GEOGRAPHY 446
Medical Geography: The Geography of Health and Healthcare

University of North Carolina, Department of Geography

Monday, Wednesday, Friday
12-12:50pm

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Office Hours: Monday & Wednesday 1-2pm or by appointment

Course Description and Objectives
This course surveys medical geography, a subdiscipline which encompasses a broad range of geographical work on health and health care. Medical geography deals with human-environment interactions and the influence these interactions have on public health. What distinguishes medical geography from the discipline of geography as a whole is simply its thematic focus, not its methods or theoretical grounding. The focus of this course will be on geographical patterns of health and disease from the viewpoint of populations rather than individuals. The focus of *medicine* is on the treatment of individuals; our focus, like that of *public health*, will be on understanding health and disease from the perspective of populations.

Throughout the semester we will use the concepts and techniques of the discipline of geography to investigate a variety of health-related topics. The course is structured using three major approaches to medical geographic research: ecological approaches, which systematically analyze relationships between people and their environments; social approaches, including political economy and socio-behavioral approaches; and spatial approaches, which employ maps and spatial statistics to identify patterns of single and associated variables. Students are encouraged to view these three approaches as complimentary. Much research in medical geography incorporates ecological, social and spatial theories and methodologies. Medical geography is an integrative and multidisciplinary, incorporating contributions from a wide range of specialties. Specific course objectives include:

1) Facilitate a critical understanding of health, disease, illness, and society;
2) Introduce some of the major contemporary issues in global health;
3) Promote an understanding of how geography as a discipline contributes to understanding health and health care;
4) Understand the impact of ecological change on health;
5) Utilize maps to examine the spatial patterns of disease and risk factors that may contribute to disease; and
6) Within the context of the course content, improve writing, communications, critical thinking, and analytical skills.

Class policies
- Attendance is very important. While I will cover much of the material in your readings, I will present new materials in class which you will be expected to know for assignments and exams. If you cannot attend a class, please let me know beforehand. If you have a valid reason for missing a class (medical, family issue, conference, etc) you will be given the opportunity to make up any for-credit activities you missed. Please note that leaving early for spring break is not a valid excuse.

- Students are expected to abide by the UNC Honor Code at all times. Plagiarism, falsification of data, cheating, and other types of academic misconduct will be handled according to university guidelines. To review UNC's Honor Code see: http://honor.unc.edu/students/welcome.html
- You are expected to hand in all exercises and papers on time. A late assignment will be penalized 10% for each day it is late, except under special circumstances (see attendance policy).
- Please be respectful of you class colleagues and instructor. Class disruptions and side conversations should be kept to a minimum. This includes turning ***off*** your cell phone ringer when you enter the class.
- Students will special needs should bring these to my attention during the first two weeks of class. Appropriate accommodations will be made.

Readings

Please do all assigned readings each day before coming to class

Two texts are required for the course:

- Meade, M.S. and Earickson, R.J. 2000. *Medical Geography*, 2nd ed. New York: The Guilford Press.
- McMichael, T. 2001. *Human frontiers, environments and disease*. New York: Cambridge University Press.

Dr. Mead is in the process of writing the 3rd edition of *Medical Geography* and I will periodically post new or revised chapters on Blackboard.

Other Readings

In order to get adequate breadth in the course I have selected a variety of additional required readings, most from major peer-reviewed journals such as *Social Science and Medicine, Health and Place* or *The Professional Geographer*. Whenever possible, I will make these readings available on Blackboard, though all should be available for you to download through the library's e-journals. Please bring copies of these readings, or at least your notes on them, to class on the days that these readings are assigned as we will be discussing many of them in class.

Assignments

The points available for the course are divided among a large number of activities to ensure that no one is excessively penalized for falling down on one particular activity.

Activity	**% of Grade**
Ecological Approaches Exam	20
Spatial Approaches Exercise	15
Book Review	15
Research Paper	30
Final Exam (cumulative)	20

The ***Spatial Approaches Exercise*** will involve map creation and interpretation.

