Learning Goals & Objectives:
This course is designed to provide students with an introduction to the various areas of study within environmental health. Through readings and class discussion, students will develop an understanding of the environmental issues that help shape the health of humans, animals and the environment. Students will explore the disciplines concerned with the recognition and control of environmental health threats.

- 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.

Grading:

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<tr>
<th>Component</th>
<th>Percentage</th>
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<tr>
<td>Midterm Exam</td>
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<td>Final Exam</td>
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<tr>
<td>Assignment</td>
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<td>Participation/Attendance</td>
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Sakai Website:
A website for this course is available to enrolled students at www.sakai.rutgers.edu – select the tab “Issues in Environmental and Occupational Health.” Here, you will find lecture notes, ancillary readings and other materials under the “Resources” tab, which may be found in the left margin. You will also periodically find class announcements, assignments and other items, which I will generally email to you, as well. Please become familiar with our Sakai website and use it often.

Attendance & Participation:
While participation and attendance reflect a small portion of your grade, both are expected in this course. Students who actively engage in class discussion and come prepared to contribute to the evening’s material will generally receive an A in participation. Cell phones must be silenced in class, and students using their phones will be asked to turn them off or leave.

It is the responsibility of students who have been absent to find out what they have missed and obtain materials that may have been distributed in class. In the event of serious 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.
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/shmtl). 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 11
**Introduction to the Course**
History of environmental health, Problems, Definitions, Perspectives, Trends in environmental health.

*Reading:* Chapter 1

September 18
**Environmental Epidemiology**
Basic background, Data sources, Incidence and prevalence, Types of studies, Issues of study design and analysis, 2x2 tables, RR, OR

*Reading:* Chapter 3

September 25
**Toxicology**
History, Routes of exposure, Factors affecting toxicity, Environmental media.

*Reading:* Chapter 2

October 2
**Risk Assessment & Risk Communication**
Risk assessment paradigm, Adverse effects of toxins, Risk communication.

*Reading:* Chapter 15

October 9*
*Please note class location below*
**Occupational Health: Protection & Practice**
Mitch Rosen, PhD, Director, Rutgers SPH Office of Public Health Practice
Engineering, administrative and PPE controls, Detecting contamination, Air monitoring, Workplace safety, Demonstrations.

*Reading:* Chapter 4, *History of Occupational Medicine, Triangle Shirtwaist Fire, Improvements in Workplace Safety*

October 16
**Occupational Health: Background & Theory**
History, Regulations, Most prevalent workplace hazards, TLV, STEL, TWA, Ergonomics, Means of protection.

*Reading:* Chapter 4, *Alice Hamilton, Ramazzini and Occupational Health, The Jungle (excerpt)*

October 23
**Midterm Exam**
October 30

**Environmental Contamination**
Hazardous material events, Contaminant properties, Human and animal health implications, Ecosystem effects, Policy implications.

*Reading:* See Sakai announcement and attached assignment for details regarding this week’s work

November 6

**Public Health & Environmental Law**
History and definitions, Legislative process, Police power, Emergency Health Powers Act, Significant legislation, Basis for lawmaking.

*Reading:* To be assigned

November 13

**Water, Wastewater, Solid Waste & Hazardous Waste**
Sources of water, Waterborne disease, Water treatment, Sewage treatment, Soil/Site evaluation, Septic systems. Means of disposal, Environmental risks, Health implications, Relevant laws and policies.

*Reading:* Chapters 7, 8, 9

November 20

**Disaster Preparedness & Response**
Kevin Sumner, MPH, Middle-Brook Regional Health Commission
Environmental issues related to natural and man-made disasters; Public health response to these issues.

*Reading:* Chapter 17

November 27

**Food Safety & Foodborne Illness**
Assignment Due
Causes of illness, Types of illness, Food danger zone, Bacteria survival, Salmonellosis, Botulism, Staphylococcus, E. coli.

*Reading:* Chapter 6

December 4

**Air Pollution**
Atmospheric pollutants, Ambient air quality, Clean Air Act, NAAQS, Ozone, Global warming, Acid rain and deposition, Population growth.

*Reading:* Chapter 5 (pp. 87-102, 105-112), Chapter 18 (pp. 421-424, 435-445)

December 11

**Global Health**
Mark G. Robson, PhD, MPH, Dean of Agricultural and Urban Programs, Professor of Entomology, Rutgers University
Global public health challenges; Infrastructure, environmental diseases and remediation; Long term opportunities for research and education.

*Reading:* Handouts

December 18

**Final Exam (TBD)**