

## Human Health, Disease, and the Environment in History

HMed 3040  
Spring 2004  
TTh 9:45-11:00  
Weaver/Densford 2-120/30

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Office Hours:  
T: 1:00-2:00  
W: 1:00-2:00

**Purpose:** This course is an introduction to the changing relationship of human health and disease and the environment in which humans exist. We will explore the complex ecological determinants of human health, and employ historical analysis to demonstrate how human-induced environmental changes have altered our experiences with disease and our prospects of health. In the process we will follow some of the major themes which historians interested in human health and its relationship to the environment have pursued. We will explore the changing patterns of human disease from the Neolithic Period to the present and discuss the types of evidence used to reconstruct and explain those changing patterns. Such evidence is drawn from a variety of scientific and scholarly fields. We will not only discuss what this diverse evidence can suggest about the history of human disease and environmental change but also the very significant problems of interpreting such evidence. We will also illustrate the magnitude of the interpretative problems by demonstrating how scholarly explanations of these phenomena have changed over time. This course is intended to form part of a general liberal arts education and assumes no special technical knowledge of the biomedical sciences.

### **Course Requirements:**

1. Mid-term examination. Tentatively scheduled for March 9 (25%)
2. A critical essay to be written out of class as submitted during Week 11 (25%)
3. Comprehensive final examination. Wed. May 12, 8:00-10:00 (50%)

You are welcome to enroll in this class on an "S/N" basis. To earn an "S" your performance must meet the minimum standard for the grade of "C."

If you have special needs that will affect your performance in this class, please discuss these with the instructor during the first week of class.

**Texts:** Available for purchase at Coffman Union Bookstore. Also on reserve at the Learning Center, Biomedical Library, Diehl Hall.

Alfred W. Crosby, Columbian Exchange: The Biological and Cultural Consequences of 1492.

Alfred W. Crosby, Ecological Imperialism: The Biological Expansion of Europe, 900-1900.

Herlihy, David. The Black Death and the Transformation of the West.

McNeill. William H. Plagues and Peoples.

David Rosner and Gerald Markowitz, Deadly Dust: Silicosis and the Politics of Occupational Disease in Twentieth-Century America

Laurie Garrett, The Coming Plague: Newly Emerging Diseases in a World out of Balance

A packet of photocopies

**Tentative Class Schedule:**

Week 1 (Jan. 20-22)

Class Meetings:

1. Course Introduction
2. Understanding Infectious Disease: Host, Agent, and Environment

Reading:

Begin reading for week 2.

Week 2 (Jan. 27-29)

Class Meetings

1. How Do We Know What We Think We Know about Disease and Environmental Change in the Distant Past ?
2. The Neolithic Revolution & Human Wellbeing: Crops, Herds, and Epidemics

Reading:

McNeill, Plagues and Peoples, Chap 1 & 2.

Crosby, Ecological Imperialism, Chap 1 & 2.

Week 3 (Feb 3-5)

Class Meetings:

1. Civilization and the Formation of Endemic Disease Pools
2. War, Trade, and the Confluence of Disease Pools in the Ancient World

Reading:

McNeill, Plagues and Peoples, Chap 3.

Begin reading Hurlihy, Black Death

Week 4 (Feb 10-12)

Class Meetings:

1. Rodents, Fleas and Human Epidemics: Plague in Northern Europe
2. War, Famine, and Typhus in Northern Europe

Reading:

Herlihy, Black Death.

Week 5 (Feb 17-19)

Class Meetings:

1. European Colonialism and Its Consequences, I: Old World Infections in the New World
2. European Colonialism and Its Consequences, II: New World Foods and Old World Populations

Reading:

Crosby, Columbian Exchange, Chap. 1,2,3,5.

Week 6 (Feb 24-26)

Class Meetings:

- 1 European Colonialism and Its Consequences, III. What Happened when We Introduced Western Agriculture Abroad?
2. Human Infection as a Complex Environmental and Evolutionary Product: Tuberculosis as a Exemplary Disease.

Reading:

Crosby, Ecological Imperialism, Chap. 5-11.