For the ***Book Review Assignment*** you have a choice of several books that represent one or more of the geographic approaches we will discuss during the course of the semester. Please choose *one* of these books for your review. I recommend reading your book earlier in the semester so that you can think about how the content fits into the theories, methodologies and subject matter we will discuss. The book review should be between 3 and 5 pages and should include a short review of the content and purpose of the book and a discussion of how this topic fits into the subdiscipline of medical geography. The book choices are:

- Shabecoff, P. and Shabecoff, A. 2008. *Poisoned Profits: The Toxic Assault on our Children*. New York, Random House.
- Fadiman, A. 1997. *The spirit catches you and you fall down: A Hmong child, her American doctors and the collision of two cultures.* New York: Farrar, Straus and Giroux.
- Verghese, A. 1994. *My own country: A doctor's story.* New York: Vintage Books.
- Wills, C. 1996. *Yellow Fever, Black Goddess.* New York: Addison-Wesley.
- McNeill, W. 1977. *Plagues and People*. New York: Doubleday.

The ***Research Paper*** will allow you to develop a more complete understanding of the spatial distribution, spread or etiology of a specific disease. Papers should be between 10 and 15 pages, include at least one map, and all research materials must be cited. The major point of the research paper should be the spatial distribution of a disease/illness and your research should focus on explaining that distribution. Therefore, map analysis is very important. We will cover mapping and map interpretation during the spatial approaches section of the course.

You will be asked to complete this paper in stages. Each section you submit will be graded separately and ***that will be your final grade on that section***! This may seem like an odd way to write a paper but it ensures that you will not wait until the last minute to complete an assignment that is worth 1/3 of your total course grade and allows you to receive feedback from me at certain critical points during your research. Due dates for each section are noted in the syllabus.

- Part 1: Introduction (two paragraphs on project topic) – 15%
- Part 2 & 3: Literature Review and Description of Data Used for Map – 40%
- Part 4 & 5: Map analysis, Conclusions and Appendices – 45%

Detailed instructions for the research paper will be available on Blackboard during the first few weeks of the semester.

Graduate Students will be asked to complete two additional assignments. First, you will be expected to present your term paper at the end of the semester in a 15 minute presentation. Second, you will be asked to help present one of the case studies I have set aside time for in the syllabus. The grading system will be adjusted to accommodate these additional assignments.

Blackboard

Course material will be available to enrolled students on the course's Blackboard website. Access this site at http://blackboard.unc.edu. You will need to log in using your onyen and password, proceed to this course's site, and select whatever link is appropriate.

Note: If you have trouble gaining access to this site early in the semester, follow the link "Having trouble logging in?" on the Blackboard site.

The Writing Center

The Writing Center is excellent resource available to all UNC students. I encourage everyone to become familiar with their services and take advantage of the assistance they can provide on your research papers. Information on those services and many useful ideas on research and writing are at: www.unc.edu/depts/wcweb.

Date	Topic	Readings	Assignments
INTRODUCTION/EPIDEMIOLOGY CONCEPTS			
12,14 Jan	Introduction to Medical Geography, Geography of Health and Healthcare, Concepts of Health and Disease	M & E, Chapter 1 (**new on Blackboard**) Mayer, JD. 1982. Relations Between Two Traditions of Medical Geography, *Progress in Human Geography*, 6:216-230. Rosenberg, M.W. 1998. Medical Geography or Health Geography? Populations, peoples and places. *International Journal of Population Geography*, 4:211-226.	
16,19 Jan	NO CLASS		
ECOLOGICAL APPROACHES			
21 Jan	Epidemiological Terminology		
23, 26, 28 Jan	Disease Ecology Landscape Epidemiology	M & E, Chapter 2 (**new on Blackboard**) M & E, Chapter 3	
30 Jan	Case Study: Cholera		
2, 4, 6 Feb	Emerging and Re-emerging Diseases: Ecological Change, Evolution of Pathogens & People	Mayer, J. 2000. Geography, ecology, and emerging infectious diseases. *Social Science and Medicine* 50: 937-952. Emch, M.E. and Root, E.D. 2008. Emerging and Reemerging Infectious Diseases. *Companion to Health and Medical Geography*	
9, 11 Feb	Emerging and Re-emerging Diseases: Population Change: Demographic & Epidemiological Transitions, Migration, Mobility and Globalization	M & E, Chapter 5 (**new on Blackboard**)	
13, 16 Feb	Emerging and Re-emerging Diseases: Food and Nutrition	McMichael, Chapters 5 (pp. 126 -151) and 8 (pp. 220-240)	
18, 20 Feb	Emerging and Re-emerging Diseases: Environmental Exposure	M & E, Chapter 7 (**new on Blackboard**)	
23 Feb	Case Study: Coal Mining and Cancer	Joyce, S. 1998. Major Issues in Miner Health. Environmental Health Perspectives,106(11): A538-43 Weinberg, G.B., L.H. Kuller, and P.A. Stehr. 1985. A case-control study of stomach cancer in a coal mining region of Pennsylvania. *Cancer* 56:703–713.	Introduction Due
25 Feb	**Exam 1**		

