UNIVERSITY OF WISCONSIN-MADISON

POP HLTH / ENVIR ST 560: HEALTH IMPACT ASSESSMENT OF GLOBAL ENVIRONMENTAL CHANGE

FALL 2019, 3 CREDITS

Basic Information
Tuesday / Thursday, 9:30-10:45am - Computer Sciences, 1325

Instructor: Professor Jonathan Patz, MD, MPH
Offices: 258 Enzyme Institute Building, 1710 University Ave.
        1050 Medical Sciences Center (1st floor), 1300 University Ave. (across from W.I.D.)
Office hours: Tues. and Thurs. 11:00am – 12pm and by appointment
Email: patz@wisc.edu [Please put “PHS 560 CLASS” in subject line of each email or I may miss it 😊]
Phone: 608-263-2188

Graduate Teaching Assistant: Nick Mailloux
Office Hours: 1-3pm Thursdays or by appointment
        258 Enzyme Institute Bldg (Dr. Patz’ office) 1710 University Ave.
Email: namailloux@wisc.edu

Course Objectives & Overview
The course will provide students with tools to identify and address real-world global environmental and urban health issues. In addition to reading and discussing subject content to assist in understanding of the issues, students will learn skills to optimize the likelihood of affecting policy change through: 1) the Planetary Health; Health Impact Assessment (HIA) & Health in All Policies (HiAP) frameworks; 2) an introduction to environmental epidemiology and urban design/spatial analysis; and 3) science communication skills.

This class meets for two 75-minute class periods each week over the fall semester and carries the expectation that students will work on course learning activities (reading, writing, listening to podcasts, watching videos, studying, etc.) for about 3 hours out of classroom for every class period. This syllabus includes more information about meeting times and expectations for student work.

Learning Outcomes
By the end of the course, students should be able to:

1. Recognize unique elements of environmental public health and environmental epidemiology, and the new conceptual framing of Planetary Health.
2. Know the steps both for Risk Assessment and for Health Impact Assessment and understand when to apply one approach versus the other; recognize their strengths and weaknesses.
3. Recognize the linkages between physical and ecological conditions with human health and well-being, as well as exposure pathways through which impacts occur.
4. Gain facility in some tools available to study environmental and urban design influences on
health, e.g., spatial influences on health, and health impact assessment

5. Through and interdisciplinary Policy Brief and Podcast, recognize the value of problem-solving by applying perspectives from across disciplines and/or sectors, in line with the World Health Organization’s “Health in All Policies” framework.

6. Develop effective risk and/or science communication strategies related to environmental health.

Graduate Students Only:

1. Be able to summarize and critique peer-reviewed scientific articles in succinct and organized format for gap analysis/identification and research planning.

2. Clearly articulate scientific findings in layman’s terms by writing an op-ed.

CLASSROOM POLICIES

To better facilitate learning, laptops, cellular phones, tables, and e-readers are NOT allowed during class. You should take notes by hand. On occasion, students will be asked to bring laptops for specific in-class activities. At all other times, please only have a notebook and a pen at your desk. This decision is based on evidence demonstrating that most students who use laptops report more multitasking and distraction. For more information on the science, see: Fried, 2008, In-class Laptop Use and Its Effect on Student Learning or “Laptops Are Great. But Not During a Lecture or a Meeting” by Susan Dynarski (2017). Please let us know, however, if you have special needs that require use of a laptop in class.

Cultivating a classroom of respect and inclusion is essential. We ask all students to recognize that we must learn together how best to nurture greater inclusion; our initiatives reflect an understanding that we are always learning.

REQUIRED STUDENT RESOURCES


Canvas Material (Articles, Podcasts, Videos, Etc.):

Along with textbook readings, most class sessions include additional required and optional material to be read, listened to, or viewed prior to each class. You can find these posted by class session on Canvas under each ‘Module.’ Web links, podcasts, lecture videos, lecture slides, and other resources will also be posted. Access to Canvas is necessary for the class. Additionally, most assignments will be submitted online using Canvas and updates to this syllabus and additional information throughout the course will also be posted online.

Optional Related Texts:

Environmental Health: From Global to Local (Third Edition, 2016)
**Course Schedule/Calendar**
Please see attached sheet for a tentative course schedule. Dates are subject to change.

