

GEOL 5806
Modular Course in
Exploration Geochemistry

08-18 December 2022

**Mineral Exploration Research Centre, Harquail School of Earth Sciences, and Goodman School of Mines
Laurentian University**

Course Description: This 10-day course addresses the principles and methods of litho-geochemical and surficial geochemical exploration, including planning, sampling, analysis, QA/QC, data handling, plotting (using ioGAS), data analysis (including basic geostatistics and machine learning), and interpretation. It includes case histories with applications to magmatic Cr and Ni-Cu-(PGE) sulfide deposits, porphyry Cu deposits, volcanic-associated Cu-Zn-(Pb) deposits, Archean lode gold deposits, sedimentary-exhalative Pb-Zn-Cu deposits, unconformity U deposits, and diamond deposits, and a variety of exploration-relevant laboratory exercises.

Speakers: Dr Chris Beckett-Brown (GSC), Dr Steve Beyer (Queen's), Dr Marcus Burnham (Geo Labs), David Crabtree (OGS), Dr Jennifer Hargreaves (Geo Labs), Dr James Kidder (GSC), Dr Robert Lee (MDRU/UBC), Prof Michael Leshner (MERC/HES), Prof Matthew Leybourne (Queen's), Dr John McGaughey (MIRA Geoscience), Prof Steve Piercey (Memorial), Dr Stéphane Perrouty (MERC/HES), Dr Behnam Sadeghi (Carnegie Inst Sci), Prof Ross Sherlock (MERC/HES), Prof Cliff Stanley (Acadia)

Hybrid Delivery Mode: On-campus in the Executive Learning Center, live-streamed via Zoom. Connection information will be sent to registered participants closer to the date, who will need a high-speed internet connection with a large data plan.

Prerequisites: Advanced undergraduate-level courses in *Geochemistry*, *Petrology*, and *Ore Deposits*.

Course Format: Lectures, laboratory practicals, and problem sets.

Grading: Laboratory practicals and problem sets 100%.

Course Hours and Credits: 49.5 contact hours of lectures and 16.5 contact hours of labs, 3 credits applicable toward thesis- or coursework-based MSc programs and PhD programs, continuing education, and professional development requirements for Professional Registration.

Course Costs: *Students:* CDN\$ 1287 for Canadian residents, CDN\$ 3319 for non-residents: see <http://laurentian.ca/graduate-fees> under *Part-Time*); includes tuition and PDFs of course notes. *Non-Students:* CDN\$ 3108 for full course on-campus, CDN\$ 339 per day on-campus, CDN\$ 1356 for full course remote, or CDN\$ 120 per day remote; includes HST and PDFs of relevant course notes. *MERC Foundation and Corporate members are eligible for discounts. Contact us for information on sharing options for multiple participants in the same company.*

Contact Mme Roxane Mehes rmehes@laurentian.ca to register. Contact Prof Michael Leshner mlesher@laurentian.ca for additional information.