I. Course Description

A tutorial designed for students who have completed or are in the process of completing the core curriculum. Limited to two students and designed for independent study and inquiry with weekly sessions to share the material reviewed over in the previous week.

The Artificial Epidemics and Changes in Human Culture Independent Study course will provide a close examination of how human behavior affects the development and spread of so-called “artificial epidemics,” primarily covering non-communicable diseases. Diseases and conditions reaching epidemic proportions - such as coronary artery disease, lung cancer, carpal tunnel syndrome, Lyme disease, and ectopic pregnancy, among others – will be examined in order to discern how cultural influences can impact both the rise of diseases as public health issues and their subsequent decline in incidence.

II. Course Objectives:

The course will allow students to understand underlying causes for the growth in prevalence of diseases and societal impacts of epidemics. The course will provide us with a relevant history of public health events, and the reaction to these events by authorities, physicians, and the general public. Students will have the opportunity to:

1. Acquire and review relevant literature pertaining to disease epidemics, in order to understand epidemic characteristics and management
2. Define an epidemic, and identify the response from various stakeholders to these epidemics
3. List major effects of each epidemic (e.g. death toll, economic/disability costs), why these effects are so substantial, and what long-term impact these effects have had
4. Describe research methods used to study epidemics
5. Explain underlying cultural influences that have driven the growth of each respective disease/condition to epidemic proportions
6. Explain changes in culture as a result of these epidemics, including the effects of the epidemics on human behavior and public policy

III. Grading Policies:

Course grades will be based upon:

Critical review of assigned readings on a weekly basis* and participation in discussion in the tutorial session. (50%)
Weekly short (1-2 page) reflection on the week’s assignment (20%)
Final project (30%)

As a final project, students will select a disease not previously covered in the course and create a folder of relevant sources (media, case reports, scientific research, etc.) to be used as teaching aids in subsequent classes.

*Questions to be considered for each “Epidemic”

1. What is/was the impact of the epidemic on society? (Including health/death toll, disability/economic costs, etc.)
2. What are the underlying risk factors for the disease in question? How were these risk factors identified (i.e. by what research methods)? Why did these researchers focus on this particular epidemic?
3. What changes in culture might have lead to this epidemic (including, for example, the context of contemporary population dynamics, politics, economic situation, environment, and human behavior)?
4. Is the disorder in question still a problem today? If so, why does it remain? If not, what cultural influences have contributed to the decline in its incidence?
5. Can an epidemic of this disease reoccur (or become worse)? What has been done/should be done to prevent this kind of epidemic?
7. Who were the investigators of these epidemics and what role did their prior experiences play in the elucidation of the possible causes of the epidemic.

IV. Course Workload

Weekly attendance and participation in discussion, weekly preparation of cases, weekly writing assignments, final project.

V. Course Evaluation

The MPH Program administers web-based course evaluations to students for each course near the end of the quarter. Your completion of both the unit (course) and faculty evaluation components is required; failure to complete either of the evaluations will result in an incomplete
grade until the evaluations are submitted. You will be sent the web link and instructions via email later in the quarter. You will have about two weeks to complete the evaluations before grades are submitted.

VI. Academic Integrity
Every Northwestern faculty member and student belongs to a community of scholars where academic integrity is a fundamental commitment. The Program in Public Health abides by the standards of academic conduct, procedures, and sanctions as set forth by The Graduate School at Northwestern University. Students and faculty are responsible for knowledge of the information provided by The Graduate School on their Web page at http://www.tgs.northwestern.edu/academics/academic-services/integrity/index.html

Academic misconduct includes, but is not limited to
1. Receiving or giving unauthorized aid on examinations or homework
2. Plagiarism
3. Fabrication
4. Falsification or manipulation of academic records
5. Aiding or abetting any of the above

The PPH follows The Graduate School’s procedure for evaluating alleged academic misconduct, as outlined on the TGS website. http://www.tgs.northwestern.edu/academics/academic-services/integrity/dishonesty/index.html

Faculty reserve the right to use the “Safe Assignment: Plagiarism Detection Tool” that is part of the Course Management System to evaluate student assignments. Information about this tool can be found at http://www.it.northwestern.edu/education/course-management/support/assessments/safeassignment.html

VII. Course Outline

Week 1: Eating and drinking in early 20th century America: Pellagra, Jake Leg
Week 2: Big Killers Emerge During the Cold War: Lung Cancer, Cardiovascular Disease
Week 3: Hazardous Employment: Occupational Lead Poisoning, Carpal Tunnel Syndrome
Week 4: Women at Risk: Silicon Workers Reproductive Health Risk, Ectopic Pregnancy
Week 5: Discovered in the Morgue: Heat Wave, Parkinson’s Dementia Complex of Guam
Week 6: Outdoor recreation in the late 20th century: Lyme Disease, Melanoma

Other possible topics: Depression, Obesity, Neural Tube Defects.
VIII. Course Materials (available to students for review)

**Pellagra**


Jake Leg

Baum D. Jake Leg How the blues diagnoses a medical mystery. The New Yorker 2003, September 15, 50-57.


No author. Jamaica ginger legislation – A new California law. 1931;34:378-379


Lung Cancer
Cardiovascular Disease
Occupational Lead Poisoning


No author. Adult blood lead epidemiology and surveillance. JAMA 1993;269:1373.


**Carpal Tunnel Syndrome**


OSHA, US Department of Labor. Success with Ergonomics. (undated report from perhaps 2002 describing a decrease in injury claims and costs associated with CTD-related repetitive strain injuries in the insurance industry.)


Email message about “support knitting gloves” for wrist ache and numbness and tingling in the fingers. October 14, 1996.

Medline search print outs showing articles related to carpal tunnel syndrome in paraplegics, grocery store workers, sheep shearers, cardiac sonographers, and those with trichotillomania, among others.
Silicon Chip Workers and Reproductive Risks


Chepesiuk R. Where the chips fall: environmental health in the semiconductor industry. Environ Health Perspect. 1999 September; 107(9): A452–A457.


Richards B. Computer-chip plants aren’t as safe and clean as billed, some say. Wall Street Journal, October 5, 1998, p1A, 13A


Ectopic Pregnancy
Heat Wave


Kiernan L, Zielinski G. Casualties of heat just like most of us. Chicago Tribune, July 23, 2000, Sec. 1, p 1,6.


Royko M. Killer heat wave or a media event? Chicago Tribune, July 18, 1995, Sec. 1, p 3.


Schreuder C, Gorner P. Coroners don’t always agree on when heat kills. Chicago Tribune, July 18, 1995, Sec. 1, p 1, 6.


Parkinsonism-Dementia Complex of Guam


Monmaney T. This obscure malady. The New Yorker, October 29, 1990, pp 85-113.


Lyme Disease (incomplete list)


Vartiovaara I. Living with Lyme. Lancet 1995;345:842
Melanoma


No author. Teens should be banned from tanning booths, doctors say. CNN.Com Accessed 9/24/2011.


