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.

We meet from 9:00 - 12:00 on Tuesdays in LM 319, with the time often divided into a two-hour lecture and one-hour workshop. 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
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Lecture Schedule
- Sep 10: Introduction, Physical Environment (JM)
- Sep 17: Thermodynamics (JD)
- Sep 24: Gas- and Multi-phase Reactions (SM)
- Oct 1: Chemical Partitioning - Hydrophobicity, sediments, soils (DM)
- Oct 8: Carbon cycle (JM)
- Oct 15: Chemical Partitioning - Bioaccumulation, bioavailability (DM)
- Oct 22: Visualizing bioaccumulation - chemical space plots and models (DM)
- Oct 29: Aqueous reactions (SM)
- Nov 5: Biological reactivity and toxicity (SM)
- Nov 12: Measurement techniques (JM)
- Nov 19: Reaction Kinetics (JD)
- Nov 26: Photochemistry (JD)

Evaluation
Assignment from each instructor + workshop participation 50 %
Term paper - submit by email to JM 25 %
(outline due Nov 1, paper due Dec 6)
Final exam (Dec 12) 25 %
(two-sided equation sheet can be brought to exam)

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 Murphy if you have questions.