Semester: Fall 2017
Course Number: 10:832:201, Section 5
Course Title: Principles of Public Health
Course Day and Time: Saturday, 9:00am – 11:55am
September 9, 2017 – May 5, 2017
Location: Scott Hall Room 206
Course Instructor: Peter N. Tabbot
Contact Information: 973-400-6562
ptabbot@rockawaytownship.org
Office Hours and Location: By appointment
Additional Materials: Centers for Disease Control & Prevention readings as referenced in syllabus: www.cdc.gov/az.do/id/0900f3ec8000e035#S
Additional Readings will be posted on Sakai
Recommended Reading: Heymann, Control of Communicable Disease Manual, 20th edition, 2015, APHA.
Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report http://www.cdc.gov/mmwr/

Course Description
Introduction to the U.S. public health system. Focus on health and the life course, and how personal and environmental health relates to social, economic, cultural, psychological and political factors. Measurements of community health status.
SAS Core Curriculum Learning Goals

- Upon successful completion of this course, students will be able to employ tools of social scientific reasoning to study particular questions or situations, using appropriate assumptions, methods, evidence, and arguments.
- Upon successful completion of this course, students will be able to formulate, evaluate and communicate conclusions and inferences from quantitative data.

Public Health Learning Goals

Students will:
1. Think critically in public health
2. Effectively communicate public health information
3. Develop, apply and analyze concepts from research methods and basic statistics
4. Utilize information literacy skills in public health
5. Understand and apply professional ethics

Course Assessment

The following assignments will assess the course learning goals:

Think critically in public health
Each student will read additional materials on epidemiological techniques and will critique an epidemiological study for its design and potential flaws. Guidelines for this assignment will be provided.

Effectively communicate public health information
Students will periodically participate in online discussion forums regarding topics covered in class discussion and/or reading materials. In addition, class exams will elucidate students’ understanding of the material covered from week to week.

Utilize information literacy skills in public health
Students will consult scholarly narrative, as provided by instructor, to augment foundational principles of public health, and will cite same as necessary.

Develop, apply and analyze concepts from research methods and basic statistics
Discussion topics will include the formulation, evaluation and communication of inferences and conclusions from quantitative information, including the study of relative risk, disease prevalence, disease incidence and odds ratio.

Understand and apply professional ethics
One lecture and related discussion will cover the topic of ethics in public health.
## Class Outline by Week

