

CNIM update

January 2025

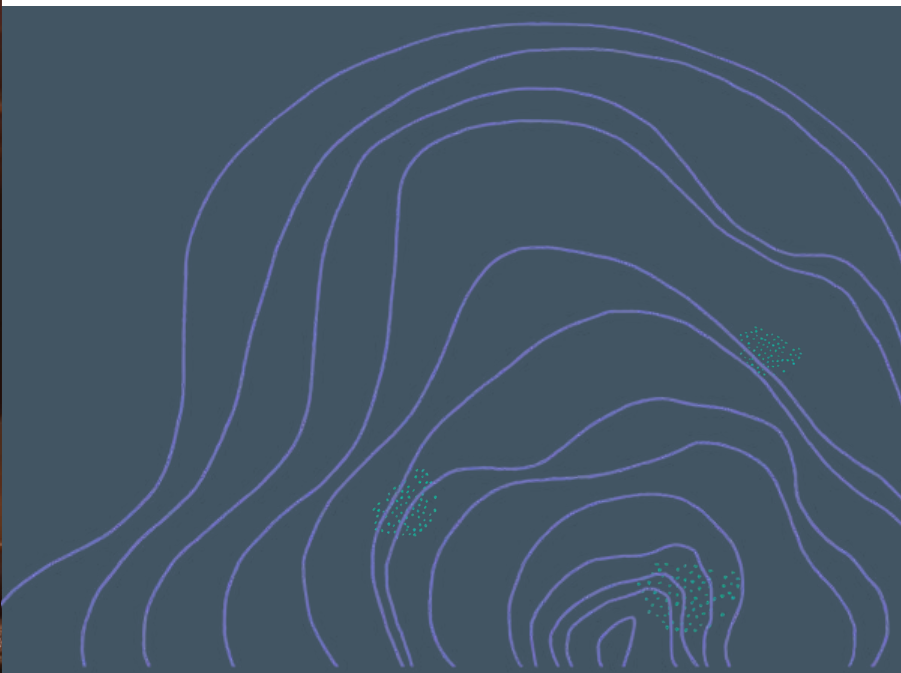
YukonU.ca/CNIM





At a glance

- *Heavy Equipment Technician*
- *Heavy Equipment Rural Operator Training*
- *Class 1, 3 and Air Brakes*
- *Earth Sciences*
- *Environmental Monitoring Certificate*
- *Applied Research: Northern Mine Remediation*



CNIM update - January 2025

Heavy Equipment Technician

The Pre-Apprentice Heavy Equipment Technician (HET) program resumes with a group of seven dedicated students. The next seven weeks will focus on shop-based activities, allowing students to gain hands-on experience and deepen their skills. We're thrilled to acknowledge the achievements of our Level 1 apprentices, who successfully completed their block training in early December prior to Territorial exams. Out of the four students, three passed their exams—a significant milestone on their journey. The remaining student will be re-writing the exam with support. The upcoming Level 3 intake is set to commence on March 17th. Preparations are well underway, and we look forward to welcoming the next cohort of apprentices ready to take their skills to the next level.

Heavy Equipment Rural Operator (H.E.R.O) and Simulator Training

In 2024, our staff identified a growing need for heavy equipment operator training. CNIM staff have been working on a strategy to utilize CNIM's HEO simulator on campus for introductory training purposes. The training will begin with a simulated experience on a haul truck. Students will be able to buy a "10 hour punch pass" and schedule their time on the simulated equipment. This training is set to begin by late February 2025. Other collaborative projects for HEO training are under development for delivery in the spring and summer of this year.

Class 3, Class 1, and Air Brakes Endorsement

Commercial driver training courses continued through the winter break - CNIM's driving instructor, Trevor Sinclair wrapped up his in-cab driver training with students by December 27th, 2024. To kick off the new year, Air Brake Endorsement and Class 3 Theory courses were delivered in Ross River. This follows a request from the Ross River community in 2025.

In December 2024, Cobalt Construction Ltd. applied for Government of Yukon's Economic Development Funding to support a partnered CNIM delivery of class 3 commercial driving programming in Pelly Crossing. If successful, this collaborative pilot project may be replicated for future commercial driving, heavy equipment operation training and workforce readiness programming in Yukon communities.