**Evaluation Procedures and Grading Criteria**
Students will be graded on a variety of individual and group work, including active participation in class discussions. Graduate students will also be required to write an Op-Ed related to course content in addition to the other assignments. Descriptions of these assignments are outlined in more detail below.

**Grading Scale:**
- 93-100% = A
- 88-92% = AB
- 82-87% = B
- 71-76% = C
- 70-71% = D
- <60% = F

**Attendance Statement**
Course attendance is required. If you miss more than three classes, your final course grade could be lowered at the instructor’s discretion. In the event of unavoidable conflicts, please communicate ahead of time if possible.

**Grade Breakdown** (see detailed description on next page)

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<thead>
<tr>
<th><strong>Individual is Graded On:</strong></th>
<th><strong>Points</strong></th>
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<tbody>
<tr>
<td>Message Box</td>
<td>5</td>
</tr>
<tr>
<td>Quizzes (5 pts. each)</td>
<td>25</td>
</tr>
<tr>
<td>Policy Brief</td>
<td>25</td>
</tr>
<tr>
<td>In-class Activities</td>
<td>20</td>
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</tbody>
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- Model United Nations Exercise (5 pts)
- Urban Design Exercise (5 pts)
- Food/Agriculture Exercise (5 pts)
- Section Topic Debate (5 pts)

Note: There will be 6 online quizzes, and the lowest grade will be dropped.

**Group is Graded On:**

| **Health Impact Assessment** | **10** | Will conduct an HIA on selected policy. |
| **Podcast**                  | **15** | Group activity combining Policy Briefs. |
**TOTAL 100**

**GRADUATE STUDENTS ONLY**  
*(INDIVIDUAL)*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Op-Ed</td>
<td>10</td>
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<tr>
<td>Reference Table</td>
<td>10</td>
</tr>
</tbody>
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**TOTAL 120**

**ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES**

We wish to fully include persons with disabilities in this course. Please let Dr. Patz know if you have a McBurney Visa listing any accommodations, and we will do our best to meet those needs.

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student’s educational record, is confidential and protected under FERPA.

**ACADEMIC INTEGRITY**

Our course is an academic community that is bound together by the traditions and practice of scholarship. Honest intellectual work – on examinations and assignments – is essential to the success of our own community of scholars. Using classmates’ responses to answer exam questions or disguising words written by others as your own assignments undermines the trust and respect on which our course depends and will not be tolerated. Academic dishonesty could result in course failure.

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison’s community of scholars in which everyone’s academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student
Conduct & Community Standards for additional review. For more information, refer to: studentconduct.wiscweb.wisc.edu/academic-integrity/.

**DIVERSITY AND INCLUSION**
Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals. The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.

**Assignment Descriptions**

1. **Class Attendance and Participation** *(not directly graded)*
   Active participation, preparation, and class attendance are required for all students. While not graded specifically, class participation is essential for your success. Note that several class sessions include graded activities (see below). Some questions on online quizzes will relate specifically to in-class discussion and lecture.

2. **Online Quizzes x 5 (25 points)** – *Periodically Throughout the Semester*
   Students must complete online quizzes by 11:59 pm on the due date (see course schedule). Quizzes will include 10 questions related to course readings, videos, podcasts, and lectures. A total of 6 quizzes will be given throughout the semester. The lowest grade will be dropped. Each quiz is therefore worth 5 points.

3. **In-Class Activities (20 points)** - *10/2/2018 and Periodically Throughout the Semester*
   There will be four primary in-class activities.
   a) **Model United Nations (5 pts)** activity (scheduled for 10/2/18). In groups, students will represent the interests of an assigned country in a model United Nations activity. Each group will be provided background materials and format guidelines for the activity.
   
   b) **Section Topic Debate (5 pts)** near the end of each class section (e.g., climate change, urban health, energy, food systems, and One Health/ecology). The class will be divided so that each student is responsible for preparing for only one debate. In groups, students will research and argue for or against a question pertinent to each of the four topic areas that will be provided ahead of time. Detailed instructions will be provided in class. Students must be prepared to argue both sides of the debate, because your team will (intentionally by design) only learn which side they are supporting at the last minute – as in, just a day or two before the scheduled debate.
   
   c) **Built urban environment in-class activity (5 pts)** (TBD). Dr. Chris McCahill is designing an exercise to orient you to urban designing to promote health.
d) **Food systems in-class activity (5 pts)** (TBD). Dr. Valerie Stull is designing an exercise around sustainable food systems.

