

ENV 452 – Environmental Science Seminar: Current Topics in Environmental Science
University of Toronto, School of the Environment
Spring Term 2020

This course focuses on current challenges in environmental science, ranging from environmental pollution, environmental chemistry, toxicology, to biological and health impacts. A variety of guest speakers who are leading experts from different backgrounds will introduce these topics, and speak to their recent progress on these topics. Students will be tasked with broadly introducing the topics on which the experts will speak in advance of their lectures, to familiarize the class with the topic. The course will also include a parallel, stand-alone, module on chemical contaminants. Students will be assigned research articles and essays by leading experts in the field, as well as articles appearing in the news media. Students will then lead a discussion on the article/essay of the week, which all the students in the class will have read. A final essay will involve writing a review paper to introduce the environmental fates, toxicology and related policy regulations of a selected class of chemical contaminants.

Time and Place: The course meets in ES1016 from 3:00 – 4 pm every Tuesday, and from 10:00 am - 12 pm every Thursday.

Instructors: Professor Hui Peng (Department of Chemistry and School of the Environment), room LM 321A, Lash Miller Building, 80 St. George Street, hui.peng@utoronto.ca

Office hours: Professor Peng will be available by appointment.

Website: We will communicate with you using the course Quercus site. You are responsible for consulting it regularly for updates and to access readings.

Evaluations:

Student-led discussions	25 %
Student-led presentations of speaker topic previews	25 %
Final essay	35 %
Participation (in class)	15 %

Presentations of guest speaker topic background information: Your presentations will be done in pairs, and your team will be expected to provide background information to students in the class, to better understand the talks given by the guest speakers on the upcoming Thursday. The instructors can provide guidance about the scope of the topic and you can use websites, peer-reviewed research, and stories in the popular media as resources. The oral presentation will be delivered in class in student pairs, will be approximately 30 minutes in duration (approximately 15mins for each student), and will be supported by a Power Point slideshow. A short discussion/question session will follow afterwards.

Student-led Discussion: In pairs, your team will be responsible for collecting information from journal publications or media articles and then organize the information to materials. All other members of the

class will also read the assigned readings. Your team will then lead a discussion on the salient points of the readings, extracting relevant information, helping other students to flesh out and articulate the concepts explored. A short oral presentation is recommended. Identifying critical points for discussion is requested.

Final Paper: Careful notes should be taken throughout the term, as what you have learned in the class will provide the basis of your opinion essay. In approximately 2000 words, you will be tasked with reviewing recent research progresses on a certain class of pollutants, and related toxicity/health effects.

Late work policy: Final papers are due on April 4, 2019. Work handed in late will be penalized at 10% per day, including the weekend for up to 7 days, after which it will not be accepted. Late work can be submitted to Prof. Hui Peng.

*Note that the “Discussion” is decoupled from the “Lecture”. A Discussion (based on readings) and a guest lecture may occur on the same day, but the topics are unrelated.

Date	Week	Lecture (Student or Guest)	Student-Led Discussion
Jan-07	1	Hui Peng– <i>Introduction</i>	Student choice of topics
Jan-9	1	Hui Peng– <i>Overview of Environmental Chemistry and Toxicology</i>	
Jan-14	2		Overview of Next Speaker's Topic
Jan-16	2	Hui Peng – <i>Per- and Polyfluoroalkyl Substances (PFASs)</i>	
Jan-21	3	Student Overview of Next Speaker's Topic	
Jan-23	3	Arthur Chan – <i>Canada Wildfire</i>	<i>Bisphenol A and its replacements</i>
Jan-28	4	Student Overview of Next Speaker's Topic	
Jan-30	4	TBD	<i>Flame retardants and related concerns</i>
Feb-04	5	Student Overview of Next Speaker's Topic	
Feb-06	5	TBD	<i>Air particulate matter and aerosol</i>
Feb-11	6	Student Overview of Next Speaker's Topic	

Feb-13	6	TBD	<i>Drinking water disinfection and byproducts</i>
Feb-18	7	Reading Week	
Feb-20	7	Reading Week	
Feb-25	8	Student Overview of Next Speaker's Topic	
Feb-27	8	TBD	<i>Neonicotinoids pesticides</i>
Mar-03	9	Student Overview of Next Speaker's Topic	
Mar-05	9	TBD	<i>Persistent Organic Pollutants (POPs)</i>
Mar-10	10	Student Overview of Next Speaker's Topic	
Mar-12	10	TBD	<i>Foodweb biomagnification</i>
Mar-17	11	Student Overview of Next Speaker's Topic	
Mar-19	11	TBD	<i>Polycyclic aromatic hydrocarbons and cancer</i>
Mar-24	12	Student Overview of Next Speaker's Topic	
Mar-26	12	TBD	<i>Endocrine Disruptors</i>
Mar-31	13	TBD	
Apr-02	13	No class – reserved for essay questions & discussion of essay challenges	

Academic Integrity: While discussions among classmates are encouraged, any material that you submit or present MUST represent your own independent work and comprehension. Academic integrity is fundamental to learning and scholarship at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the U of T degree that you earn will be valued as a true indication of your individual academic achievement, and will continue to receive the respect and recognition it deserves.

Familiarize yourself with the University of Toronto's *Code of Behaviour on Academic Matters* (<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>). It is the rule book for academic behaviour at the U of T, and you are expected to know the rules. Potential offences include, but are not limited to:

In papers and assignments:

- Using someone else's ideas or words without appropriate acknowledgement.
- Copying material word-for-word from a source (including lecture and study group notes) and not placing the words within quotation marks.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Including references to sources that you did not use.
- Obtaining or providing unauthorized assistance on any assignment including:
 - working in groups on assignments that are supposed to be individual work;
 - having someone rewrite or add material to your work while "editing".
- Lending your work to a classmate who submits it as his/her own without your permission.

Misrepresentation:

- Falsifying or altering any documentation required by the University, including doctor's notes.
- Falsifying institutional documents or grades.

The University of Toronto treats cases of academic misconduct very seriously. All suspected cases of academic dishonesty will be investigated following the procedures outlined in the *Code*. The consequences for academic misconduct can be severe, including a failure in the course and a notation on your transcript. If you have any questions about what is or is not permitted in this course, please do not hesitate to contact me. If you have questions about appropriate research and citation methods, seek out additional information from me, or from other available campus resources like the [U of T Writing Website](#). If you are experiencing personal challenges that are having an impact on your academic work, please speak to me or seek the advice of your college registrar.

Accommodations: Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability or health consideration that may require accommodations, please feel free to approach the instructor and/or Accessibility Services at (416) 978 8060; <http://accessibility.utoronto.ca>

Absences: Students who miss classes, for legitimate reasons or otherwise, are responsible for making up the missed material. Students who miss a presentation or report deadline should contact Professor Wunch as soon as possible, and no later than one week after returning to class. A legitimate reason for an absence or missed deadline due to medical, personal, or family reasons should be documented by one of the following: 1) U of T Student Medical Certificate; 2) Student Health or Disability Related Certificate; 3) College Registrar's Letter; or 4) Accessibility Services Letter.