PHS 904  Topics in Epidemiology: Global Health, Syllabus  
FALL SEMESTER, Module 2, Nov 3-Dec 15, 2010  
Wed, 4:30-7:00 PM;  1309 Health Sciences Learning Center  
Instructor: Maureen Durkin, PhD, DrPH      Teaching Assistant: Marissa Courey, MSc  

The purposes of this course are to explore the relationship between globalization and health and provide students with an understanding of: (a) major indicators and determinants of health and health disparities across populations, from less to more developed countries; (b) the role of epidemiology in evaluating population health, and developing interventions to improve global health and reduce health disparities; and (c) some of the methodological and ethical considerations in international health research.  The course is also designed to expose students to health research and clinical work of current University of Wisconsin faculty members working in a range of disciplines relevant to global health, and to help students identify ways in which they might contribute in the future to improvements in global health.

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<tr>
<th>Week, DATE</th>
<th>TOPIC</th>
<th>SPEAKER</th>
<th>ASSIGNMENT</th>
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<tr>
<td>1. Wed 11/03</td>
<td>4:30-5:20 Introduction: course goals, scope &amp; requirements; brief overview of epidemiology</td>
<td>Durkin</td>
<td>Readings assigned for wk 1, come prepared with questions or discussion points related to readings you did for this week.</td>
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<td>2. Wed 11/10</td>
<td>4:30-5:30 Biology and Epidemiology of Parasitic Infections</td>
<td>Christensen</td>
<td>Readings assigned for wk 2; Post on Learn@UW Forum, 500-word Essay #1, integrating one of this week's lectures, associated readings and your own thoughts, due Mon 11/15</td>
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<td></td>
<td>5:45-7:00 Disaster Management</td>
<td>Birnbaum</td>
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<td>3. Wed 11/17</td>
<td>4:30-5:20 Climate Change and Health</td>
<td>Patz</td>
<td>Readings assigned for wk 3; Post 500-word Essay #2, an opinion piece based on questions discussed in small groups, due 11/22 (can be done as a group or individually)</td>
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<td></td>
<td>5:30-6:30 Class small group discussions: Is there evidence of human-induced climate change? Is there epidemiologic evidence of such change causing adverse effects on human health?</td>
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<td>4. Wed 11/24</td>
<td>4:30-6:00 Global Influenza Crises Early dismissal, Thanksgiving break</td>
<td>Ip</td>
<td>Readings assigned for wk 4; Post 500-word Essay #3, on this week's lecture and readings, due 11/29</td>
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<td>5. Wed 12/1</td>
<td>4:30-5:30 Globalization &amp; health; epidemiologic transitions; global health indicators</td>
<td>Durkin</td>
<td>Readings assigned for wk 5; Post 500-word Essay #4, integrating 1 of this week's lectures, associated readings &amp; own thoughts, due 12/6</td>
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<td></td>
<td>5:30-7:00 Epidemiology of HIV/AIDS</td>
<td>Sosman</td>
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<td>6. Wed 12/8</td>
<td>4:30-5:50 Using epidemiology to identify global health priorities, disparities &amp; disease risk factors, &amp; evaluate interventions to improve global health</td>
<td>Durkin</td>
<td>Readings assigned for wk 6; Global Health Indicator Assignment Due 12/8 (paper copy)</td>
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<td>7. Wed 12/15</td>
<td>4:30-5:30 Global health effects of mercury Ethics of global public health research</td>
<td>Kanarek</td>
<td>Readings assigned for wk 7</td>
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<td>5:40-7:00 Course Wrap-Up</td>
<td>Durkin</td>
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<tr>
<td>Wed 12/22</td>
<td>No class</td>
<td>Online Exam Due, (Learn@UW quiz)</td>
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Format: lectures featuring U.W. faculty with expertise in topics related to international health; weekly readings; brief written assignments and discussions on assigned and student-selected topics.

Grading:
- Class attendance and participation, including completion of at least three of the four assigned Learn@UW 500-word essays, 60% [Note: each weekly attendance and each 500-word essay or commentary is worth six points; students can miss either one class or one essay and still achieve 60%]
- Global Health Indicator Assignment, 15%
- Final Exam (take-home, on-line, multiple choice), 25%.

