

**"HUMAN HEALTH AND THE ENVIRONMENT"**  
**(EESA10 H3-S L30/L01)**

**Instructor:** Dr. Silvija Stefanovic

**Lectures:**

**L30:** In-person, Wed. 7-9pm; AC223

**L01:** Online Asynchronous;

**Office:** EV366

**Office hours:** Wed. 5-6:30pm

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**TAs:** Saha Ratnajit (Lectures 3-7)  
Xiaoqing Shao (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 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.

**Suggested readings** (*not required for the exams*):

“Maxwell's Understanding Environmental Health, How We Live in the World” 3rd Edition, Deborah Alma Falta, 2022, Jones & Bartlett Learning (available from the bookstore; any addition of the text is acceptable)

**Lectures and lecture notes** (*required for the exams*):

This course is offered in two different delivery modes: in-person (L30) and online asynchronous mode (L01). The students that are enrolled in the L01 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. The videos are recorded, edited and uploaded manually to the course Media Gallery by UTSC WebOption team.

The lectures you will view online are 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 L01 can attend the live lecture if there are available seats in the classroom.

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](http://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, please see instructor during office hours – this time is for you so please do not hesitate to use it.

### Grading:

Discussion 20%

Mid-term Examination 40%

Final Examination 40%

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

The discussions will start on Wed. Jan. 25<sup>th</sup> at 9 pm (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.**

**The groups will be available on Monday, Jan. 23th at 12pm. You will need to 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 @ 9 pm	Due Date: Monday @ 11:59 pm
Group 1	Lecture 3	Week 3	January 25	January 30
Group 2	Lecture 4	Week 4	February 1	February 6
Group 3	Lecture 5	Week 5	February 8	February 13
Group 4	Lecture 6	Week 6	February 15	February 20
Group 5	Lecture 7	Week 7	March 1	March 6
Group 6	Lecture 8	Week 8	March 8	March 13
Group 7	Lecture 9	Week 9	March 15	March 20
Group 8	Lecture 10	Week 10	March 22	March 27
Group 9	Lecture 11	Week 11	March 29	April 3
Group 10	Lecture 12	Week 12	April 5	April 10

The discussion will be available to the assigned group on **Wednesday at 9 pm**. You can post only your opinion on the question asked for 5 days (**until Monday at 11:59 pm**) 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 Mondays at 11:59 pm. **However, the 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 the proper documentation is provided within 3 business days after the assignment due date. Failing to follow these instructions will result in a mark of 0 for discussion.**

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. **The students' responses will not be available for class to review and they are not testable material.**

### **Midterm:**

The 1.5-hour mid-term examination will be held during the mid-term period, exact time, date and rooms TBA. The exam will consist of 80 multiple-choice and true-false choice; **60 questions from the lectures and 20 questions from the supplementary 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.

### **Missed Midterm Policy:**

If you miss midterm due to illness, emergency, or other mitigating circumstances 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>).

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

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

Both submissions have to be done **within 5 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 **new document with the new date**, the weight of the midterm will be transferred to the final exam (in this case your final will be worth 80%).

### **Final Exam:**

The 1.5-hour final examination is worth 40% of the final grade for the course. The exam will consist of 80 multiple-choice and true-false choice; **60 questions from the lectures and 20 questions from the supplementary 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.

### **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@utoronto.ca](mailto:ability@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.

## Lecture Topics:

<b>Lecture/Week 1.</b> Introduction, ground rules, expectations and course structure. Understanding the Health Effects of Environmental Hazards	Jan. 11 <sup>th</sup>
<b>Lecture/Week 2.</b> Airborne Hazards and Human Health	Jan. 18 <sup>th</sup>
<b>Lecture/Week 3.</b> Waterborne Hazards and Human Health	Jan. 25 <sup>th</sup>
<b>Lecture/Week 4.</b> Chemical Hazards and Human Health	Feb. 1 <sup>st</sup>
<b>Lecture/Week 5.</b> Heavy Metals and Human Health; Case study: CCA (Chromated Copper Arsenate) wood preservative	Feb. 8 <sup>th</sup>
<b>Lecture/Week 6.</b> Radiation and Electromagnetic Hazards and Human Health	Feb. 15 <sup>th</sup>
<b>READING WEEK</b>	<b>Feb. 22<sup>nd</sup></b>
<b>Lecture/Week 7.</b> Biological Hazards and Human Health	Mar. 1 <sup>st</sup>
<b>Lecture/Week 8.</b> Foodborne Hazards and Human Health	Mar. 8 <sup>th</sup>
<b>Lecture/Week 9.</b> Toxicology - The science of Poisons	Mar. 15 <sup>th</sup>
<b>Lecture/Week 10.</b> The Science of Risk Assessment; Precautionary Principle;	Mar. 22 <sup>nd</sup>
<b>Lecture/Week 11.</b> Environmental Hazards to Specific Populations: Children and Women; Occupational Hazards; Growing Population and Overconsumption and Human Health; War and Human Health;	Mar. 29 <sup>th</sup>
<b>Lecture/Week 12.</b> Climate change; Ozone depletion; Species Loss and Ecosystem Disruption and Human Health; Course Review	Apr. 5 <sup>th</sup>

*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 (2<sup>nd</sup> Edition):

- 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)