

"HUMAN HEALTH AND THE ENVIRONMENT"
(EESA10 H3-Y L99)

Instructors:

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Lectures: fully online asynchronous (no live lectures; pre-recorded)

Term work, midterm and final exams: online; on Quercus

Weekly office hours in Zoom:

Dr. Stefanovic – every Tue. 11am-12pm (starting May 17)

Dr. Visha - TBA

TAs: Brian Pentz (Lectures 3-7)

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Kokilathanan Nigarsan (Lectures 8-12)

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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 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.

Suggested readings (not required for the exams):

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

Lectures (required for the exams):

The lecture videos will be pre-recorded and posted on Quercus every week on Wed. at 9am. The lectures will remain posted until the end of the semester.

The lecture slides will be posted in *.pdf format on Quercus day before the videos or on Tue. at 9am. You will require Adobe Reader to open the files (available free of charge at www.adobe.com).

Grading

Discussion	20%
Midterm Exam	40%
Final Exam	40%

Supplemental Material and Discussion Board (required for the exams):

The discussions will start on Wed. May 25th at 11am (after the lecture). TAs will post supplemental media resources (e.g., videos and articles) weekly on Quercus for the students to review. These resources will be related to the lecture taught on that day (also called “topic of the week”). It is strongly suggested you watch the lecture before you participate in your discussion assignment. TAs will also post the questions you are expected to discuss in your response and they will regularly monitor the Discussion Board linked to the posted material.

In order to incentivize your efforts on the discussion board, you will be divided into ten groups. Every week people in ONE particular group will be required to answer the questions on the discussion board to get their mark.

For the mark, you need to participate in discussion only ONCE for the whole term.

Please check Quercus to find out your group number. Below are the lecture/week numbers and dates when each group should participate in discussions.

Group #	Lecture #	Week #	Issue Date: Wednesday @ 11am	Due Date: Sunday @ 11:59pm
Group 1	Lecture 3	Week 3	May 25	May 29
Group 2	Lecture 4	Week 4	June 1	June 5
Group 3	Lecture 5	Week 5	June 8	June 12
Group 4	Lecture 6	Week 6	June 15	June 19
Group 5	Lecture 7	Week 7	June 29	July 3
Group 6	Lecture 8	Week 8	July 6	July 10
Group 7	Lecture 9	Week 9	July 13	July 17
Group 8	Lecture 10	Week 10	July 20	July 24
Group 9	Lecture 11	Week 11	July 27	July 31
Group 10	Lecture 12	Week 12	Aug. 3	Aug. 7th

The discussion will be available to the assigned group on **Wednesday at 11am**. You can post only your opinion on the question asked for 4 days (**until Sunday at 11:59pm**) after the supplementary material is posted. Please make sure you post the specific answer and not your notes in the response. 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) if you like before the due date on Sunday at 11:59pm. **However, ONLY first submission will be marked.**

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

The extension will be granted only if you formally self-declare absences through DPES on-line self-declaration form (<https://www.utoronto.ca/physsci/self-declaration-absence-form-0>). These on-line requests will be sent directly to your instructor, as well as to the department.

The form is conveniently placed on the front page of DPES website, just underneath the picture with the “smiley faces” during the groundbreaking of our EV building (<https://www.utoronto.ca/physsci/welcome-physical-environmental-sciences>).

Please note that you still have to submit your absence on-line requests through ACORN.

Both submissions have to be done **within 3 business days** after the regular discussion due date. The self-declarations submitted after this time will not be considered.

After the due date, all students are responsible to watch ALL supplementary videos or reading material from lecture 3-12, as they will be testable for your midterm and final exam.

Midterm Exam:

The 2-hours midterm exam will be held during the mid-term period, time and date TBA. The midterm will be online on Quercus.

