

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 lithochemical and surficial geochemical exploration, including planning, sampling, analysis, QAQC, 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 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 Beth McClenaghan** (GSC), **Dr John McGaughey** (MIRA Geoscience), **Dr Tom Morris** (Northern Superior Resources), **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.

Laurentian University
Mineral Exploration Research Centre
Harquail School of Earth Sciences
Goodman School of Mines
935 Ramsey Lake Road, Sudbury, Ontario, Canada P3E 2C6
Telephone: (705) 675-1151 x6575; Facsimile: (705) 675-4898
E-mail : HES@laurentian.ca or MERC@laurentian.ca

Université Laurentienne
Centre de recherche en exploration minérale
École des sciences de la terre Harquail
École des mines Goodman
935 Chemin du lac Ramsey, Sudbury (Ontario) Canada P3E 2C6
Téléphone: (705) 675-1151 x6575; Télécopieur: (705) 675-4898
Courrier électronique: HES@laurentian.ca ou MERC@laurentian.ca