Week 7 (March 2-4)

Class Meetings:

1. Insects, Agriculture and Health: The History of Endemic Malaria and Yellow Fever
2. Agricultural Systems and Chronic Disease: The History of Pellegra and Hookworm Disease

Reading:

Darrett B. Rutman and Anita H. Rutman, "Of Agues and Fevers: Malaria in the Early Chesapeake," *William and Mary Quarterly*, 33 (1976), 31-60 (packet).

Erwin H. Ackerknecht, *Malaria in the Upper Mississippi Valley 1760-1900* (Baltimore: Johns Hopkins University Press, 1945), 62-98 & 125-128 (packet).

Week 8 (March 9-11)

Lecture:

Mid-Term Examination

2. The Industrial and Agricultural Revolutions and Environmental Change

## Reading:

Edwin Chadwick, *The Sanitary Condition of the Labouring Population of Great Britain* (London, 1842), 5-6, 15-19, 26-33, 98-101, 111-113, 124-130, 153-159, 188-211, 368-372 (packet).

Carleton B. Chapman, "The Year of the Great Stink," *Pharos*, 35 (July 1972), 90-105 (packet)

Week 9 (March 16-18) Spring Break

Week 10 (March 23-25)

## Class Meetings:

1. Precious and Fragile Resources: Air, Waste, and the New Industrial City
2. Did Environmental Reform in the Nineteenth Century do Any Good?

## Reading:

Thomas McKeown, "Medicine and World Population," *Journal of Chronic Disease*, 18 (1965), 1067-77.

Arthur Newsholme, *Annual Report on the Health, Sanitary Condition, &c. of the Borough of Brighton for the Year 1896* (Brighton, 1897) (packet)..

Gretchen A. Condran, Henry Williams, and Rose A. Cheney, "The Decline in Mortality in Philadelphia from 1879 to 1930: The Role of Municipal Services," *Pennsylvania Magazine of History and Biography*, 108 (April 1984), 153-177 (packet).

Week 11 (March 30-April 1)

## Class Meetings:

1. Dust and Lung Disease: Old Risks, New Technology
2. Lead and Mercury in the Workplace and the Health of Workers

## Readings:

Rosner and Markowitz, *Deadly Dust*, Chap 1-4.

Essays: Your out-of-class essay will be due this week.

## Week 12 (April 6-8)

## Class Meetings:

1. Lead and Mercury in the Environment and the Health of the Public
2. Environmental Reform and the Emergency of Infection: The Ironic History of Epidemic Poliomyelitis

## Reading:

Rosner, David and Markowitz, Gerald. "A 'Gift of God?': The Public Health Profession and the Controversy over Tetraethyl Lead during the 1920s," Am. J. Pub. H. 75(1985), 344-52.

Needleman, Herbert L. "The Removal of Lead from Gasoline: Historical and Personal Reflections," Environmental Research, 84 (2000), 20-35.

Markowitz, Gerald & Rosner, David. "'Cater to the Children': The Role of the Lead Industry in a Public Health Tragedy, 1900-1955," Am J. Pub. H., 90 (2000), 36-46.

## Week 13 (April 13-15)

## Class Meetings:

1. New Forces, New Risks: X-rays and Radioactivity in the Early Twentieth Century
2. Asbestos: The Damage Doesn't End at the Factory Door

## Reading:

Begin reading Garrett, The Coming Plague

## Week 14 (April 20-22)

## Class Meetings:

1. Drugs in the Clinic and on the Farm and the Emergence of Microbial Antibiotic Resistance
2. Epidemiology and Lung Cancer: The Discovery of Environmental Carcinogens

(Week 14 continued)

Reading:

Garrett, Coming Plague, Chap. 2 & 13.

Week 15 (April 27-29)

Class Meetings:

1. Emerging Infections
2. Wired: Electrical Energy and the Public Health

Readings:

Garrett, Coming Plague, 4-7.

Week 16 (May 4-6)

Class Meetings:

1. It's a Very Small World: The Origins of the AIDS Pandemic
2. Nation-building and Infectious Disease: The Plight of the Developing World

Readings:

Garrett, Coming Plague, Chap. 10, 11, 14, 17.