

**SST 295-02**  
**SPECIAL TOPICS: HEALTH GEOGRAPHY**  
**Fall 2007**

**Tues 10-11:50 am, Thurs 10-10:50 am, Goodnow 105**

**Instructor:** Eric D. Carter  
**Office Hours:** Wed. 1-6 pm (drop-in)  
or by appointment

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**Course Description and Objectives:**

This course examines the geographical dimensions of health and disease. Conventionally, health and disease are considered the exclusive domain of medical scientists, whose frame of reference typically involves individuals – their symptoms, behaviors, organs, cells, and DNA. This often-microscopic perspective is absolutely essential to the promotion of human health, but increasingly there is widespread recognition of the need to view health issues at broader scales (at community, national, and global levels) and as the outcome of interrelated social and environmental processes. This course explores a variety of important approaches and themes in health geography: (1) the **human ecology** approach to health; (2) concepts, data analysis, GIS, and mapping in **spatial epidemiology**; (3) pollution, toxins, and other **man-made hazards to human health**; (4) the **social environment** and risk factors for non-communicable diseases, such as cancer, cardiovascular disease, and diabetes; (5) distribution and delivery of **health care resources**; (6) the **spatial diffusion** of infectious diseases; (6) the **disease ecology** approach to understanding infectious and vector-borne diseases; and (7) emerging threats to **global health** and security, such as HIV/AIDS and bioterrorism.

**Required Books and Other Readings:**

There are two required books for this class:

Meade, M. S. and R. Earickson (2005). *Medical Geography*. 2nd edition. New York, Guilford Press. ISBN: 1-59385-160-X (This book is available at the college Bookstore)

Kolata, Gina (2001). *Flu: the story of the great influenza pandemic of 1918 and the search for the virus that caused it*. New York: Touchstone. ISBN: 0-7432-0398-4 (This book is also at the college Bookstore.)

In addition, there will be other required readings (from newspaper, magazine, and journal articles, and excerpts from books or book chapters). All of these will be available either *electronically* (via this course's site on Blackboard) or handed out in class.

**Online Resources**

For this course, many important items will be posted on Blackboard. This includes all course handouts, assignments, readings, and links to important websites. Bear in mind that some materials will be available exclusively via Blackboard, so familiarize yourself with this system.

If you find links to web-based content that you think might be interesting for the whole class, please email the instructor! This will help improve the course for this and future semesters, and your contributions will be reflected in your attendance and participation grade.

## **Class Attendance and Participation Policy:**

In this class, 10 percent of your grade derives from attendance and participation. Consistent attendance is necessary to fully comprehend the course material, and there will be plenty of opportunities to participate in this class. In general, "participation" means speaking up and making yourself noticed in positive and intelligent ways. Recognize that "participation" can include many kinds of contributions: asking questions in class, contributing to class discussions, coming to see the professor during office hours with questions or comments, sending the professor emails about interesting news stories or articles, and so forth. If you attend class consistently (zero or very few absences) and participate frequently, while making significant contributions to everyone's learning experience, you can expect to get a 10 out of 10 for attendance and participation. If you show up to every class but never say anything, you will get fewer points. If you miss many classes, and then make little or no effort to participate, you should expect to get a very low attendance/participation score.

Any exam or in-class activity that is missed because of an unexcused absence will receive a zero. An excused absence is given only through prior permission of the instructor, and for medical reasons or family emergencies. In the latter two cases, notice must be provided through either the health center or academic affairs. Please do not be late as this is disruptive to the class. If you do come late it is your responsibility to ensure that I have marked you as present.

## **Academic Dishonesty Policy:**

Academic dishonesty will not be tolerated in this course. Acts of academic dishonesty include, but are not limited to, plagiarism, fabrication, cheating, stealing or buying copies of exams or papers, unauthorized collaboration, and taking exams for someone else. Be aware that at Grinnell penalties for academic dishonesty include verbal reprimand, written reprimand, lowering of grade on a specific exam or assignment, a failing grade on specific exam or assignment, lowering of course grade, a failing course grade, and suspension and expulsion from the university. Depending on the circumstances of the infraction, you may be subject to any of these penalties. For more details, see the college's brochure on Academic Honesty at <http://www.grinnell.edu/academic/writinglab/writers/academichonesty.pdf>. This brochure not only contains information about the college's policy on this matter, but great tips on how to avoid plagiarism.

## **Course Requirements/Assignments:**

- 1) Attendance and Participation (see above)**
- 2) Exercises.** There will be three homework exercises, each worth 5 percent of your grade. The purpose of these exercises is to apply the concepts and analytical tools of health geography, such as demography, spatial epidemiology, and disease diffusion, to specific health problems. The instructions for these exercises will be posted on Blackboard, and much of the material you need for the exercises will be available via the Internet.
- 3) Research Project.** You will be expected to complete a 12-15 page research paper that explores a specific health issue using the general concepts you are learning in this course. You will be provided with a list of possible topics but you are free to pursue a topic of your own, with the approval of the instructor. Overall, the research paper assignment is worth 30 percent of your grade, although only 20 percent of your grade derives from the final version of the paper.

