Climate Change and Occupational Health

ENVH 592

Richard Fenske, Professor (rfenske@uw.edu)  
Spring 2015  
Dept of Environmental & Occupational Health Sciences  
1 credit  
Health Sciences Bldg, F-226A (543-0916)  
M, 2:30-3:50  
Grant Quiller, Course Manager: gquiller@uw.edu  
SOCC 348

NOTE: Course meets 7 times: Apr 6, 13, 27 (no class Apr 20), May 4, 11, 18, June 1

Course Description
This course examines the impact of heat exposure on worker health and productivity within in the context of a changing climate. We will explore current methods of measuring heat exposure, the potential health effects of extreme heat exposure, and projected impacts of heat exposure based on current climate models. The course will feature recently conducted research in Central America and will include participation (by phone) of Dr. Jennifer Crowe at the Universidad Nacional in Costa Rica.

Learning Objectives
At the end of this course, students will be able to
- Describe current methods for measuring heat exposure in working populations
- Explain the primary signs and symptoms of heat-related illness
- Describe at least one potential long-term effect of chronic heat exposure
- Explain the known and likely impact of heat exposure on worker productivity
- Demonstrate a general understanding of how climate models can be used to project future impacts of heat exposure on worker health and productivity

Assignments
- Serve as primary discussant for one (or two) reading(s) (40%)
- Serve as secondary discussant/rapporteur for one (or two) reading(s) (30%)
- Participate in class discussions (30%)

Readings
We have two articles per class session and seven class sessions, so a total of 14 articles. With 7 students, this means you are each responsible for one class session.

Primary Discussant Assignment
Perform a brief presentation of an assigned article. This presentation will serve as a summary of the article and should include key points, findings, data, and conclusions. The presentations should serve as a starting point for discussion in the class on the specific topic.

Secondary Discussant/Rapporteur
For the week that you are primary discussant we ask that you serve as secondary discussant for the other article assigned for that week. You should provide a critical review (constructive criticism appreciated) of the article, and provide some response or commentary to supplement the primary discussant’s presentation. As secondary discussant you may wish to provide some additional background and context for the week’s topic.
Please email Grant with your top 3 choices of topics to present. Following the first class, a final presentation list will be provided. Email final presentations to Grant prior to the class for presentation. Please keep presentations to 15 minutes or less to provide ample time to discuss the topic amongst the class.

**Participation**
Students should attend all classes. Active participation includes comments, questions, and remarks for all of the material presented. Students will read all articles presented prior to the class session.

**Students with Disabilities**
To request academic accommodations due to a disability, please contact Disability Resources for Students, 448 Schmitz, 206-543-8924 (voice), 206-543-8925 (TTY). If you have a letter from Disability Resources for Students indicating that you have a disability that requires academic accommodations, please present the letter to me so we can discuss the accommodations you might need in this class.

**Academic Integrity**
Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity. The UW School of Public Health (SPH) is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the University of Washington Student Conduct Code (WAC 478-120). We expect you to know and follow the university’s policies on cheating and plagiarism, and the SPH Academic Integrity Policy. Any suspected cases of academic misconduct will be handled according to University of Washington regulations. For more information, see the University of Washington Community Standards and Student Conduct website.
## Schedule

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<thead>
<tr>
<th>Date</th>
<th>Instructor</th>
<th>Topic</th>
<th>Readings**</th>
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<tbody>
<tr>
<td>4/6</td>
<td>Fenske</td>
<td>Climate and work</td>
<td>Bennett &amp; McMichael 2010</td>
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<td>Roelefs &amp; Wegman 2014</td>
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<td>Sawka et al. 2011</td>
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<td>4/20</td>
<td>No Class</td>
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<td>4/27</td>
<td>Quiller</td>
<td>Measuring heat exposure</td>
<td>Lemke and Kjellstrom 2012</td>
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<td>Lundgren et al. 2013</td>
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<td>5/4</td>
<td>Fenske</td>
<td>Heat exposure and worker productivity</td>
<td>Kjellstrom 2015</td>
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<td>Kuklane et al. 2015</td>
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<td>5/11</td>
<td>Fenske</td>
<td>Projection of impacts of heat exposure</td>
<td>Kjellstrom et al. 2013</td>
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<td>Dunne et al. 2013</td>
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<td>5/18</td>
<td>Quiller</td>
<td>Heat and kidney function</td>
<td>Wesseling et al. 2014</td>
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<td>Johnson et al. 2014</td>
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<td>5/25</td>
<td>Memorial Day</td>
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<td>6/1</td>
<td>Crowe</td>
<td>Workplace heat exposure in Central America</td>
<td>Crowe et al. 2013</td>
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<td>Kjellstrom and Crowe 2011</td>
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** Full references for these readings are provided on the following page.
<table>
<thead>
<tr>
<th>DATE</th>
<th>READINGS</th>
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</table>
| 4/6    | **Bennett CM, McMichael AJ.** Climate change impacts on working people: non-heat related impacts of climate change on working populations. *Global Health Action* 3, 5640, 2010.  
**Kjellstrom T, Crowe J.** Climate change, workplace heat exposure, and...
Additional Readings