Attendance: Students are expected to attend all seven weekly class sessions and sign the attendance sheet. In the event that a student has to miss a class, he or she should let the instructor (mdurkin@wisc.edu) and the teaching assistant (mkcourey@wisc.edu) know in advance, if possible. Students can make up for one missed weekly attendance by completing all four of the assigned 500-word essays (instead of the otherwise minimum requirement of completing three essays).

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<tr>
<th>Lecturers</th>
<th>Lecture Topics</th>
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<tr>
<td>Marvin Birnbaum, MD, PhD, Emeritus Professor of Medicine &amp; Physiology, Director of Emergency Medical Services, UW; President of the World Association for Disaster &amp; Emergency Medicine</td>
<td>Disaster Management</td>
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<td>Bruce Christensen, PhD, Professor, Dept of Animal Health &amp; Biological Sciences, School of Veterinary Medicine UW-Madison</td>
<td>Biology and epidemiology of parasitic infections, lymphatic filariasis, geohelminths, effects of preventive interventions on child health</td>
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<td>Maureen Durkin, PhD, DrPH, Professor, Dept of Population Health Sciences &amp; Pediatrics, &amp; Waisman Center, UW-Madison</td>
<td>Global health indicators &amp; determinants; globalization &amp; health; design &amp; conduct of global epidemiologic studies; neurodevelopmental disabilities; ethics of global health research</td>
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<td>Hon Ip, PhD, Director, Diagnostic Virology Laboratory, United States Geological Survey, National Wildlife Health Center, Madison, WI</td>
<td>Virology, avian influenza, diagnosis, surveillance, global influenza epidemiology</td>
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<td>Marty Kanarek, PhD, Professor, Dept of Population Health Sciences &amp; Gaylord Nelson Institute for Environmental Studies UW-Madison</td>
<td>Global health effects of mercury</td>
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<tr>
<td>Jonathan Patz, MD, Professor, Dept of Population Health Sciences &amp; Gaylord Nelson Institute for Environmental Sciences, UW-Madison</td>
<td>Global climate change and health</td>
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<tr>
<td>James Sosman, MD, Associate Professor Dept of Medicine, UW-Madison</td>
<td>HIV/AIDS</td>
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READINGS (to be read in advance of each session)

Week 1, Wed 11/03/2010:
Required Readings:
Introduction (Lecture 1)


Week 2, Wed 11/10/2010
Required Readings:
Biology and epidemiology of parasitic infections (Lecture 1)

Disaster Management (Lecture 2)

Southeast Asia Regional Office/World Health Organization, Health aspects of disaster preparedness and response, panel session 2: seismic risks including tsunamis. Prehospital and Disaster Medicine, 2006; 21(Supplement 3).

Birnbaum ML, H1N1 …, Prehospital and Disaster Medicine, 2009; 24(3).


Week 3, Wed 11/17/2010, Health Effects of Climate Change
Required Readings:


Optional Readings:


**Week 4, Wednesday 11/24/2010  Global Influenza Crises**

**Required Readings:**


*[New]* Writing Committee of the WHO Consultation on Clinical Aspects of Pandemic (H1N1) 2009 Influenza, Clinical Aspects of Pandemic 2009 Influenza A (H1N1) Virus Infection, *N Engl J Med* 2010;362:1708-19. (see also supplementary appendix and errata files on Learn@UW).

**Week 5, Wednesday 12/1/2010**

**Globalization & health; epidemiologic transitions; global health indicators (Lecture 1)**

**Required Readings:**


**Optional Reading:**


**Epidemiology of HIV/AIDS (Lecture 2)**

**Required Reading:**


**Optional Reading/Reference:**


**Week 6, Wednesday 12/8/2010,  Using epidemiology to identify global health priorities, disparities and risk factors, and to evaluate interventions to improve global health**

**Required Readings:**

Berry RJ. Li Z. Erickson JD. Li S. Moore CA. Wang H. Mulinare J. Zhao P. Wong LY.


Week 7, Wednesday 12/15/2010 Global Public Health Effects of Mercury (Lecture 1)


Ethics of global public health research, course wrap-up (Lecture 2)