

**Department of Population Medicine**

**(POPM\*6540): Concepts in Environmental Public Health**

**Winter 2012**

**Course Coordinator:**

Scott McEwen

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**Calendar description:**

This course covers the main concepts of environmental public health including basic elements of environmental toxicology, risk analysis, air and water quality, food safety, waste management, occupational health and ecosystem health.

**Teaching/learning strategy:**

Learning materials and opportunities will be provided through a combination of lectures, seminars, assignments, case studies as well as student presentations. Readings from the required textbook will be assigned throughout the course. Students will be expected to be able to discuss the material in class. Cooperative and group discussion will be emphasized.

**Course objectives:**

At the end of the course, students are expected to be able to:

1. Identify potential environmental hazards.
2. Describe how chemical and microbiological contaminants in air, water and food affect public health and approaches that can be used to reduce negative impact on health.
3. Distinguish between hazards and risks; understand and apply the basic principles of environmental risk analysis; evaluate basic exposure data and characterize risk.
4. Describe national and provincial regulatory programs, guidelines and authorities that control environmental health issues.
5. Discuss the impact of global climate change on human health and approaches to mitigation of these effects.
6. Participate in group discussion and case studies to develop skills in environmental public health.
7. Write a grammatically correct, well-written paper on a specific topic in environmental public health.

**Evaluation:**

Group assignment / presentation	20%.
Essay	20%
Essay Presentation	10%
Midterm exam	25%
Final exam	25%

**Group Assignment:**

Small groups of students will each make one presentation to the class and prepare a written report on an environmental health hazard and associated public health intervention.

**Essay:**

Each individual student will submit a paper and make a presentation on a topic in environmental public health. Students will select topics from a list provided in the second week of classes; alternatively they may identify a topic not on the list with permission of the instructor. The paper will be no more than 12 pages (12 point, double spaced, 1 inch margins), not including references, tables and figures. Any refereed reference style is acceptable. The paper is due Sunday, March 11, 2011. The presentations will take place in the latter part of the course; they will be no longer than 10 minutes plus 2 minutes for discussion. The presenter is expected to lead discussion of the topic and should have a question or two prepared to prompt discussion.

**Students with Special Needs/Learning Disabilities**

If you have a documented disability and require accommodations to obtain equal access to this course, please meet with the course coordinator at the beginning of the semester, or as soon as possible thereafter.

If you suspect you may have a learning disability, you are strongly encouraged to consult the Centre for Students with Disabilities ( <http://www.uoguelph.ca/csd/>).

**Academic Misconduct:**

The university has a policy on academic misconduct that will be enforced - [http://www.uoguelph.ca/registrar/calendars/graduate/2011-2012/genreg/sec\\_d0e1553.shtml](http://www.uoguelph.ca/registrar/calendars/graduate/2011-2012/genreg/sec_d0e1553.shtml).

Academic misconduct takes many forms and includes, but is not limited to: copying, plagiarism, submitting a product prepared in whole or by another person, buying or selling academic work, submitting the same piece of work twice for academic credit. Also note that aiding/abetting academic misconduct is itself academic misconduct.

For more details, you are strongly encouraged to consult the University's Academic Integrity tutorial, a short but highly useful online tutorial to help inform and clear common misconceptions regarding academic misconduct:

<http://www.academicintegrity.uoguelph.ca/> .

If you are unsure about proper methods for crediting the work of others or any other matters relating to proper academic conduct, make an appointment with someone in the Learning Commons and / or seek guidance from the instructor.

### **Required Textbook:**

Friis, RH. Essentials of Environmental Health, 2<sup>nd</sup> edition. Jones and Bartlett (publishers), 2012. Available for purchase at the university bookstore.

### **Other References, Journals and Websites:**

#### **Books**

Moeller, D. W. Environmental health. 2<sup>nd</sup> edition. Harvard University Press 1997. RA 565.M64 1997.

Duncan, Kirsty. Environment and health: protecting our common future. WIT Press. Boston. (2008). RA566 .D86 2008.

Lippmann, Morton. Environmental toxicants: human exposures and their health effects. 2<sup>nd</sup> ed. Wiley. New York. (2000). RA565 .E58 2000.

