UEP 294-16: Environmental Health for Policy and Planning

Special Topics Course
Fall 2012

Instructor
Mary Davis
Office: 72 Professor's Row, 2nd Floor
Phone: 617-627-4719
Email: mary.davis@tufts.edu
Office hours: By appointment

Meeting Schedule
Wednesdays 9-11:30, White House classroom

Course Description
This course will provide an introduction to environmental health from a policy and planning perspective, with a focus on urban health issues. The epidemics of asthma, diabetes, and obesity have focused new attention on the role played by suburban sprawl, transportation, and the built environment on human health. This course will investigate a broad range of elements needed to foster healthy places, and will focus on topics such as the built environment and obesity, transportation and air quality, food insecurity, climate change, and health disparities, among many other topics. Through the class discussions, lectures, guest speakers, and weekly assignments, students will gain a broad understanding of modern environmental health problems. Students will have the opportunity to self-design certain aspects of the course to focus specifically on their interests through both the weekly applied tasks and the choice of project topic.

Skills to be Learned
Students will learn to use and apply various tools for researching environmental health problems, including mapping software to explore the spatial distribution of hazards and the use of health impact assessments to evaluate policy alternatives. We will critique a wide range of articles drawn from the academic literature on this topic, and students will practice valuable literature review and project design skills. The weekly tasks will provide an opportunity for students to apply the lecture topics to a real-world setting relevant to their own interests.

Prerequisites
Some of the required readings will be quantitative in nature, and for that reason a basic knowledge of statistics is a prerequisite for taking this course (UEP 254 or equivalent). Prior coursework in ArcGIS is not a requirement for this class. For that reason, the mapping tools discussed in class and applied in the weekly tasks will focus largely on accessible web-based tools for exploring the spatial distribution of environmental hazards. Students are encouraged to use ArcGIS to complete these tasks if they are able.

Textbook and Required Readings
Environmental Health: From Global to Local, 2nd edition, by Howard Frumkin is the required textbook for this course. A copy of this textbook is on reserve in the student lounge at the White House, and it is also available for purchase on Amazon (~$60). This textbook was chosen because it provides a broad overview of the topics covered in this course as well as many other environmental health topics relevant to policy and planning practitioners. Additional required readings will be drawn from the academic literature, and have been chosen to represent a well-rounded view of each week's topics. All readings and additional course materials will be made available on the Trunk course site (http://trunk.tufts.edu).

Class participation
Class participation is an important component of this class. Students are expected to do the required readings and to actively participate in class (and online) discussions.

Weekly Homework Tasks
A series of short written tasks will be posted online each week that require students to apply a topic covered in class to a real-world setting. Students are responsible for posting their task responses (300-500 words) on the designated discussion thread on Trunk, which will also be discussed in class. Students are strongly encouraged to constructively comment on the postings of others, which will be factored into individual student class participation scores. The deadline for posting task responses is Tuesday at 5pm, after which time the message board for that week's task will be closed. This will provide both the instructor and students sufficient time to read and/or comment on the contributions of others. Please note that there will be no credit given for late postings.

Example of a task from last year: "Examine your indoor home and work environments from a public health perspective. Can you identify at least three hazards? How would you correct them? Can you recognize additional hazards that might not impact yourself directly but could present a problem for susceptible sub-populations, such as children, the elderly, or the disabled?"

Final Project
Students will develop a project proposal document over the course of the semester, which will be due in sections as noted below. Scores for late project submissions will be reduced by one percentage point every day past the deadline, and zero credit will be given to submissions over one week late. These assignments are intended to represent a first step towards developing a research proposal in an environmental health topic, and

are designed to closely align with the UEP requirements for a thesis proposal document. The project elements are also well aligned with the basic components of a preliminary grant proposal. Students are required to properly reference each of their project assignments using the citation style supported by the journal *Environmental Health Perspectives*, a leading academic journal in environmental health. A number of helpful tutorials on writing different components of this assignment (literature review, methods, and referencing) are available on the Trunk course site under Project Files.

Project assignment #1 (Introduction): Develop a narrow research question related to an environmental health topic of interest to you. Provide some scientific/policy background for your topic and describe its importance (approximately 1 page).

Project assignment #2 (Literature Review): Conduct a literature search of your topic and write a section linking your research question to the existing literature on the topic (at least 3 pages).

Project assignment #3 (Methods): Develop an approach to answer your research question, and write a Methods section detailing your strategy for doing this work. The approach could be qualitative or quantitative, but should provide sufficient detail that it could be used as a template for later completion of the project (at least 2 pages).

Final project assignment: Students are expected to fully incorporate the instructor feedback received on each project assignment into a final project proposal. This final corrected version will be due at the end of the semester (exact date TBD), at which point each student will be responsible for making a short presentation of their proposal ideas to the rest of the class (exact date TBD). Additional guidance on the details of the presentation will be provided later in the semester.

Final Course Grade

Graded Component	**Score Allotted**	**Score Description**
Class participation	20%	Combination of in-class and online participation
Weekly homework tasks	20%	2% for each task; late submissions will not be accepted
Final project		
Individual paper assignments	21%	7% for each assignment; one percentage point deduction for each day late
Final (revised) version of project paper	24%	
In-class presentation	15%	

Course Outline

Week	Topic	Assignments Due	Textbook Readings*
Week 1: September 5	Introduction to environmental health		*Urban Sprawl and Public Health* (article)
Week 2: September 12	Introduction to environmental health, contd.	Task #1	Chapters 3,4
Week 3: September 19	Mapping and other EH research tools	Project #1	Chapter 28
Week 4: September 26	Environmental psychology and biophilia	Task #2	Chapters 5 and 24
Week 5: October 3	Transportation and health	Task #3	Chapter 12
Week 6: October 10	Built environment	Task #4	Chapters 14 and 19
Week 7: October 17	Built environment	Task #5	
Week 8: October 24	Food insecurity	Project #2	
Week 9: October 31	Food, water, and emerging pathogens	Task #6	Chapters 15 and 18
Week 10: November 7	Climate change and energy	Task #7	Chapters 10 and 13
Week 11: November 14	Cities in the developing world	Task #8	Chapter 11
November 21	*No class - Holiday*	Project #3	
Week 12: November 28	Health Impact Assessment	Task #9	
Week 13: December 5	Health Impact Assessment	Task #10	
TBD – Final exam week	Student presentations and final projects due		

*Please note that additional required readings (scholarly research articles) will be posted one week in advance of the lecture on the Trunk course site