The exam will consist of 80 Fill in the Blanks, Matching, MCQs, Multiple Dropdowns and True/False questions (60 questions from the lecture material and 20 questions from the supplemental material). The midterm will be worth 40% of the final grade. The midterm will draw from lectures 1-6 and includes lecture notes and supplemental material posted on Quercus (videos, articles). The suggested readings are not for the exam. More details about the exams will follow.

The midterm will be closed book and **questions and answers will not be available for students to review after the exam**. Also, the students will need to complete a Midterm Exam Take-Home Honour Pledge Questions. The completion of the pledge is mandatory and not completing will be considered as an Academic Integrity Violation issue and students' names will be sent to the Departmental Chair (DPES) for assessment. More details about the pledge submission will follow.

Missed Midterm Policy:

If you miss midterm you have to formally self-declare absences through DPES on-line self-declaration form (<https://www.utoronto.ca/physsci/self-declaration-absence-form-0>). These on-line requests will be sent directly to your instructor, as well as to the department.

The form is conveniently placed on the front page of DPES website, just underneath the picture with the "smiley faces" during the groundbreaking of our EV building (<https://www.utoronto.ca/physsci/welcome-physical-environmental-sciences>).

Please note that you still have to submit your absence on-line requests through ACORN.

Both submissions have to be done **within 3 business days** after the day of the regular midterm. The self-declarations submitted after this time will not be considered.

After checking the validity of your self-declarations, the 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 self-declarations again, the weight of the midterm will be transferred to the final exam (in this case your final will be worth 80%).

Final Exam:

The 2-hours final examination is worth 40% of the final grade for the course. The final exam will be online on Quercus.

The exam will consist of 80 Fill in the Blanks, Matching, MCQs, Multiple Dropdowns and True/False questions (60 questions from the lecture material and 20 questions from the supplemental material). **The final exam is NOT cumulative**. The final exam will draw from lectures 7-12 and includes lecture notes and supplemental material posted on Quercus (videos, articles). The suggested readings are not for the exam. More details about the exams will follow.

The final will be closed book and questions and answers will not be available for students to review after the exam. Also, the students will need to complete a Final Exam Take-Home Honour Pledge Questions. The completion of the pledge is mandatory and not completing will be considered as an Academic Integrity Violation issue and students' names will be sent to the Departmental Chair (DPES) for assessment. More details about the pledge submission will follow.

Accessibility Statement:

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the AccessAbility Services Office as soon as possible. I will work with you and AccessAbility Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC AccessAbility Services staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations at (416) 287-7560 or ability@utsc.utoronto.ca.

Other Course Policies:

Plagiarism will not be tolerated. Each student is expected to submit **individual work** for grading. It is an academic offence to plagiarize and those who do will be subjected to University procedures (see the University calendar).

Lecture topics:

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| 1. Course outline: introduction, ground rules, expectations and course structure.
Understanding the Health Effects of Environmental Hazards | May 11 |
| 2. Airborne Hazards and Human Health | May 18 |
| 3. Waterborne Hazards and Human Health | May 25 |
| 4. Chemical Hazards and Human Health | June 1 |
| 5. Heavy Metals and Human Health. | June 8 |
| 6. Radiation and Electromagnetic Hazards and Human Health | June 15 |

READING WEEK (no classes)

June 22

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| 7. Biological Hazards and Human Health | June 29 |
| 8. Foodborne Hazards and Human Health | July 6 |
| 9. Toxicology science | July 13 |
| 10. Science of Risk Assessment, Precautionary Principle | July 20 |
| 11. Environmental Hazards to Specific Populations: Children and Women; Occupational Hazards;
Growing Population and Overconsumption and Human Health, War and Human Health | July 27 |
| 12. Climate change, Ozone depletion, Species Loss and Ecosystem Disruption and Human Health;
Final exam preparation | Aug. 3 |

Suggested readings in Maxwell's Text (NOT for the TESTS)

- 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- Chapter 4 (pg.143-156), Chapter 5 (205-206)