

"HUMAN HEALTH AND THE ENVIRONMENT"
(EESA10 H3-S L30/L60)



Instructor: Dr. Silvija Stefanovic

Lecture: Wednesday 7–9pm; AC223
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TAs: Ariola Visha (Lectures 1-6)
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The intent of the course:

Because of pollution, our surroundings are becoming increasingly hazardous to our health. The past century has seen intense industrialization characterized by the widespread production and use of chemicals and the intentional and unintentional disposal of a wide range of waste materials. This course explores the relationship between the incidence of disease in human populations and the environmental pollution. Emphasis will be placed on understanding where and what pollutants are produced, how they are taken up by humans and their long-term effects on health; the role of naturally-occurring carcinogens will also be examined. The course will include a view of risk assessment and toxicology using case studies. No prior knowledge of environmental or medical science is required.

Sustainability:

This course is recognized as a UTSC Green Course which has steps in place to reduce the amount of course-generated paper, encouraging students to print multiple slides per page, double-side printing or using scrap paper.

Text:

“Understanding Environmental Health: How We Live in the World” Nancy Irwin Maxwell, 2014, Jones & Bartlett Learning (available from the bookstore)

Lecture notes:

The lecture slides will be posted in *.pdf format on the Blackboard. You will require Adobe Reader to open the files (available free of charge at www.adobe.com).

Course email policy:

Email is not an effective way of teaching and email inquiries regarding course materials will not be answered. Dr. Stefanovic will be available during designated office hours to answer questions regarding course material. If you have questions, then please see instructor during office hours – this time is for you so please do not hesitate to use it.

Grading:

Mid-term Examination	50%
Final Examination	50%

Additional Readings and Discussion Board

TAs will post supplemental new media resources (e.g. videos, articles) on Blackboard weekly for the students to review. TAs will initiate and regularly monitor Discussion Board linked to the posted material. *The student participation in Discussions is strongly encouraged.* Questions about the posted material will be on the exams.

Midterm

The 1.5-hour mid-term examination will be held during the mid-term period, exact time, date and room TBA. The exam will consist of multiple-choice and true-false choice and will be worth 50% of the final grade.

The midterm will draw from lectures 1-6 and includes lecture notes, associated readings in Maxwell's Text and additional material posted on Blackboard (videos, articles). Information from the textbook not directly covered in class will not be tested on the exam. **Questions about the transcript (Lecture 1) and videos shown in the lectures will also be on the exam.** More details about the exams will follow.

Final Exam

The 1.5-hour final examination is worth 50% of the final grade for the course. It will be a combination of multiple-choice and true-false choices. *The final exam is NOT cumulative.*

The final exam will draw from lectures 7-12 and includes lecture notes, associated readings in Maxwell's Text and additional material posted on Blackboard (videos, articles). Information from the textbook not directly covered in class will not be tested on the exam. **Questions about the videos shown in the lectures will also be on the exams.** More details about the exams will follow.

Web option Lectures

This course is also offered as a web option. The students that are enrolled in the L60 section are to watch the lectures online later when it is posted (usually within 24 hours of the live lecture), and only those registered into L30 are expected to attend the live lecture. You can access the online video by logging in at <https://lecturecast.utoronto.ca/login.php>. using your UTSC ID or UTOR ID and password. The lecture you will view online is identical to what was presented during the live lecture; you will not miss any bit of the lecture. **All lectures will remain posted until the end of the semester.**

If you are enrolled in the traditional section you can also watch the lectures online if you prefer or you can use the WebOption to review your lectures later in the term. The students from L60 can attend the live lecture if there are available seats in the classroom.

Lecture topics:

1. Introduction, ground rules, expectations and course structure.
Understanding the Health Effects of Environmental Hazards
Video: "Leaving Downstream" Featured by Dr. Sandra Steingraber Jan.4th
2. Airborne Hazards and Human Health Jan. 11th
3. Waterborne Hazards and Human Health Jan. 18th
4. Chemical Hazards and Human Health
Video: "The Disappearing Male" Jan. 25th
5. Heavy Metals and Human Health.
Case study: CCA (Chromated Copper Arsenate) wood preservative Feb. 1st
6. Radiation and Electromagnetic Hazards and Human Health Feb. 8th
7. Biological Hazards and Human Health
Video: "Black dawn: the next pandemic" Feb. 15th
8. **READING WEEK** Feb. 22th
9. Foodborne Hazards and Human Health
Video: "Diet and Disease in Modern Society" Mar. 1st
10. Toxicology - The science of Poisons Mar. 8th
11. The Science of Risk Assessment, Precautionary Principle Mar. 15th
12. Environmental Hazards to Specific Populations: Children and Women; Occupational Hazards;
Growing Population and Overconsumption and Human Health, War and Human Health Mar. 22nd
13. Climate change, Ozone depletion, Species Loss and Ecosystem Disruption and Human Health;
Course Review Mar. 29th

I will follow this schedule as closely as possible, but things being what they are, some of these topics may "overflow" over into other time slots.

Associated Readings in Maxwell's Text:

- Lec. 1- Chapter 1
- Lec. 2- Chapter 4 (pg. 128-143), Chapter 5 (pg. 211-213), Chapter 7 (pg. 328-335)
- Lec. 3- Chapter 7 (pg. 303-309)
- Lec. 4- Chapter 5 (196-205)
- Lec. 5- Chapter 4 (pg. 139-143), Chapter 5 (pg. 207-210)
- Lec. 6- Chapter 3 (pg. 106-114), Chapter 2 (pg. 20-23), Chapter 7 (pg. 335-337)
- Lec. 7- Chapter 3 (pg. 72-104)
- Lec. 8- Chapter 6 (pg. 239-250, 268-270)
- Lec. 9- Chapter 2 (pg. 18-37)
- Lec. 10- Chapter 2 (pg. 52-66)
- Lec. 11- Chapter 5 (214-216), Chapter 7 (337-339)
- Lec. 12- Chapters 4 (pg.143-156), Chapter 5 (205-206)