SPATIAL APPROACHES			
27 Feb	Introduction to Spatial Analysis		
2, 4, 6 March	Health Data and Terminology, GIS and Public Health	M & E, Chapter 3 (**new on Blackboard**)	
9-13 March	NO CLASS – Spring Break		
16, 18 March	Visualizing Geographic Health Data	M & E, Chapter 12 (**new on Blackboard**)	
20 March	Case Study: GIS and Health Services		Spatial Ex. Due
SOCIAL APPROACHES			
23-27 March	NO CLASS – AAG Meeting		Literature Review Due (March 27th)
30 March, 1 April	Introduction to Social Approaches: the Social Context of Disease	*Optional: Northridge, M., E. Sclar and P. Biswas. 2003. Sorting out the Connections Between the Built Environment and Health. J Urban Health, 80 (4): 556-568.*	
3 April	Global Inequalities in Health/Healthcare Health Care Accessibility and Utilization	M & E, Chapter 11 (**new on Blackboard**) *Optional: Garrett, L. 1994. Thirdworldization. The Coming Plague. New York: Penguin Books, 457-527.*	
6, 8 April	Health Care Systems Worldwide (Comparative Health Systems)	M & E, Chapter 11 (**new on Blackboard**)	
10 April	NO CLASS – Holiday		
13 April	The Political Ecology of Health and Healthcare	Mayer, J. D. 1996. The Political Ecology of Disease as a New Focus for Medical Geography. *Prog. in Human Geography*, 20:441-456.	
15 April	Poverty and Health	M & E, Chapter 8 (**new on Blackboard**)	
17 April	Neighborhoods and Health	M & E, Chapter 9 (**new on Blackboard**)	Book Review Due
20 April	Therapeutic Landscapes	Gesler, W.M. 1993. Therapeutic landscapes: theory and a case study of Epidauros, Greece . *Env and Planning D*, 11: 171-189. Frumkin, W. 2003. Healthy Places: Exploring the Evidence. *American Journal of Public Health*, 93(9): 1451-1456.	
COMBINING ECOLOGICAL AND SOCIAL APPROACHES			
22 April	Vaccines and Disease Eradication Campaigns	Lutumba P, Robays J, et al. 2005. Trypanosomiasis control, Democratic Republic of Congo, 1993-2003. *Emerg Infect Dis* 11(9):1382-8. Van Herp, M., V. Parqué, E. Rackley, and N. Ford. 2003. Mortality, Violence and Lack of Access to Healthcare in the Democratic Republic of Congo. *Disasters* 27 (2):141-153.	

24 April	Cardiovascular Disease and Obesity	Lopez, A. D. 1993. Assessing the burden of mortality from cardiovascular disease. *World Health Stat Q* 46:91–96. Galobardes, B., G. D. Smith, and J. W. Lynch. 2006. Systematic Review of the Influence of Childhood Socioeconomic Circumstances on Risk for Cardiovascular Disease in Adulthood. *Annals of Epidemiology* 16 (2):91-104. Diez-Roux, A. 2003. Residential environments and cardiovascular risk. *J Urban Health* 80 (4):569-89.	
27 April	Review		Map Analysis and Conclusions Due
30 April	**FINAL EXAM – 12noon**		