EHS 602
Foundations of Environmental Health Science II: Environmental Health Policy
Syllabus, Winter 2014

Location: TBD
Time: Tuesday, 1.00-3.00 PM
Credits: 2 Credits
Instructors: Di Bowman (HMP) and Andrew Maynard (EHS)

Di Bowman
Phone: 734-647-1825
E-mail: dibowman@umich.edu
Assistant: Barb Klumpp (M3148 SPH II)
Office: Room 6611, SPH Tower
Office Hours: Please make appointments by email

Andrew Maynard
Phone: 734-647-6856
E-mail: maynarda@umich.edu
Assistant: Beverly Slane, 734 615 3050
Office: Room 6671, SPH Tower

GSI: Allyson Green
E-mail: aggreen@umich.edu
Office Hours: Please make appointments via email

Overview
Although science forms the bedrock on which professions in the environmental health and nutritional sciences are built, policy and regulation often mold the environment within which that science is applied. EHS 602 complements EHS 601—Foundations in Environmental Health Sciences—and aims to provide a foundational understanding of how a science and evidence-based approach to public health translates into decisions and actions through environmental health policy in the public and private sector. It provides students with a clear and broad understanding of how environmental health policy is developed and implemented within government and corporations nationally and globally. Specifically, the course uses policy areas from chemicals and food safety to workplace practices and voluntary codes in establishing understanding of how science-based evidence translates to action when making decisions that impact on human health.

EHS 602 draws on expertise from within the US federal government, industry and the non-government sector in providing first hand accounts of how environmental health policy is developed and implemented. Guest and didactic lectures are accompanied by class discussions on specific policy and regulatory issues and set assignments.
The competencies covered by the class are core to professionals working within the environmental health and nutritional sciences.

**Prerequisites**
There are no formal pre-requisites for the course.

**Competencies:**
Students taking this class are expected on its completion to be able to:

<table>
<thead>
<tr>
<th>Competency</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1  Explain the role of evidence in developing and implementing environmental health policy in the US.</td>
<td>High</td>
</tr>
<tr>
<td>C2  Describe the US environmental health policy landscape and key US environmental health regulations.</td>
<td>Intermediate</td>
</tr>
<tr>
<td>C3  Understand the importance of international environmental health policies such as REACH (Registration, Evaluation and Authorization of Chemicals) on US activities.</td>
<td>Low</td>
</tr>
<tr>
<td>C4  Describe the different roles of corporate, state and government policies in addressing environmental health issues.</td>
<td>Intermediate</td>
</tr>
<tr>
<td>C5  Explain the advantages and limitations of corporate policies and voluntary approaches to supporting public health-related actions.</td>
<td>Low</td>
</tr>
<tr>
<td>C6  Describe the key environmental health policy stakeholders in the US, and their roles in developing and implementing policy</td>
<td>Intermediate</td>
</tr>
<tr>
<td>C7  Understand the political issues and challenges surrounding US federal environmental health policy</td>
<td>Intermediate</td>
</tr>
</tbody>
</table>
Grading

Students will be graded on class participation, on five class-specific homework assignments ("Musings"), a group presentation, and in-class blogging activity.

<table>
<thead>
<tr>
<th>% of class grade</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Class participation</td>
<td>40%</td>
</tr>
<tr>
<td>Musing 1</td>
<td>5%</td>
</tr>
<tr>
<td>Musing 2</td>
<td>5%</td>
</tr>
<tr>
<td>Musing 3</td>
<td>5%</td>
</tr>
<tr>
<td>Musing 4</td>
<td>5%</td>
</tr>
<tr>
<td>Musing 5</td>
<td>5%</td>
</tr>
<tr>
<td>In-Class Group Presentation (Article Analysis)</td>
<td>25%</td>
</tr>
<tr>
<td>In-Class Blogging Activity</td>
<td>10%</td>
</tr>
</tbody>
</table>

Percentages will be translated into grades using the following break points:

- A+ \( \geq 97\% \)
- A \( \geq 93\% \) and < 97%
- A- \( \geq 90\% \) and < 93%
- B+ \( \geq 87\% \) and < 90%
- B \( \geq 83\% \) and < 87%
- B- \( \geq 80\% \) and < 83%
- C+ \( \geq 77\% \) and < 80%
- C \( \geq 73\% \) and < 77%
- C- \( \geq 70\% \) and < 73%

D+ and below: If you really need to know the break points here, come and talk to Di Bowman! And sooner rather than later…

Homework assignments

Musings

For five homework assignments, you are required to submit "musings" in hard copy before the specified lectures. The purpose of these is to help you read and assimilate the readings as you prepare for lectures, and to ensure that you come prepared to ask questions. The musings themselves are not graded; but submission on time and in the required format is. Non-submission without prior permission will result in a zero grade for the assignment.
Musings have two components. First, they should include your typed notes on ideas that have struck you as interesting or noteworthy while reading through the associated reading material. These will typically be 300–500 words long. They should be in continuous prose, and should capture and explore one or two aspects of the readings that stand out for you. Second, they should include between two to five questions that are prompted by the readings and are relevant to the associated lecture.

Printed copies of your musings should be handed in at the beginning of class, and should include your name on the front sheet. Successful submission qualifies for an A grade for the assignment (95%). If you do not submit your musing at the beginning of the relevant class, you will not be graded for that assignment unless prior permission has been granted for late submission.

Musings are due before lectures on the following dates, and should respond to the reading material for the lecture being given on the submission date:

- **Week 2** – Framing, fundamentals, typologies and justification of policy interventions
- **Week 3** – The Environmental Protection Agency and environmental policy in the US
- **Week 4** – EU chemicals regulation
- **Week 7** – Corporate environmental health policy, and its relevance to corporate policy
- **Week 13** – Is policy a perversion of science that has no place in a science-grounded professional degree course?

**In-Class Group Presentation (Article Analysis)**

The purpose of this in-class presentation is to have groups select and critically review a scholarly peer-reviewed article from the peer-reviewed literature that pertains to a particular area of environmental health policy. Each group will be required to select an article for review that relates to the topic addressed in their presentation week (i.e., in Week 5, Groups One-Three will be required to select an article that addresses in some way the role of the FDA in regulating human and environmental health). Presentations are to be approximately 10 minutes in length, provide a critical analysis of the study/article, the science and how this connects to the policy context. Groups should use PowerPoint (or similar) during the course of their presentation, and be prepared for a brief question and answer session following their talk.

Each group will need to provide a one page single-spaced handout (Times New Roman 12-point font, with standard margins) summarizing the key points of the article and their analysis of it. The handout should be uploaded to CTools prior to the group’s presentation; 2 hardcopies should be brought to class on the day of the presentation. The grade will be based on the presentation and the handout.

Groups will be randomly assigned at the start of the semester, and details shall be posted on CTools, along with additional guidance material.
In-Class Blogging Activity

The purpose of this activity is to provide students with an opportunity to practice a different style of writing - a blog post - while doing so under a tight time frame (i.e., two hours). Readings on a selected environmental health policy issue shall be posted to the CTools at the start of Week 8; additional details regarding the position that you are to take as the blogger shall be provided at the start of the class. During the class, each student will be required to write a 300-400 word response to a commentary/option or other published piece dealing with the selected topic. The blog is to be submitted (via CTools) at the end of the two hour period.

In Class Participation

All students are expected to be present by the start of class; late attendance or non-attendance without prior permission will be penalized. Active participation is expected, and will be monitored. Students may be called on to ask questions or to provide their perspective in class, and should come prepared to engage fully with the class and with speakers and lecturers.

Course Format

The class will meet every week for 2 hours. Sessions will follow the following formats:

Didactic lectures covering key policy concepts and areas.

Guest lectures given by policy practitioners and experts. These will typically be between 1–1.5 hours long, followed by a Q&A session.

Class discussions. These will further explore the policies and regulations covered in guest and didactic lectures, and will encourage students to critically examine the development and implementation of specific policies. Where appropriate, these classes will include debate and role-play.