As January turned out to be a busy month for classroom based commercial driving courses, promotion of in-cab training will begin again in February.

CNIM update - January 2025

Air Brakes:

11 students passed
ABE exams in
December;
17 registered in
January

Class 3 In-Cab:

6 students registered

Class 3 Theory:

17 students registered

Class 1 Road Test:

3 students passed in
December 2024

Class 3 Road Test:

2 students passed in
December 2024

Class 3 Simulator Training:

7 students registered



*Yukon University Class 3 Training,
Dawson City November 2024*



*Class 1 student, Gary Brown completed
and passed his road test, after 2 months
of training*

Earth Sciences

The Earth Sciences winter 2025 semester is off to a successful start with high enrollments in courses and no student attrition. There are currently 17 Earth Sciences majors active in the program.

Winter courses that are currently being offered include:

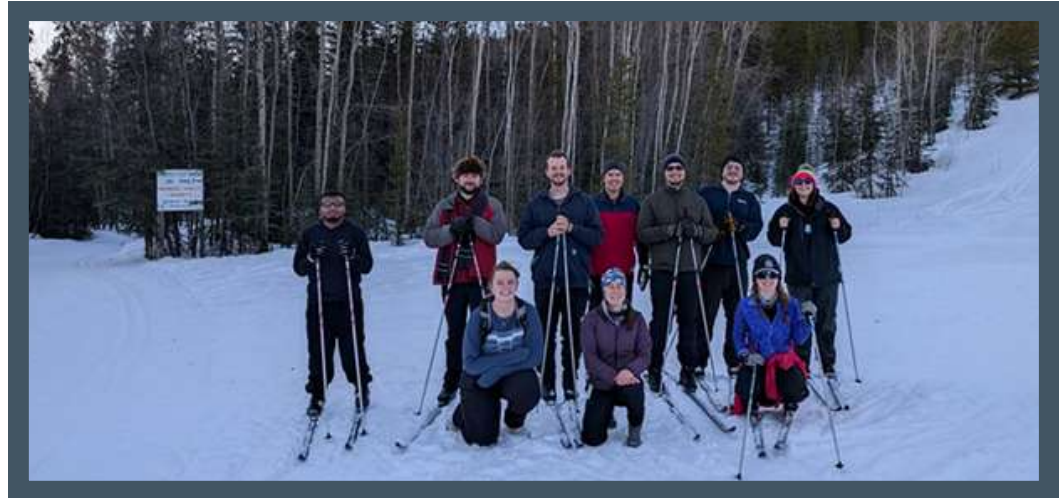
- Earth Systems: Landscapes and Natural Hazards (GEOG 102); lecture taught by Mary Samolczyk (8 students)
- Historical Geology (GEOL 106); lecture and lab taught by Dr. Chad Morgan (9 students)
- Earth Through Time (GEOL 108); online course, (lecture only) taught by Dr. Chad Morgan (24 students)
- Introduction to the Mineral Exploration and Mining Industries (GEOL 112); lecture taught by Dr. Chad Morgan (17 students)
- Geochemistry (GEOL 211); lecture and lab taught by Dr. Joel Cubley (5 students)
- Geophysics (GEOL 213); lecture and lab taught by Dr. Joel Cubley (4 students)

We are excited to announce that a new block transfer agreement has been completed with Acadia University. The seamless transfer of credits from YukonU's Earth Sciences Diploma toward years 3 and 4 of Acadia University's B.Sc in Geology provides additional options for YukonU graduates looking to continue their education. This block transfer is a compliment to the already established block transfer with Vancouver Island University.

