COURSE: CHEMISTRY 599.22/619.22 – Water Chemistry

DAYS TIME ROOM INSTRUCTOR OFFICE PHONE EMAIL OFFICE HOURS
Tu/Th 11:00-12:15 ST 063 Dr. Kimura-Hara SB 333 220-7519 s.kimurahara@ucalgary.ca M/W 4-5pm or By appointment


TOPICS COVERED:
Application of principles of chemical equilibrium and chemical kinetics to water quality.

- Chemistry review: Concentration units, ionic strength, balancing chemical reactions
- Chemical equilibrium and activity coefficients
- Acid/base speciation and chemistry: solving equilibrium equations, pC-pH diagrams, proton condition
- Titration and buffers: buffer intensity, equivalence points, carbonate system and alkalinity
- Metals in aqueous systems: speciation and complexation of dissolved metals, predominance area diagrams, precipitation reactions
- Oxidation-reduction
- Disinfection: chlorine and chloramine chemistry, disinfection by-products

All other relevant course information can be found in the official course syllabus.

This course does not have a laboratory component.

Department Approval_______Electronically Approved_________Date___August 29, 2019_____