- 4) **Exams.** There will be two exams. Each exam will contain matching, multiple-choice, short-essay, and map location questions. You should expect to be tested on lectures, readings, and exercises. The final exam will be worth more than the midterm exam because it will be comprehensive (i.e. it will cover topics from throughout the semester).

### **Grading:**

Attendance and Participation	10%
Exercises (3 x 5%)	15%
Research Project	30%
Midterm Exam	15%
Final Exam	30%
TOTAL	100%

If necessary, I will use a curve to decide **final** course grades.

### **Course Outline**

Note: "TEXT" refers to Meade & Earickson textbook. Also, I reserve the right to add assigned readings, with fair warning.

#### **Week 0. Introduction.** (Thurs, Aug. 30)

TEXT, Chapter 1

Earickson, Robert (2007), "Introduction to special issue: Eleventh International Medical Geography Symposium," *Social Science & Medicine* 65: 1-6

Weiss, Rick (2002), "Challenges for Humanity: War on Disease." *National Geographic*, Feb.

#### **Week 1. Fundamentals of the Health Geography Approach** (Sept. 4-6)

TEXT Chapters 2 and 12

Curtis, Sarah (2004), *Health and Inequality*, Chapter 1

#### **Week 2. Developmental Change and Human Health** (Sept. 11-13)

TEXT Chapter 4

Sen, A. (2001), "Economic Progress and Health" in Leon & Walt (eds.), *Poverty, Inequality, and Health: An International Perspective*, Chapter 17.

**EXERCISE 1, "Understanding Demographic and Health Indicators," due Thurs. Sept. 13**

#### **Week 3. The Pollution Syndrome** (Sept. 18-20)

TEXT Chapter 6

Brown & Mikkelsen (1997), *No Safe Place: Toxic Waste, Leukemia, and Community Action* (excerpt)

Additional readings T.B.A.

**Week 4. Geographies of Disease in Economically Developed Areas (Sept. 25-27)**

TEXT Chapter 7 & 13  
Curtis (2004), *Health and Inequality*, Chapter 4  
*New York Times* series on diabetes

**EXERCISE 2, "Spatial Analysis and Mapping in Health Studies," due Thurs. Sept. 27**

**Week 5. Geographies of Health Care (Oct. 2-4)**

TEXT Chapters 9-10  
Other readings T.B.A.

**RESEARCH PAPER PROPOSAL AND WORKING BIBLIOGRAPHY DUE (Tues. Oct 2)**

**Week 6. Disease Diffusion in Space (Oct. 9-11)**

TEXT Chapter 8  
Other readings T.B.A.

**Exam Review Session, Thurs. Oct. 11**

**Week 7. Disease Diffusion in Space cont'd (Oct. 16-18)**

**MIDTERM EXAM, TUES. OCT. 16** (will cover material through week 5)

**EXERCISE 3, "Disease Diffusion: Maps and Simulations" due Thurs. Oct. 18**

**FALL RECESS – NO CLASS OCT. 23 & OCT. 25**

**Week 8. Disease Ecology and Emerging Infectious Diseases (Oct. 30 & Nov. 1)**

TEXT Chapter 3  
McMichael, A. J. (2004), "Environmental and social influences on emerging infectious diseases: past, present and future." *Philosophical Transactions of the Royal Society of London Series B-Biological Sciences* 359 (1447): 1049-1058.  
Other readings T.B.A.

**RESEARCH PAPER OUTLINE DUE (Thurs. Nov. 1)**

**Week 9. Infectious Diseases: Evolutionary and Historical Perspective (Nov. 6-8)**

McNeill, W.H. (1976), *Plagues and People* (excerpt)  
Other readings T.B.A.

**Week 10. Influenza (Nov. 13-15)**

Kolata, G. (1999), *Flu: the story of the great influenza pandemic of 1918 and the search for the virus that caused it.*

**Week 11. Vector-Borne Diseases: Malaria** (Nov. 20-22)

Gladwell, M. (2001), "The Mosquito Killer"  
Sachs & Malaney (2002), "The economic and social burden of malaria"  
Caldas de Castro, et al. (2006), "Malaria Risk on the Amazon Frontier."

**RESEARCH PAPER POLISHED DRAFT DUE (Tues. Nov. 20)**

**NO CLASS THURS. NOV. 22 – THANKSGIVING**

**Week 12. Other Vector-Borne Diseases** (Nov. 27-29)

Readings T.B.A.

**Week 13. HIV/AIDS in Global Perspective** (Dec. 4-6)

Readings: Kalipeni, E. et al. (2004), *HIV and AIDS in Africa: beyond epidemiology* (excerpts).

**Week 14. HIV/AIDS, cont'd** (Dec. 11-13)

**RESEARCH PAPER FINAL DRAFT DUE (Thurs. Dec. 13)**

**FINAL EXAM: WEDNESDAY, DECEMBER 19, 2:00 PM**