

ENVS 408 - URBAN ENVIRONMENTS: THE URBAN ASTHMA EPIDEMIC

Fall 2008

**Tuesdays and Thursdays
1:30 – 2:50 p.m.
Hayden 358**

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Overview:

Asthma as a pediatric chronic disease is undergoing a dramatic and unexplained increase. It has become the #1 cause of public school absenteeism and now accounts for a significant number of childhood deaths each year in the U.S. The Surgeon General of the United States has characterized childhood asthma as an epidemic.

In ENVS 408, Penn undergraduates learn about the epidemiology of urban asthma, the debate about the probable causes of the current asthma crisis, and the nature and distribution of environmental factors that modern medicine describes as potential triggers of asthma episodes. Additionally, Penn students will engage in one of several community asthma programs, in collaboration with the Children's Hospital of Philadelphia (CHOP) or medical residents at Penn's Presbyterian Hospital. The Penn undergraduates will co-teach asthma classes offered at community centers and public schools throughout West Philadelphia, providing the opportunity to impart theoretical knowledge into real-world situations, promote community education and awareness about asthma, and use problem-solving learning to enhance student education in environmental health.

Structure:

This seminar consists of lectures, readings, student presentations, group work, discussions, research, and community service. The course is affiliated with Communication Within the Curriculum (CWIC) therefore oral presentations are an integral part of the curriculum. Meetings with the CWIC advisor are a requirement of the course.

For their community service, students will lead five classes in asthma management as part of CHOP's Community Asthma Prevention Program in West Philadelphia, or as part of the Drew Elementary School's Health Ambassadors club (choice of community service will be determined by student schedules).

Objectives:

1. To facilitate comprehension and evaluation of the environmental science and health issues surrounding asthma in Philadelphia.
2. To provide opportunities for perfecting and practicing presentation and communication skills in several different situations.
3. To incorporate group fieldwork, and analysis, and presentation into a larger study of asthma in West Philadelphia.
4. To deliver course lectures and encourage class discussion that can be adapted into lessons and learning activities for urban youth.
5. To lead classes and discussions on asthma management with affected populations, as well as to encourage conceptual thinking about environmental health among the target audience.
6. To support the research, writing and presentation of a problem-oriented research paper.

Requirements and Grading:

This course is a seminar and focuses primarily on presentations and discussions. Because this course features experts in their field with limited availability, **attendance is mandatory** and active **preparation** and **participation** are expected.

- Classes begin promptly at 1:30 pm.
- Absences or lack of participation in class will contribute to a lower grade.
- You are expected to be prepared to discuss *at least* the required readings and asthma lesson plans on the dates for which they are assigned.
- More than two unexcused absences from class will adversely affect the student's final grade. Requests for an excused absence must be emailed to the TA, Lucia DiNapoli, in advance.
- **The Community Service time requirement outside of class is approximately 6 hours of teaching plus travel time. No absences from teaching lessons are permitted or excused.**
- The course is affiliated with Communication Within the Curriculum (CWIC) and oral presentations are an integral part of the curriculum. Meetings with the CWIC advisor are a requirement of the course.

Assignments (70%):

1. **Group Oral Presentation – Asthma Lesson Practice Team Teaching (5%)**
Teams (of two or more, TBD) each deliver a 15-minute lesson on one of the asthma lessons (CAPP or Drew). Although the lessons will be delivered to the class of Penn students, it should be targeted to the appropriate audience of the CAPP lesson. Evaluation will be based on presentation skills, age appropriateness, message effectiveness, choreographed discussion and class activities.
2. **Participation and assigned readings (15%).**
The list of required and suggested readings will be distributed and posted on Blackboard (<https://courseweb.upenn.edu>) along with assignments and community

service updates. Your familiarity with and analysis of the assigned articles during class discussion will form the basis for this portion of the grade. This portion of the grade is also affected by timely production of non-graded assignments, such as the research topic proposal and community service reflection.

3. Trigger Scenarios – Discussion and Brief Write-Up (10%)

Research an asthma trigger scenario (trigger + location + affected individuals) and prepare for class discussion on 10/7. A 1-page write up describing the scenario is also due on that day.

4. Individual Oral Presentation – Research Project (15%)

Deliver a formal 15-minute presentation outlining your thesis, background research, analysis, conclusions and recommendations. **Meeting with the CWiC advisor is required prior to giving this oral presentation.** Appropriate use of PowerPoint slides and evidence of substantive research will be factors considered in the grading. Students who present close to Thanksgiving break may spend more time during the presentation explaining the background research, and are expected to have only preliminary analysis and conclusions.

1. Written Assignment – Research Paper (25%)

Select any topic or problem related to asthma. Topics must be approved in advance by the instructor by submitting a 2 paragraph research topic proposal (due 10/28). Conduct research and write a 10-12 page problem-oriented research paper. The paper will be due during final exams; specific date TBD.