#### **Journals**

Environmental Health <http://www.ehjournal.net/>

Environmental Health Perspectives <http://www.ehponline.org/>

Medline Plus – Environmental Health

<http://www.nlm.nih.gov/medlineplus/environmentalhealth.html>

Environmental Health and Toxicology – Specialized Information Services

<http://sis.nlm.nih.gov/enviro.html>

Environmental Health News <http://www.environmentalhealthnews.org/>

#### **General Environmental Health Websites**

##### *Canada*

Health Canada – Environmental and Workplace Health <http://www.hc-sc.gc.ca/ewh-semt/index-eng.php>

Public Health Agency of Canada <http://www.phac-aspc.gc.ca/index-eng.php>

Environment Canada <http://www.ec.gc.ca/default.asp?lang=En&n=FD9B0E51-1>

Canadian Food Inspection Agency <http://www.inspection.gc.ca/english/toce.shtml>

Canadian Environmental Assessment Agency

<http://www.ceaa.gc.ca/default.asp?lang=En&n=0046B0B2-1>

Inventory of Federal, Provincial and Territorial Environmental and Occupational Health  
Environmental Health Assessment – Publications [http://www.hc-sc.gc.ca/ewh-  
semt/pubs/eval/inventory-repertoire/index-eng.php](http://www.hc-sc.gc.ca/ewh-<br/>semt/pubs/eval/inventory-repertoire/index-eng.php)

National Collaborating Centre for Environmental Health <http://www.ncceh.ca/en/home>  
Environmental Health Legislation in Canada (NCCEH)  
<http://www.ncceh.ca/en/legislation>

Ontario Ministry of Health and Long-Term Care – Environmental health program  
standards

[http://www.health.gov.on.ca/english/providers/program/pubhealth/oph\\_standards/ophs/eh.html](http://www.health.gov.on.ca/english/providers/program/pubhealth/oph_standards/ophs/eh.html)

Public Health Ontario

<http://www.oahpp.ca/services/environmental-and-occupational-health.html>

Ontario Ministry of the Environment:

Water - <http://www.ene.gov.on.ca/en/water/index.php>

Air - <http://www.ene.gov.on.ca/en/air/index.php>

Ontario Ministry of Agriculture Food and Rural Affairs

<http://www.omafra.gov.on.ca/english/index.html>

Other provincial environmental public health agencies:

Alberta -

<http://www.health.alberta.ca/newsroom/pub-environmental-health.html>

British Columbia -

<http://www.bccdc.ca/util/about/div/EHServices/default.htm>

Manitoba –

<http://www.gov.mb.ca/health/publichealth/environmentalhealth/index.html>

Newfoundland –

<http://www.health.gov.nl.ca/health/publichealth/envhealth/environmental.html>

Nova Scotia –

<http://www.gov.ns.ca/hpp/environmental/>

Prince Edward Island-

<http://www.gov.pe.ca/health/environmentalhealth>

Quebec -

[http://www.msss.gouv.qc.ca/sujets/santepub/environnement/index.php?accueil\\_en](http://www.msss.gouv.qc.ca/sujets/santepub/environnement/index.php?accueil_en)

Saskatchewan –

<http://www.health.gov.sk.ca/environmental-health>

Children’s environmental health project <http://www.cape.ca/children/index.html>

Canadian Centre for Health and Safety in Agriculture [http://www.cchsa-  
ccssma.usask.ca/ahsn/index.php](http://www.cchsa-<br/>ccssma.usask.ca/ahsn/index.php)

*US*

US Environmental Protection Agency <http://www.epa.gov/>

Integrated Risk Information System (USEPA): <http://www.epa.gov/iris/index.html>

National Center for Environmental Assessment: <http://cfpub.epa.gov/ncea/>  
National Toxicology Program: <http://ntp-server.niehs.nih.gov/>  
Agency for Toxic Substances and Disease Registry: <http://www.atsdr.cdc.gov/>  
CDC – National Center for Environmental Health <http://www.cdc.gov/NCEH/>  
Environmental Health Links – US <http://phpartners.org/environmentalhealth.html>  
National Institute of Environmental Health Sciences: <http://www.niehs.nih.gov/>  
Minnesota Environmental Health <http://www.health.state.mn.us/divs/eh/index.html>  
Healthy People 2010: Environmental Health  
<http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=12>  
Oregon Office of Environmental Public Health  
<http://www.oregon.gov/DHS/ph/ophs/index.shtml>

### *International*

WHO Environmental Health [http://www.who.int/topics/environmental\\_health/en/](http://www.who.int/topics/environmental_health/en/)

## **General Topics**

Introduction to environmental health, environmental epidemiology, policy, regulation, water, pesticides and other environmental toxins, food, water & air quality, ionizing and non-ionizing radiation, solid and liquid wastes, climate change and public health.

These will be addressed through a combination of lectures, guest lectures, case studies, group work and student presentations.

## **Schedule**

Final class schedule to follow.

All classes 09:00 – 10:20, Tuesdays and Thursdays beginning January 10, 2012. Classes will be held in room 1812 Pathobiology, with the following exceptions:

Jan-10  
1438 Clinical Studies

Jan-24  
1438 Clinical Studies

Jan-26  
1438 Clinical Studies