

CHM1401 - Transport and Fate of Chemical Species in the Environment

This is the core course for new graduate students in environmental chemistry, and provides an introduction/refresher to concepts from physical, analytical and organic chemistry and their application to the environment. It also provides you with the background to better understand the research of your peers and colleagues.

Schedule class time is from 9:00-12:00 on Tuesdays, with the time often divided into a two-hour lecture and one-hour workshop. While it will be possible to take the entire class remotely (using on-line tools), some instructors will teach part of the course in-person on the St. George Campus (room yet to be determined). Whether attendance is in-person or remotely, active participation of students is encouraged and expected at all times. Readings and assignments for the course will be posted on the Quercus site (q.utoronto.ca) and students are responsible for checking the site regularly for updates and resources.

Instructors

Frank Wania (coordinator)	frank.wania@utoronto.ca
Myrna Simpson	myrna.simpson@utoronto.ca
Jonathan Abbatt	jonathan.abbatt@utoronto.ca
Hui Peng	hui.peng@utoronto.ca
Daniel Newman	daniel.newman@utoronto.ca

Lecture Schedule

September 8	Intro to physical environment	Abbatt
September 15	Physical environment	Simpson
September 22	Organic pollutant sorption	Simpson
September 29	Basics of analytical and environmental chemistry	Simpson
October 6	Kinetics and photochemistry	Abbatt
October 13	Atmospheric reactions	Abbatt
October 20	Equilibrium partitioning and the partitioning space	Wania
October 27	Basic of chemical mass balance modelling	Wania
November 3	Bioaccumulation	Wania
November 10	<i>How to write a good literature review</i>	Newman
November 17	General introduction to toxicology	Peng
November 24	Chemistry principles of receptor-mediated toxicities	Peng
December 1	Chemistry principles of covalent binding-mediated toxicities	Peng

Evaluation

Assignment(s) from each instructor + workshop participation	40 %
due: Abbatt	September 22 & October 13
Simpson	October 6
Wania	November 10
Peng	December 7

Term paper - submit by email to Wania	30 %
(outline due November 3, paper due December 8)	

Take-home, open-book "exam" of one week (dates to be determined)	30 %
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Plagiarism: Students may be required to submit their course assignments to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their material to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.

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 contact Accessibility Services at (416) 978 8060; <http://www.studentlife.utoronto.ca/as>, or contact Professor Wania if you have questions.