<table>
<thead>
<tr>
<th>Units</th>
<th>Topic</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction to concepts and key developments in community health, with discussion regarding achievements in public health</td>
<td>Reading: <em>Achievements in Public Health</em>, <em>Spending in Public Health</em>, Video: See details below</td>
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<tr>
<td>2</td>
<td>Understand the evolution of public health practice and principles, with a focus on ancient civilizations, European developments and the modern era of public health</td>
<td>Reading: Chapter 1, Plague, Yellow Fever: See details below</td>
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<td>3</td>
<td>Describe different theories of infectious disease causation, the vectors and modes of disease transmission, and the significance of disease surveillance.</td>
<td>Reading: Chapter 4 pp. 89-95, 99-107, Chapter 14 pp. 435-439, Lyme, Rabies, Hantavirus, West Nile Virus</td>
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<td>4</td>
<td>Explain the importance of epidemiological rates and studies, and apply the science of epidemiology in determining health risks to the public.</td>
<td>Chapter 3, John Snow essay, Epidemiology formulas &amp; equations, Lyme disease study &amp; readings</td>
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<tr>
<td>5</td>
<td>Understand different environmental, biological, cultural, social and economic determinants of health in adults and the elderly. Learn the most prevalent causes of morbidity and mortality, and explain the importance of chronic diseases and non-communicable events in the population.</td>
<td>Reading: Chapter 4 pp. 95-100,107-111, Chapter 9, <em>Decline in Deaths Due to Heart Disease &amp; Stroke</em>, Influenza, Pneumonia</td>
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<td>6</td>
<td>Understand the components of public health infrastructure, trends in staffing and the major policies that dictate how public health services are provided to communities.</td>
<td>Reading: Chapter 2, Chapter 5 pp. 114-126, <em>Public Health Infrastructure</em></td>
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<td>7</td>
<td>Learn methods and models of health promotion in the community, as well as the ways in which health education programming empowers individuals to make healthier decisions.</td>
<td>Reading: Chapter 5 pp. 126-138, <em>Selected Models of Change, Education Matters for Health, Improving Americans’ Health Takes a Community</em></td>
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<tr>
<td>8</td>
<td>Midterm Exam</td>
<td>No Class</td>
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<td>9</td>
<td>Thanksgiving Holiday</td>
<td>No Class</td>
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<tr>
<td>Week</td>
<td>Assignment</td>
<td>Reading</td>
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<td>10</td>
<td>Explain the basic aspects of food protection, the leading causes of foodborne illness, and the significance of controlling pathogen growth.</td>
<td>Reading: Chapter 14 pp. 424-428, Salmonellosis, Botulism, Shigellosis, Campylobacter, E. coli 0157:H7, Staphylococcus aureus, Safer &amp; Healthier Foods</td>
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<td>11</td>
<td>Understand the positive and negative effects of potable water, wastewater, solid waste and hazardous waste on the public’s health, as well as significant laws regulating same.</td>
<td>Reading: Chapter 14 pp. 415-423, 429-435</td>
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<tr>
<td>12</td>
<td>Review epidemiological studies for distinguishing characteristics and flaws, including overview and examination of epidemiological concepts.</td>
<td>Reading: Outbreak Discussion</td>
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<td>13</td>
<td>Examine the implications of bioterrorism, disaster events and other issues that compromise public health infrastructure.</td>
<td>Reading: Are You Ready pp. 147-163, Bioterrorism – Why Now?</td>
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<tr>
<td>14</td>
<td>Discuss health issues ranging from local to global concerns, including childhood lead poisoning, environmental pollution and population growth.</td>
<td>Reading: Chapter 14 pp. 406-414, 442-444 [<a href="http://www.epa.gov/lead/pubs/leadinfo.htm#facts">www.epa.gov/lead/pubs/leadinfo.htm#facts</a>], [<a href="http://www.epa.gov/radon/healthrisks.html">www.epa.gov/radon/healthrisks.html</a>], Air pollution readings to be provided</td>
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<tr>
<td>15</td>
<td>Final Exam</td>
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**Grading & Attendance**

All material assigned and presented in this class (i.e., readings, videos, lectures, web links) is subject to inclusion on course exams. Discussion topics will, from time to time, be posted to the course website, and students are expected to contribute via discussion threads. Additional contributions to the course website (i.e., resource documents, web links, relevant chat) may positively affect your grade, as well. The site may be found at: [https://sakai.rutgers.edu/portal/](https://sakai.rutgers.edu/portal/). Use your Rutgers identification and password to access all course materials. Sakai instructions appear on the back of this syllabus.

If you expect to miss class, please use the University absence reporting website at [https://sims.rutgers.edu/ssra/](https://sims.rutgers.edu/ssra/) to indicate the date and reason for your absence. In the event of illness or emergency on the day of an exam, contact Mr. Tabbot before the exam. In case of examination scheduling conflicts, contact Mr. Tabbot at least one week prior to the exam. Students who do not make alternative arrangements before the exam will receive a 0 for that exam.

It is disrespectful and distracting to text, browse, tweet, email, or do anything other than take notes with your electronic devices during the class period. The fact that you are not making noise does not mean that you are not a distraction to others. This means no texting, emailing, checking Facebook accounts, etc., in class. Addicted students will be asked to turn off their electronic devices.
Course Grading

A = 90-100; B+ = 86-89; B = 80-85; C+ = 76-79; C = 70-75; D = 60-69; F = 59 and lower

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<thead>
<tr>
<th>Percentage</th>
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<tbody>
<tr>
<td>35%</td>
<td>Midterm Examination</td>
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<tr>
<td>35%</td>
<td>Final Examination</td>
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<tr>
<td>25%</td>
<td>Assignment</td>
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<tr>
<td>5%</td>
<td>Attendance &amp; Participation</td>
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Academic Integrity
Students in this class and in all courses at Rutgers University are expected to uphold the highest standards of academic integrity. Cheating, plagiarism in written work, receiving and providing unauthorized assistance, and sabotaging the work of others are among the behaviors that constitute violations of the [Academic Integrity Policy](http://academicintegrity.rutgers.edu/academic-integrity-policy/). You are expected to be familiar with this policy. Behaviors such as those describe above can lead to a student’s failing grade and referral to his/her dean for disciplinary action.

