Principles of Public Health
10:832:232, Sect. 7
Fall 2013
9/7/13 – 12/14/13
Saturday, 9:00 – 11:55

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Office hours by appointment
Teaching Assistant:
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Required Text:

Communicable Disease Readings:
http://www.cdc.gov/az.do/id/0900f3ec8000e035#S

Recommended Reading:
Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report

Grading:
Midterm Exam 35%
Final Exam 35%
Assignment 25%
Attendance/Participation 5%

Learning Goals & Objectives
This course is designed to provide students with an introduction to the various areas of study within public health. Through readings and class discussion, students will develop an understanding of basic public health principles. Attendance and participation are expected and will be reflected in your grade.

- Students will understand the bases and development of human and societal endeavors across time and place.
- Students will be able to apply concepts about human and social behavior to particular questions or situations.
- Students will be able to formulate, evaluate, and communicate conclusions and inferences from quantitative data.

More specifically, upon completion of this course, students should be able to:

- Understand the evolution of public health practice and principles, and apply basic concepts in community health
- Describe different theories of infectious disease causation, the vectors and modes of disease transmission, and the significance of disease surveillance
- Explain the importance of epidemiological rates and studies, and apply the science of epidemiology in determining health risks to the public
• Understand different environmental, biological, cultural, social and economic determinants of health in children, adolescents, 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
• Understand the components of public health infrastructure, trends in staffing and the major policies that dictate how public health services are provided to communities
• Explain the basic aspects of food protection, the leading causes of foodborne illness, and the significance of controlling pathogen growth
• Understand the positive and negative effects of potable water, wastewater, solid waste and hazardous waste on the public’s health, as well as the history of laws regulating same
• 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
• Examine the implications of bioterrorism, childhood lead poisoning, global environmental pollution and other issues that compromise public health infrastructure and capacities

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 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/. Use your Rutgers identification and password to access all course materials. Sakai instructions appear on the back of this syllabus.

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 to text, browse, tweet, answer 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. Addicted students will be asked to turn off their electronic devices.

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 Policy on Academic Integrity (http://academicintegrity.rutgers.edu/integrity/shtml). 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 7

History of Public Health; Concepts in Community Health
Public health in ancient civilizations, Developments in public health practice, Modern era of public health, Factors affecting health.

Reading: Chapter 1 pp. 1-26, Achievements in Public Health
Plague, Yellow Fever
http://www.pbs.org/wgbh/nova/typhoid/quarantine.html
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<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Details</th>
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<tbody>
<tr>
<td>September 14</td>
<td>Communicable Disease</td>
<td>Theories of disease causation, Modes of transmission, Epidemiological triangle, Zoonoses &amp; vectors, Vaccination, Surveillance.</td>
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<td>Reading</td>
<td>Chapter 4 pp. 96-102, 109-111, Chapter 16 pp. 463-466 Lyme, Rabies, Hantavirus</td>
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<td>September 21</td>
<td>Epidemiology</td>
<td>Basic background, Data sources, Rates, Types of studies, Issues of study design &amp; analysis, 2x2 tables, Relative risk, Odds ratio.</td>
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<td>Reading</td>
<td>Chapter 3, Appendix 1, John Snow essay, Formulas Lyme disease study and readings</td>
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<td>September 28</td>
<td>Determinants of Health: Maternal, Child &amp; Adolescent Health</td>
<td>Most prevalent health problems, Common diseases, Etiology, Vaccinations.</td>
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<td>Reading</td>
<td>Chapter 7 pp. 175-203, Maternal &amp; Child Health Diptheria, Measles, Mumps, Tetanus, Pertussis</td>
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<td>October 5</td>
<td>Determinants of Health: Adult &amp; Elderly Health</td>
<td>Chronic diseases &amp; non-communicable events, Most prevalent health problems, Psychosocial &amp; physical problems of the elderly.</td>
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<td>Reading</td>
<td>Chapter 4 pp. 102-109, 114-118, Chapter 8 pp. 230-239, Chapter 9, Adult &amp; Elderly Health</td>
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<td>October 12</td>
<td>Outbreak: A Study in Infectious Disease &amp; Epidemiology</td>
<td>Research &amp; Epidemiology Critique Review of epidemiological study for distinguishing characteristics and flaws, Examination of epidemiological concepts.</td>
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<td>Reading</td>
<td>Outbreak Discussion</td>
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<td>October 19</td>
<td>Midterm Exam</td>
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<td>October 26</td>
<td>Public Health Infrastructure &amp; Practice</td>
<td>Minimum standards, Practice standards, Paradigm shift, State &amp; municipal health departments, Health agencies, Defining roles.</td>
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<td>Reading</td>
<td>Chapter 1 pp. 26-28, Chapter 2, Public Health Infrastructure</td>
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<td>November 2</td>
<td>Health Education &amp; Promotion</td>
<td>Colleen McKay Wharton, MPH, Project Manager, NJPHTC Promoting health to the public, Ecological perspective, Levels of influence, Program development.</td>
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<td>Reading</td>
<td>Chapter 5 pp. 131-141, Handouts</td>
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November 9  Food Safety & Foodborne Illness
Types of foodborne illness & causes, Bacteria survival, Danger zone.
Reading: Chapter 14 pp. 450-456
Salmonellosis, Botulism, Shigellosis, Campylobacter, E.
coli 0157:H7, Staphylococcus aureus, Food Safety

November 16  Water, Wastewater & Solid Waste
Assignments Due
Hydrologic cycle, Sources, Waterborne disease, Water treatment,
Sewage treatment, Septic systems, Solid waste, Hazardous waste.
Reading: Chapter 14 pp. 440-450, 456-463

November 23  Issues in Public Health: Bioterrorism
History, Assessing the risk, Agents of concern, Impacts of biological
agents, Recognition of hazards, Controls.
Reading: Chapter 1 pp. 22-24, Anthrax, Smallpox, Botulism,
Plague

November 30  NO CLASS – Thanksgiving Holiday

December 7  Issues in Public Health: Local & Global Environmental Health
Lead poisoning, Housing & health, Radon, Air pollution, Global warming,
Acid rain & deposition.
Reading: Chapter 14 pp. 431-440, 462-472
http://www.epa.gov/lead/pubs/leadinfo.htm#facts
http://www.epa.gov/radon/healthrisks.html
http://www.epa.gov/acidrain/effects/index.html

December 14  Exam 2