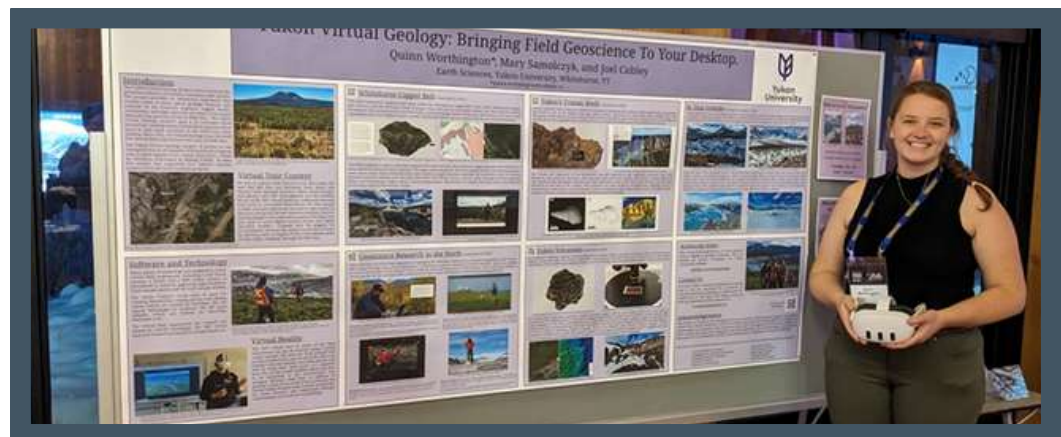
Research is ongoing in the department. Program faculty members M. Samolczyk and J. Cubley have received funding from the Northern Research Council's Arctic and Northern Challenge Program to continue their work characterizing groundwater in Whitehorse. This project includes a large community input component, where stakeholders can play a role in shaping future research goals. In addition, faculty member J. Cubley was a part of a research team that recently published results of a study that used geophysical methods to better understand the lithosphere underlying the northern Canadian Cordillera [Esteve et al., 2025]

Geology outreach remains a focus of YukonU's Earth Sciences program. Current funding from GEM-GeoNorth supports developing online virtual geology experiences through the Virtual Geology Project. Currently, project personnel and faculty are drafting virtual experiences that focus on the St. Elias Icefields, specifically glacial processes, landforms and histories. This virtual experience will highlight researchers studying the icefields. In addition, three raspberry shake seismometers will be deployed throughout Yukon in community campuses and schools and be used to collect seismic data relating to earthquake and mass movement events. This data, in collaboration with the SchoolShake Program, will be used in educational outreach activities, as well as in the lecture and lab assignments in the Earth Sciences program.

Earth Sciences continued



Earth Sciences students and faculty celebrating a successful end of the Fall 2024 semester with a group ski at Mt. McIntyre.



Quinn Worthington, Virtual Geology Project Officer, connects with the public at the Yukon Geoscience Forum, showcasing the online virtual experiences that are available and allowing users to interact with these experiences using Virtual Reality headsets.



Jamie Pope, a second-year Earth Sciences student, shares preliminary results of a groundwater study that she worked on in a summer research position in 2024. This poster was presented at the 2024 Yukon Geoscience Forum.

Environmental Monitoring Certificate

The Environmental Monitoring Certificate Program has 4 students on track for graduation in the spring of 2025. September 2024's cohort of 10 students have completed their first two courses which were offered in October and November at land-based camps in Dawson City and Carcross. This cohort includes 4 students enrolled in partnership with First Nations Lands and Resources or Heritage Departments.



Shane Wally from CTFN tours ENVM students at the Venus Mine Tailings Site on the South Klondike Highway.



Tyler Obediah from CTFN Lands shows ENVM students one of their meteorological stations in Carcross.

Research

The Northern Mine Remediation Chair, Guillaume Nielsen was informed that the potential partnership with the Yukon Government will not move forward in 2025. The Yukon Government's senior management announced that due to budget pressure resulting from the Eagle Gold Mine heap leach failure, YG will not support the \$150,000 per year for 3 years; which was verbally agreed on in the summer of 2024.

Program sustainability:

- Additional program funding has not yet been secured.
- Yukon University's Senate approved the establishment of a Research Chair in Northern Mine Lifecycles, pending funding confirmation. This formalizes the Chair position under Yukon University's governance processes.

The NSERC Alliance in partnership with the University of Saskatchewan continues in conversation into 2025. The NMR team held its kickoff meeting in December, to support application development; officially starting their initiatives with the following companies:

Silvertip (Coeur Mining), Newmont Corporation, BMC Minerals, Casino Mining Corporation, Hecla Mining Company, Snowline Gold Corporation, Fireweed Metals and Balance BioGas.



Morgane Desmau presenting "3-year of Pilot Scale Bioreactors at Eagle Gold: How Well Did It Go?".

Taylor Belansky presenting "Semi-passive treatment of nitrate in mine impacted water in cold climates".

Ben Budzey presenting "Build it and they will come: Optimizing revegetation success by ameliorating the physical environment".