Community Service (30%):

1. Asthma Lessons Teaching (20%)

In a small group, teach one lesson on asthma management either as a part of the CHOP-CAPP program or the Drew Health Ambassadors program. (CHOP-CAPP classes are for children and parents in community centers in West Philadelphia; classes are 1-2 hours long in the evening (~6 pm). Drew Health Ambassadors is an after-school club, from 3:15 – 4:15 pm, for a range of grades). A variety of available lesson days will be offered; students are expected to teach one per week, during days when Penn is in session (ie, no vacations). **The Community Service time requirement outside of class is approximately 6 hours plus travel time. No absences will be permitted or excused.** Evaluation will be based on attendance as well as observation and feedback from the teachers, the public school students, the CHOP-CAPP staff, and the TA.

2. Epidemic Assessment by Professionals (10%)

We will be assessing the impact of the asthma epidemic on West Philadelphia, from an expert, professional, and first-hand perspective. In teams of about 5, interview several professionals from disciplines related to asthma (areas of focus will be assigned). Groups will present results and analysis of interviews and prepare a written assessment,

which will be contributed to a report to be delivered to CAPP and other West Philadelphia health organizations and professionals.

3. Written Assignment – Reflection

A 3-4 page reflection paper on the community service experience. This is an informal writing assignment. Some questions to consider: What were your expectations? How did the experience compare to your expectations? What were the challenging and rewarding aspects of this experience? This is not graded, but must be produced in order to receive a grade.

Required Readings:

The list of required and supplementary readings will be posted on Blackboard (<https://courseweb.upenn.edu>) along with assignments and community service updates.

DATE	TOPIC	SPEAKER	Readings
TH 9/4	Course Overview	Kulik	
TU 9/9	Asthma Basics	Kulik	#1 Asthma Capital AAFA article Chen, et al 2006 "Community Coalitions" 2007 (website) EPA Asthma Fact Sheet (May 2008)
TH 9/11	Asthma as an Occupational Hazard	Ted Emmett, MD (CEET, Penn Med)	Team Teaching Sign Up Begins Eisner, et al. 2006 Mayo Clinic 2007
TU 9/16	Teaching + West Philadelphia	Cory Bowman, Associate Dir., Netter Center for Commun. Partnerships	Reflections, 2006 CCP, 2006 (Hard copy) Giegengack, 2004 Giegengack, 1999
TH 9/18	Children's Environmental Health CWic Presentation	Kulik CWic Advisor	Clinton 1997 EPA 1996 EPA 2003 Kolhuber, et al 2006 "Children's Health" 2005 website
TU 9/23	Urban Asthma Epidemic	Kulik	Eder, 2006 Etzel, R.A. 2003 Pest Control Magazine, 2005. Klepeis, Neil E. 2001
TH 9/25	Practice Teaching Lessons		
TU 9/30	Measuring Indoor Air Quality	Kulik	EPA 2006 IAQ Tools O'Connor for EPA Buchanan 2007 NIEHS 2006
TH 10/2	Pathophysiology of Asthma	Tyra Bryant-Stephens, MD	Barnes, P.J. 1994. Di Stefano et al. 1997
TU 10/7	Asthma Triggers Discussion		Asthma Triggers Scenarios Due
TH 10/9	Asthma Triggers and Home Visits	Charmane Braxton	"Air Quality Questions" 2007 (website) "Ozone" 2007 (website) Guevara 2003
TU 10/14	<i>Fall Break – No Class</i>		
TH 10/16	Clinical Approach to Asthma	Peter Cronholm, MD (Presbyterian Hospital)	Grossman 1994 Landon 2007 NEJM Clinical Decisions
TU 10/21	Final Project Discussion	Kulik	
TH 10/23	Environmental Public Health	Lora Siegmann Werner, ATSDR	Kuttner 2008 Mangione-Smith 2007
TU 10/28	Private conferences on topic proposals (optional)		Topic proposals due by email (unless extensions granted by professor)
TH 10/30	Asthma & Health Disparities	TBD	Miles, 2004 Rauth, Virginia et al 2002

			Apter 2006 Collins et al. 2008 Weiss 2007
TU 11/4	CEET research in Asthma	Rey Panittieri, MD (HUP)	
TU 11/6	Asthma	Tine Hanson- Turton, NNC and Dalton Paxman, HHS	Bartlett 2002
TU 11/11	Environmental & Public Health	Trevor Penning, PhD (Penn CEET & HUP)	
TH 11/13	Epidemic Assessment Presentations #1		
TU 11/18	Epidemic Assessment Presentations #2 & Papers due for all groups		
TH 11/20	Student Presentations – Research Project		
TU 11/25	Student Presentations – Research Project		
TH 11/27	<i>Thanksgiving Break - No class</i>		
TU 12/2	Student Presentations – Research Project		
TH 12/4	Student Presentations – Research Project		Reflection Paper Due