

The Geology Department at Lakehead University is looking to recruit a number of MSc students to start in mid 2025. Details about the individual projects can be found below. Successful candidates will join a diverse group of graduate students and Postdoctoral Fellows investigating the origins of ore deposits. Each candidate will receive a stipend of ~\$22,500 per year and may qualify for a Graduate Assistantship which covers tuition costs. Candidates may also be eligible to apply for other competitive grants and scholarships.

My research group, the Geology Department, and Lakehead University are all committed to creating a diverse and inclusive environment, and we welcome applications from all qualified individuals. The only requirements are an undergraduate degree in Geology at and a passion for geology. Interested students should contact Pete (peter.hollings@lakeheadu.ca). Preference will be given to Canadian citizens due to tuition policies at Lakehead University.

MSc opportunities

MSc #1 will investigate the magmatic evolution, petrography and alteration chemistry of a number of poorly understood intrusions in the McFaulds greenstone belt in Northern Ontario, also known as the Ring of Fire, in order to better constrain the Ni-Cu-PGE and chromite mineralization. The project will involve sampling of drill core and surface exposure of the intrusive units and then characterizing those samples through a combination of petrography, whole rock geochemistry, U-Pb geochronology and radiogenic isotopes. The successful candidate will work closely with the industry partner Wyloo and the PDF and MSc student working on the project.

MSc #2 will characterise the geochemistry and petrography of the Mayville intrusion in Manitoba. The Mayville Property is located in the east-west trending Archean Bird River greenstone belt (BRGB) at the western edge of the Superior Province. The Mayville Intrusion proper, including the M2 deposit, has been the focus for the majority of historical exploration activity, the new geophysical interpretations indicate good potential for additional discoveries of both M2-type magmatic sulfide deposits and PGM Zone-type mineralization in numerous, undrilled coincident magnetic and conductivity anomalies that occur south, west and east of the Mayville Intrusion. The project will involve sampling of drill core and surface exposure of the intrusive units and then characterizing

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those samples through a combination of petrography, whole rock geochemistry, U-Pb geochronology and radiogenic isotopes. The successful candidate will work closely with the industry partner Grid Metals and the MSc student working on the project.

MSc #3 will investigate manganese mineralization in the metasedimentary suites around Thunder Bay, including the 2.7 Ga Wabigoon Subprovince and the 1.88 Ga Gunflint Formation. The MSc candidate will characterize the geochemistry and petrography of manganese mineralization using a combination of detailed stratigraphy, petrographic analysis, whole-rock geochemistry, and non-traditional isotopes (e.g., Fe, Cr) to reconstruct the depositional environment and interpret manganese enrichment. The project will be supervised by led by Dr. Zhiquan Li and Dr. Pete Hollings.

MSc #4 will investigate Romios Gold Resources Inc.' KINKAID project in southern Nevada lies located within the NW-SE trending Walker Lane deformation and Au-Ag mineralization belt. The student will undertake detailed mapping of the mineral prospects, alteration and metamorphic patterns, as well as more regional scale mapping of the local volcanic and sedimentary stratigraphy combined with fluid inclusion studies, hyperspectral analysis of a systematic series of rock samples across the property to outline the type of alteration minerals present, and age dating of the mineralized veins, skarns, and some of the major volcanic and intrusive rocks on the property.

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The Geology Department at Lakehead University is a small but dynamic department with six faculty and a strong focus on hard rock geology. The Department offers Undergraduate and Masters degrees in geology and environmental science. Courses offered by the department place a strong emphasis on 'hands-on' geology reflecting our location within the Canadian Shield.

Lakehead is a comprehensive university with a reputation for innovative programs and cutting-edge research. With campuses located in Thunder Bay and Orillia, Lakehead has approximately 10,000 students and 2,160 faculty and staff. With an emphasis on collaborative learning and independent critical thinking and a multidisciplinary teaching approach, Lakehead offers a variety of degree and diploma programs at the undergraduate, graduate, and doctoral levels through its ten faculties, including Business Administration, Education, Engineering, Health and Behavioural Sciences, Natural Resources Management, Science and Environmental Studies, Social Sciences and Humanities, Graduate Studies, the Northern Ontario School of Medicine (West Campus) and the Bora Laskin Faculty of Law. For further information, please visit: www.lakeheadu.ca.

Lakehead University is committed to creating a diverse and inclusive environment and welcomes applications from all qualified individuals including women, racialized persons, Indigenous people, persons with disabilities and other equity-seeking groups. Lakehead University has made a commitment to equity, diversity and inclusion in its 2019-2024 Equity, Diversity, and Inclusion Action Plan [Click here to download an accessible copy of the Equity, Diversity and Inclusion Action Plan 2019-2024]. This plan includes the goal of recruiting and retaining a diverse student body and workforce that reflects the communities Lakehead University serves.

Lakehead University actively encourages applications from individuals representing equity seeking groups, including women, members of racialized/visible minorities, Indigenous peoples, persons with disabilities, persons of any sexual orientation, gender identity or gender expression -to apply. All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority.

Applicants who require accommodations for the interview process should contact Dr. Hollings (peter.hollings@lakeheadu.ca)

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