4. **Health Impact Assessment (HIA) of various local and national new policies** (10 points, group project) – **due 10/17/2018**
Select one policy from a list of options to examine and conduct an HIA on that policy or proposed policy, following the basic steps you’ll learn about how to do an HIA. The class will be divided into groups to focus on the different proposed policies in question. The full list is still being built (and students are welcomed to suggest interesting policy they may know about and are interested in. These should be communicated early to Professor Patz to consider adding to the list of options for the group HIAs.

Some examples include:
**Executive Order for 100% carbon-free electricity by year 2050:**

**Rolling back Methane Emission standards:**

**Dairyland and Minnesota Power and Dairyland proposed combined cycle natural gas facility in Superior, WI:**
https://www.dairylandpower.com/content/cpcn-filed-nemadji-trail-energy-center

**Repeal of the US EPA Clean Power Plan:**
https://www.epa.gov/stationary-sources-air-pollution/electric-utility-generating-units-repealing-clean-power-plan

**Repeal of Wisconsin’s “Complete Streets” Law:**

NOTE: More policies to choose from TBD...

5. **Policy Brief (25 points)** – **due 11/26/2018**
Each student will write a formal Policy Brief (10-15 pages double-spaced, 12-point font) including at least 10 references. A policy brief (or policy memo) is a professionally written document that provides analysis and/or recommendations directed to a predetermined audience regarding a specific situation or topic. The goal of this assignment is to write an academically rigorous, persuasive paper about a specific “real-world” issue related to global environmental change and human health, prepared for a particular audience (or client).
Over the course of the semester, each student will individually research a topic of interest and write a comprehensive Policy Brief. Policy Brief topics will be selected in class from a provided list of options. Students may propose additional topics if they have a particular interest in a topic not already covered. Each Policy Brief topic will be covered by several students, forming a group. The policy briefs will be written individually, so you must determine distinct issues within your group’s topic for each person to write about. Your groups and broad topics will be assigned during the third week of class. At the end of the course, your group will combine the findings of your policy briefs to generate an educational Podcast. The goal of this assignment is to write an academically rigorous, persuasive paper about a specific “real-world” issue related to global environmental change and human health, prepared for a particular audience. We will discuss how to identify the audience in class.

6. Message Box (5 points) for “Elevator” interviews (ungraded) – due 12/5/2018
Students will be interviewed individually by the instructor and asked to respond to various questions focusing on the subject of the Policy Brief. From an in-class lecture, students will learn about constructing a “Message Box” to organize the most important points to convey to the press and policy makers, and they will then make an individual message box in preparation for this interview.

7. Group Podcast (15 points) – Presentations will be uploaded online (12/10/18)
In groups, students will create and record an 8-10 minute podcast outlining the key findings from their individual Policy Briefs. The purpose of this assignment is to push student groups to think critically about overlaps between policy, global environmental change, and human health using a multi-disciplined perspective. Students are encouraged to integrate elements of epidemiology, risk assessment, and health impact assessment in their podcasts. Group podcasts will be graded out of 15 points on: Content and Relevance, Professional Quality and Clarity, Organization, Creativity, and Peer Review. All students in a group must speak on the podcast. Podcasts should be submitted online as an mp3 file. You may use your phone to record if necessary, but higher quality audio recording equipment is available on campus. (See the UW Madison Information Technology Website, UW Info Labs Equipment Checkout Systems, and Equipment Elsewhere for more information.) Sample podcasts from last year’s class will be available, and a detailed rubric will be provided. Students will be required to “peer review” two other group podcasts. One point extra credit will be available if a student reviews ≥5 other group podcasts.
Assignments for Graduate Students Only

1. Reference Table (Graduate Students Only) (10 points) - due 11/21/18
Each graduate student will be required to build a reference table including a minimum of 10 papers that will be useful in the research of their final Policy Brief. This reference table should include the following: paper title, author, the study population, methods used, and a brief synopsis of the findings and their relevance to environmental health. An example reference table will be provided.

2. Op-Ed (Graduate Students Only) (10 points) – due Final Exam Period (12/16/18)
Each graduate student will be required to produce a polished 1-2 page op-ed (750-word max) based on his/her final Policy Brief topic. The op-ed should be directed toward a specific newspaper or online news source. Scoring for this project will be based on: Professional Quality and Clarity, Content and Relevance, and Creativity.