## GEOG 805 International Development: Health and Disease Seminar

## **Spring 2012 Class meets:**

TH 5-7:30PM

Saunders Hall Room 204

Instructor: Mike Emch Email: <a href="mailto:emch@unc.edu">emch@unc.edu</a> Office: 326 Saunders Hall

Office hours: Wednesday 2-3:30, Thursday 3:30-5, or by appointment

### **Course Description**

Who gets what disease where, when, and why are basic questions of the geography of health. In this class, we examine human health from the human ecology of disease perspective which is concerned with the ways human behavior, in its cultural and socioeconomic contexts, interacts with environmental conditions to produce or prevent disease. We'll also explore disease distributions from a neighborhoods and health perspective, which is related to disease ecology. Disease ecology views human life as a process, a continual interaction between our internal (biological) and external environments. To understand disease you must study both the person and the place where it exists, and the dynamic and changing relationships between the two. Disruptions in the balance between humans and their environment, via migration, landscape change, climate change, etc. can have either a positive or negative effect on health outcomes. This class will begin with a theoretical grounding in field of disease ecology from a geographic perspective as well as the related area of inquiry, neighborhoods and health. Students will read, discuss, and critique some of the fundamental literature in these areas. Students will then develop and implement an individual project in which they will focus on the ecology of one health outcome of their choice.

### **Readings**

The discussion component of this course consists of discussions of the readings and therefore you should have read the material before class. Students are expected to come to class ready to be active participants in the discussion. To facilitate an interactive discussion each student will be a discussion leader once during the semester for which they will receive a grade. This person is responsible for leading the classroom discussion along with the instructor. They should come prepared with (a) a short (10 minutes max) presentation that reviews the material in the readings and (b) copies of open-ended questions for the readings. What is an open-ended question? They cannot be answered directly from the readings but should build on them and facilitate discussion. We will read the following books and papers but the first couple of weeks, class members will discuss the reading list and we might decide to add or replace some of the readings based on student interests.

#### Books

(We'll read all of Dubos and Ewald and parts of Meade & Emch and Kawachi & Berkman)

Rene Dubos, 1959, "Mirage of Health: Utopias, Progress, and Biological Change" New Brunswick, New Jersey: Rutgers University Press. 282 pages. ISBN: 0-8135-1260-3 (4th paperback printing- 1996)

Paul Ewald, 2002, "Plague Time: The New Germ Theory of Disease." New York: Anchor Books. 304 pages. ISBN: 978-0-385-72184-4. (paperback)

Meade, M.S. and Emch, M.E. (2010) "Medical Geography, 3rd ed. New York: The Guilford Press." 498 pages. ISBN: 978-1-60623-016-9 (hardcover)

Kawachi, I. and Berkman, L. (2003) Neighborhoods and Health. Oxford University Press. ISBN 0195138384 (hardcover)

# **Papers**

(We'll read these papers and the class will choose others based on interests. As mentioned above, we'll make that determination as a class during the first and second weeks.)

Hunter, JM, (1974) "The Challenge of Medical Geography, In J.M. Hunter (Ed.), The geography of health and disease (pp. 1-31). Chapel Hill: University of North Carolina, Department of Geography.

Meade, Melinda, (1977) "Medical Geography as Human Ecology: The Dimension of Population Movement" The Geographical Review 67(4): 379-393.

Emch, M.E. and Root, E.D. (2010) Emerging and Reemerging Infectious Diseases. Companion to Health and Medical Geography.

Diez Roux, AV. 2001. "Investigating Neighborhood and Area Effects on Health" American Journal of Public Health. 91(11): 1783-89.

### **Course Schedule**

Week: Date	Readings/ Activities
Week 1: Jan 12	Course Overview
Week 2: Jan 19	Rene Dubos, "Mirage of Health: Utopias, Progress, and Biological Change" Chapters 1-3.
	Brain storming: Students talk about ideas they have about their disease ecology.
	Another discussion of course readings- additions, replacements
Week 3: Jan 26	Meade & Emch, "Chapter 1: Questions of Medical Geography"
	Hunter, JM, (1974) "The Challenge of Medical Geography, In J.M. Hunter (Ed.), The geography of health and disease (pp. 1-31). Chapel Hill: University of North Carolina, Department of Geography.
Week 4: Feb 2	Meade & Emch, "Chapter 2: The Human Ecology of Disease"
	Two applied papers in disease ecology that we choose as a group
	One pager due: students give all other class members a one page disease ecology idea
	paper.
Week 5: Feb 9	K&B, "Chapter 1: Introduction" by Kawachi & Berkman
	K&B, "Chapter 2: Neighborhoods and Health: An Overview" by Macintyre and Ellaway Diez Roux, AV. 2001. "Investigating Neighborhood and Area Effects on Health" American Journal of Public Health. 91(11): 1783-89.
	Discuss/ critique 1/3 of class idea papers.
Week 6: Feb 16	K&B, "Chapter 3: The Examination of Neighborhood Effects on Health: Conceptual and Methodological Issues Related to the Presence of Multiple Levels of Organization" by

	Diez Roux
	K&B, "Chapter 4: Multilevel Methods for Public Health Research" by Subramanian,
	Jones, and Duncan
W 1.7 E 1.22	Discuss/ critique 1/3 of class idea papers.
Week 7: Feb 23	Meade & Emch, "Chapter 4: Landscape Epidemiology"
	Meade & Emch, "Chapter 10: Disease Diffusion in Space"
	Emch, M.E. and Root, E.D. 2010. Emerging and Reemerging Infectious Diseases.
	Companion to Health and Medical Geography.
Week 8: Mar 1	Discuss/ critique 1/3 of class idea papers.
week 8: Mar 1	Rene Dubos, "Mirage of Health: Utopias, Progress, and Biological Change" Chapters 4-6.
	Outline due: students give all other class members an outline of their disease ecology paper.
	Literature review due: students give to instructor
Week 9: Mar 15	Rene Dubos, "Mirage of Health: Utopias, Progress, and Biological Change" Chapters 7-8.
	Discuss/ critique 1/3 of class disease ecology outlines.
Week 10: Mar 22	Paul Ewald, "Plague Time: The New Germ Theory of Disease" Preface, Introduction and
	Part 1. AND/OR applied papers in disease ecology that we choose as a group
W. 1.11 M. 20	Discuss/ critique 1/3 of class disease ecology outlines.
Week 11: Mar 29	Paul Ewald, "Plague Time: The New Germ Theory of Disease" Part 2. AND/OR applied papers in disease ecology that we choose as a group
Week 12: Apr 5	Discuss/ critique 1/3 of class disease ecology outlines.  Paul Ewald, "Plague Time: The New Germ Theory of Disease" Part 3. AND/OR applied
	papers in disease ecology that we choose as a group
Week 13: Apr 12	3 possibilities:
	1. More N&H:
	K&B "Chapter 5: The Quantitative Assessment of Neighborhood Social Environments"
	by Raudenbush
	K&B "Chapter 5: Neighborhood-Level Context and Health: Lessons from Sociology" by
	Sampson  2. More medical geography/disease ecology.
	3. More applied papers in 1 &/or 2
Week 14: Apr 19	Disease Ecology Presentations
Week 15: May 3	Disease Ecology Presentations
	Final Papers Due

You will be graded throughout the semester in three areas: a) informal participation in class, which is a combination of physical and mental attendance; b) weekly assignments that will include readings, leading discussions, and reviews; and c) a final research paper to be submitted both as a written document and presented to the class in the form of a talk.

Weekly assignments: 50% Final paper and presentation: 50%