** (8:30-9:20 AM) and final exam to be administered during the class session on **Dec 17** (8:30-10:15 AM).

2. **Quizzes** (20% of course grade)
   - There will be a quiz for each module of the course (5% for each quiz).

3. **Participation** in discussion group, lab exercises, and lectures (15% of grade)

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<tr>
<th>Grading Mechanism</th>
<th>Date</th>
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<tr>
<td>Quiz 1</td>
<td>9/29 (in class group quiz)</td>
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<td>Quiz 2</td>
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<td>FINAL</td>
<td><strong>Dec 17 from 8:45-10:45am in 1345 HSLC</strong></td>
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<td>Participation in labs and lectures</td>
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**READINGS**

Required and additional readings for each particular lecture or module will be posted on the course webpage at Learn@UW. Most readings will be available for download from the course webpage or will be available electronically from UW-Madison Libraries.

The following books are required for the course. They are available for purchase at University Book Store Health Sciences (located inside HSLC) and on course reserve in Ebling Library.


<table>
<thead>
<tr>
<th>Course Schedule</th>
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READINGS

Please read all required readings prior to the class session. Readings listed as “additional” are not required and their content will not be included on exams or quizzes.

MODULE 1: Defining and Measuring Population Health

Sept. 3  Session 1:  Population Health: An Overview (Lecturer: WITT)

Required:
• CHAPTER 1  POP HEALTH: CONCEPTS AND METHODS

Sept. 8  LAB 1:  Defining Health

Session 2:  Population Health Terminology (Lecturer: REMINGTON)

Required:

Sept. 10  Session 3:  Traditional Measures of Population Health (Mortality and Morbidity) (Lecturer: SKINNER)

Required:
• CHAPTER 2  POP HEALTH: CONCEPTS AND METHODS

Additional:
• Healthy People 2010 web site: http://www.healthypeople.gov/About/

Sept. 15  LAB 2:  Developing Measurable Objectives
Session 4:  Defining Health in Individuals and Populations (Lecturer: WITT)

Required:
- CHAPTER 3  POP HEALTH: CONCEPTS AND METHODS

Additional:

Sept. 17  Session 5:  Health and Healthcare Disparities (Lecturer: WITT)

Required:

Sept. 22  LAB 3:  Unnatural Causes

Session 6:  Molecular/Genetic Determinants (Lecturer: SKINNER)

Required:
- No required readings for this session

Additional:

MODULE 2: Determinants of Population Health—From Cell to Society

Part A: Non-Medical Determinants

Sept. 24  Session 7: Modeling Determinants of Population Health (Lecturer: WITT)

Required:
• CHAPTER 4 POP HEALTH: CONCEPTS AND METHODS
• Carpiano RM, Daley DM. A guide and glossary on post-positivist theory building for population health. J Epidemiol Community Health 2006;60(7):564-570.

Sept. 29  LAB 4 : TBA

Session 8: Biopsychosocial Determinants (Lecturer: FRIEDMAN)

Required:

Additional:

Oct. 1  Session 9: Behavioral and Cultural Determinants (Lecturer: JONES)

Required:
• TBA

Additional:
• TBA
Oct. 6  Review Session for Midterm (during lab session)

Session 10: Social Determinants (I)—Gender, Race, & Socioeconomic determinants (Lecturer: HERD)

Required:
• Understanding social factors and inequalities in health James S House Journal of Health and Social Behavior; Jun 2002; 43, 2
• Socioeconomic Factors, Health Behaviors, and Mortality Paula M Lantz JAMA; Jun 1996; 279, 21

Oct. 8  Session 11: Social Determinants (II)—Global Health Issues (Lecturer: BAUMGARTNER)

Required:
• TBA

Oct. 13  MIDTERM EXAM (administered during the lab session)

Session 12: Social Determinants (II)—Neighborhood/Community Context (Lecturer: ROBERT)

Required:
• TBA

Oct. 15  Session 13: Environmental Determinants (Global) (Lecturer: SCHAUER)

Required:
• TBA

Additional:
• TBA

Oct. 20  Post-Review of Midterm (during lab session)

Session 14: Environmental Determinants (US) (Lecturer: KANAREK)
Part B: Medical Determinants

Oct. 22 Session 15: Medical Care as a Determinant (Lecturer: KINDIG)

Required:
- McGinnis JM, Williams-Russo P and Knickman JR. The case for more active policy attention to health promotion. Health Affairs 2002;March-April;21(2)78-93.

Oct. 27 LAB 5: Cost, Quality, Access

Session 16: The US Health Care System: Access and Quality (Lecturer: SMITH)

Required:
- TBA

Oct. 29 Session 17: The US Health Care System: Type 2 Translational Research (Lecturer: SMITH)

Required:
- TBA

Part C: Economic Determinants

Nov. 3 LAB 6: TBA

Session 18: Economics of Health (I) (Lecturer: MULLAHY)

Required:

Nov. 5

**Session 19:** Economics of Health (II) (Lecturer: MULLAHY)

**Required:**
- TBA

Nov. 10

**LAB 7:** Economics of Population Health Science

**Session 20:** Economics of Health (III) (Lecturer: DELEIRE)

**Required:**
- TBA

**MODULE 3: Research Development and Design for Studying Population Health**

Nov. 12

**Session 21:** Asking and operationalizing population health questions I (Lecturer: WITT)

**Required:**
- TBA

Nov. 17

**LAB 9:** Research design and Development (pre- and post-work required)

**Session 22:** Asking and operationalizing population health questions II (Lecturer: WITT)

- TBA

Nov. 19

**Session 23:** Community intervention trials (Lecturer: REMINGTON)

**Required:**
- TBA

**Additional:**
- TBA

Nov. 24

**LAB 9:** Design and Level of Analysis for Population Health Studies
Session 24: Strategies and applications of population health studies (Lecturer: MALECKI)

Required:
• TBA

Nov. 26 Thanksgiving recess (NO CLASS)

MODULE 4: Implications for Improving Population Health

Dec. 1 LAB 10: Social Marketing

Before this lab session please view the lecture by Michael Rothschild, PhD entitled “An Introduction to Social Marketing: Considering its Philosophy and Process as Input to Public Health Practice”

Go to this website to view:
http://videos.med.wisc.edu/videoInfo.php?videoid=159

Session 25: Levels of analyses for population health studies (Individual, Dyad, Family, Neighborhood, System, Policy, State) (Lecturer: GANGNON)

Required:
• TBA

Dec. 3 Session 26: Translating evidence into practice: The Case of Children made Vulnerable by HIV/AIDS (Lecturer: DEPRETE-BROWN)

Required:

Dec. 8 LAB 11: Translating Evidence into Practice
Required for lab:

**Session 27:** Human Rights Perspectives on Population Health Improvement and Interventions (Lecturer: DIPRETE-BROWN)

**Required:**

**Dec. 10**  
**Session 28:** Health Policy (Lecturer: OLIVER)

**Required:**
• TBA

**Dec. 15**  
FINAL EXAM REVIEW SESSION

**Dec. 17**  
FINAL EXAM