Students are strongly encouraged to come prepared to ask questions of the guest lectures. Many of the homework assignments are designed to help prepare for these lectures.

Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics, Assignments and Assigned Readings</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Introduction to the course; overview of objectives and expectations; Information on assignments and grading; information on guest speakers; an introduction to environmental health policy.</td>
<td>Andrew Maynard</td>
</tr>
<tr>
<td>1/14/13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 2</td>
<td>Framing, Fundamentals, Typologies and Justification of Policy Interventions.</td>
<td>Di Bowman</td>
</tr>
<tr>
<td>1/21/13</td>
<td>Framing #1 – based on the readings below. To be submitted in hard copy at the start of the lecture.</td>
<td></td>
</tr>
<tr>
<td>Week 3</td>
<td>1/28/13</td>
<td>The Environmental Protection Agency and environmental policy in the US</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Musing #2 – based on the readings below. To be submitted in hard copy at the start of the lecture.</strong></td>
</tr>
<tr>
<td>Readings:</td>
<td></td>
<td><strong>Readings:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week 4</th>
<th>2/4/13</th>
<th>EU chemicals regulations (REACH Regulation), and the potential impacts on the US</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Musing #3– based on the readings below. To be submitted in hard copy at the start of the lecture.</strong></td>
</tr>
<tr>
<td>Readings:</td>
<td></td>
<td><strong>Readings:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week 5</th>
<th>2/11/13</th>
<th>Human and Environmental Health regulation from the Food and Drug Administration’s perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Background to the FDA: Di Bowman</strong></td>
</tr>
<tr>
<td>Article Analysis: <strong>Focus of today’s articles – The FDA in action in regulating human and environmental health</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Group One</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Group Two</td>
</tr>
</tbody>
</table>

**Dr. Maria Doa**  
Director  
Chemical Control Division  
Office of Pollution Prevention and Toxics  
U.S. Environmental Protection Agency  

**Di Bowman**
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Readings</th>
<th>Speaker</th>
</tr>
</thead>
</table>
| 6    | 2/18 | Occupational health policy and regulation in the US | **Reading:**

Regulation: Occupational Safety and Health Act of 1970 (OSH Act, OSHA), available at:


Director of NIOSH |
| 7    | 2/25 | Corporate environmental health policy, and its relevance to corporate policy | **Musing #4 – based on the readings below. To be submitted in hard copy at the start of the lecture.**  

**Readings:**


Global Director, Sustainability & Vehicle Environmental Matters Ford Motor Company |
| 8    | 3/11 | In-Class Activity – Blogging Exercise | **Readings:**

To be posted on CTools prior to the class. | Di Bowman |
| 9    | 3/18 | Lobbying, Advocacy and Analysis in Environmental Health | **Article Analysis: Focus of today’s articles – The impact of lobbying or advocacy groups on US environmental health policy**

• Group Four | Di Bowman |
### Week 10
#### 3/25/13
**Hydraulic Fracturing – Current state of play in terms of Michigan’s approach to safeguarding human and environmental health**


#### Sara Gosman
Lecturer, Michigan Law

### Week 11
#### 4/1/13
**In-Class Group Activity: Stakeholder involvement in policy development and implementation – Hydraulic Fracturing in Michigan**

**Readings:**


### Week 12
#### 4/9/13
**From farm to fork: nutrition, policy and regulation of the agri-food sector in the US**

**Article Analysis: Focus of today’s articles – The impact of lobbying or advocacy groups on US environmental health policy**

- Group Seven
- Group Eight
- Group Nine

**Readings:**

US Food and Drug Administration and US Department of Agriculture, *A Description Of The U.S. Food Safety System*, March 3, 2000 available at:

Morris JG, How Safe Is Our Food?, Emerging Infectious Diseases 2011; 17(1);126-128.


| Week 13 | Discussion – Is policy a perversion of science that has no place in a science-grounded professional degree course? |
| 4/16/13 | Musing #5– please answer the above question. | Andrew Maynard and Di Bowman |