Northern Mine Remediation

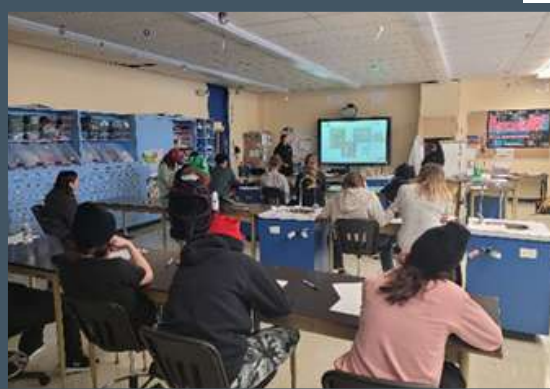
Northern Mine Remediation courses proceed in the community of Faro



Scott Keesey, Yukon University Environmental Monitoring Instructor



Helaina Moses, Nach'o Nayak Dun environmental steward



Andrew Menezes and Leneath Yanson, Casino Mining representatives



Vladimir Kabanov, NMR instructor and Faro students



General Updates

- CNIM's new part-time commercial driving instructor, Stephen Balan taught his first short course, "Chaining Up" on January 11th. This is a great introductory course for students to learn basic chaining up skills on their vehicles in our Yukon winter weather.
- The Advancing Commercial Driving Project is currently underway with the generous support of Government of Canada's CanNor agency. The CNIM team has ordered an additional commercial driving simulator which expands the range of training options to include defensive driving, school bus, snow plow, waste & recycling, and emergency vehicle operations. The new simulator is due to arrive in March 2025.
- CNIM and Continuing Studies staff have applied to the Government of Canada's Future Skills Centre to fund a Legacy 3 Project; aiming to provide commercial driver and HEO training across the communities in the Yukon this summer.
- NMR team confirms one peer-reviewed paper has been submitted. The paper titled "*Multi-contaminant removal from synthetic mine-impacted water by permeable reactive barriers under cold conditions*" was submitted to Journal of Hazardous Materials.
- An additional paper titled "*Semi-passive treatment of nitrate in mine impacted water in cold climates*" is currently being written by Taylor Belansky for her Master's thesis.
- The NMR team presented 3 discussions and 1 poster at Geoscience Forum in November of 2024. Guillaume was interviewed by Radio Canada regarding the research.
- Ben Budzey, Master's candidate at University of Saskatchewan, working with Northern Mine Remediation, is writing his thesis and will graduate in May 2025.



Meagan Christie
Instructor
Carpentry



Dr. Guillaume Nielsen
Industrial Research Chair
Northern Mine Remediation
YukonU Research Centre



Elizabeth Moses
Elder on Campus

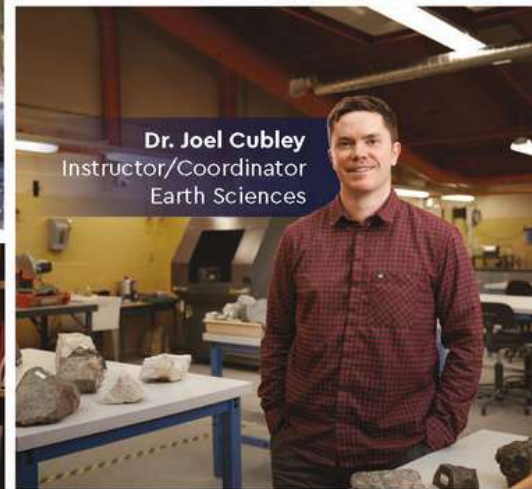
Photos: GBP Creative



Samantha Piper
Instructor
Health Care Assistant



Dr. Benoit Turcotte
Senior Research Professional
Climate Change Research
YukonU Research Centre



Dr. Joel Cubley
Instructor/Coordinator
Earth Sciences



Doug McRae
Instructor
Heavy Equipment Technician



Dr. Victoria Castillo
Instructor, Anthropology
School of Liberal Arts



Dr. Sara McPhee-Knowles
Instructor
Bachelor of Business
Administration



Dr. Katie Aitken
Instructor/Coordinator
Northern Environmental
and Conservation Sciences

Leading
from the North

Collaborate, learn
and grow with us.

YukonU.ca/leading