

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



Instructor: Dr. Silvija Stefanovic

Lecture: Wednesday 7–9pm; AC223
Office: EV366
Office hours: Thursday 3-4 pm
Email: silvija.stefanovic@utoronto.ca
Phone: 416-208-4873

TAs: Ariola Visha (Lectures 1-6)

Email: a.visha@mail.utoronto.ca

Bhargav Patel (Lectures 7-12)

Email: br.patel@alum.utoronto.ca

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 Quercus. 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:

Discussion Board	10%
Mid-term Examination	45% (30% lecture material; 15% supplemental material and discussion board)
Final Examination	45% (30% lecture material; 15% supplemental material and discussion board)

Supplemental Material and Discussion Board

TAs will post supplemental media resources (e.g. videos, articles) on Quercus weekly for the students to review. These resources will be available to students after the regular lecture, at 9pm on Wednesdays. TAs will initiate and regularly monitor Discussion Board linked to the posted material. In order to incentivize your efforts on discussion board you will be divided into twelve groups as per your last name (see Quercus). Every week people in each group will be required to answer the questions on discussion board in order to get their mark.

You will be credited only for the week when it was mandatory for you to take part in the discussion. For example, people in group of Lecture 7 will not receive their mark if they miss answering during week of Lecture 7 and then answer during week of Lecture 8.

You can post only your opinion on the question asked during 3 days (until Saturday at 9pm) after the supplementary material is posted. You have to submit your discussion first and then you will be able to see what other students wrote. You will not be able to delete or edit your comments once they are submitted but you can feel free to enter more NEW points (**copying and pasting opinions of others or being repetitive will not be considered as a substantial contribution in order to get the mark**) if you like before due date on Saturdays at 9pm. Please make sure you post the specific answer and not your notes in the response.

You will still be responsible to watch all the supplementary videos or reading material from lecture 1-12, as they will be testable for your midterm and final exam.

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 60 multiple-choice and true-false choice; **45 questions from the lectures, 15 questions from the text book and 30 questions from the supplementary material and discussions**. The midterm will be worth 45% of the final grade.

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

Missed Midterm Policy

If you miss the midterm with a verifiable reason (i.e. you have a Doctor's note or have made provisions for a VERY good reason with the professor PRIOR to the mid-term), please submit the proof for your absence. If the reason is medical, an official UTSC medical note must be completed by a doctor who examined you while you were ill/injured. The medical note can be downloaded at

http://www.utoronto.ca/~registrar/resources/pdf_general/UTSCmedicalcertificate.pdf.

You must submit appropriate documentation within 5 business days after the day of the regular midterm. All collected documents will be submitted to DPES Chairs office for consideration. After approval, day and time of the makeup midterm will be announced on Quercus. If you simply "miss" the mid-term, you will receive a mark of zero for it. If you miss the makeup midterm with a verifiable reason after you submit the proof for your absence (the same as above) you will write a cumulative final exam.

Final Exam

The 1.5-hour final examination is worth 45% of the final grade for the course. The exam will consist of 60 multiple-choice and true-false choice; **45 questions from the lectures, 15 questions from the text book and 30 questions from the supplementary material and discussions.** *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 supplemental material and discussions posted on Quercus (videos, articles). Information from the textbook not directly covered in class will not be tested on the exam. 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.uts.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 lecture 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:

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| 1. Introduction, ground rules, expectations and course structure. Understanding the Health Effects of Environmental Hazards | Jan.9 th |
| 2. Airborne Hazards and Human Health | Jan. 16 th |
| 3. Waterborne Hazards and Human Health | Jan. 23 rd |
| 4. Chemical Hazards and Human Health | Jan. 30 th |
| 5. Heavy Metals and Human Health.
Case study: CCA (Chromated Copper Arsenate) wood preservative | Feb. 6 th |
| 6. Radiation and Electromagnetic Hazards and Human Health | Feb. 13 th |
| 7. READING WEEK | Feb. 20 th |
| 8. Biological Hazards and Human Health | Feb. 27 th |
| 9. Foodborne Hazards and Human Health | Mar. 6 th |
| 10. Toxicology - The science of Poisons | Mar. 13 th |
| 11. The Science of Risk Assessment; Precautionary Principle | Mar. 20 th |
| 12. Environmental Hazards to Specific Populations: Children and Women;
Occupational Hazards; Growing Population and Overconsumption and Human Health;
War and Human Health; | Mar. 27 th |
| 13. Climate change; Ozone depletion; Species Loss and Ecosystem Disruption and Human Health;
Course Review | April 3 rd |

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)