Schedule:

**September 9**  
**Introduction to Course; Concepts in Community Health**  
10 great achievements in public health, Developments in health practice, Introduction and foundation of course.  
*Reading:* Achievements in Public Health

**September 16**  
**History of Public Health**  
Public health in ancient civilizations, Modern era of public health, Factors affecting health.  
*Reading:* Chapter 1  
Plague, Yellow Fever  

**September 23**  
**Communicable Disease**  
Theories of disease causation, Modes of transmission, Epidemiological triangle, Zoonoses & vectors, Vaccination, Surveillance.  
*Reading:* Chapter 4 pp. 89-95, 99-107, Chapter 14 pp. 435-439  
Lyme, Rabies, Hantavirus, West Nile Virus

**September 30**  
**Epidemiology**  
Basic background, Data sources, Rates, Types of studies, Issues of study design & analysis, 2x2 tables, Relative risk, Odds ratio.  
*Reading:* Chapter 3, John Snow essay, Epidemiology formulas and equations, Lyme disease study and readings
October 7

**Outbreak: A Study in Infectious Disease & Epidemiology**

**Research & Epidemiology Critique**

Review of epidemiological study for distinguishing characteristics and flaws, Examination of epidemiological concepts.

*Reading:* Outbreak Discussion

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October 14

**Determinants of Health: Adult & Elderly Health**

Chronic diseases & non-communicable events, Most prevalent health problems, Psychosocial & physical problems of the elderly.

*Reading:* Chapter 4 pp. 95-100, 107-111, Chapter 9, *Adult & Elderly Health*, Influenza, Pneumonia

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October 21

**Health Education & Promotion**

Colleen McKay Wharton, MPH, Project Manager, NJPHTC

Promoting health to the public, Ecological perspective, Levels of influence, Program development.

*Reading:* Chapter 5 pp. 126-138, Handouts – To be provided

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October 28

**Midterm Exam**

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November 4

**Public Health Infrastructure & Practice**

Minimum standards, Practice standards, Paradigm shift, State & municipal health departments, Health agencies, Defining roles.

*Reading:* Chapter 2, Chapter 5 pp. 114-126, *Public Health Infrastructure*

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November 11

**Food Safety & Foodborne Illness**

Types of foodborne illness & causes, Bacteria survival, Danger zone.

*Reading:* Chapter 14 pp. 424-428
Salmonellosis, Botulism, Shigellosis, Campylobacter, E. coli O157:H7, Staphylococcus aureus, *Food Safety*

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November 18

**Water, Wastewater & Solid Waste**

Hydrologic cycle, Sources, Waterborne disease, Water treatment, Sewage treatment, Septic systems, Solid waste, Hazardous waste.

*Reading:* Chapter 14 pp. 415-423, 429-435

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November 25

**NO CLASS – Thanksgiving Holiday**
December 2  
**Issues in Public Health: Bioterrorism**  
**Assignments Due**  
History, Assessing the risk, Agents of concern, Impacts of biological agents, Recognition of hazards, Controls.  
*Reading:*  
*Are You Ready* pp. 147-163, *Bioterrorism – Why Now?*  
Anthrax, Smallpox, Botulism, Plague

December 9  
**Issues in Public Health: Local & Global Environmental Health**  
Lead poisoning, Housing & health, Radon, Air pollution, Global warming, Acid rain & deposition.  
*Reading:*  
Chapter 14 pp. 406-414, 442-444  
[http://www.epa.gov/lead/pubs/leadinfo.htm#facts](http://www.epa.gov/lead/pubs/leadinfo.htm#facts)  
[http://www.epa.gov/radon/healthrisks.html](http://www.epa.gov/radon/healthrisks.html)  
Air pollution readings to be provided

December 16  
**Final Exam**