



**ROBERT M. BUCHAN DEPARTMENT OF MINING
Term Adjunct Position
Academic Year Fall 2026**

Posting Date: Friday, June 5, 2025

Closing Date: 12noon, Tuesday, June 30, 2026

The Robert M. Buchan Department of Mining Engineering, Smith Engineering at Queen's University invites applications from suitably qualified candidates interested in teaching the following course for the fall 2026 session.

**MINE 455 Design, Analysis and Operation of Mineral Processes
September 1 to December 31, 2026
50% Responsibility (co-teaching)
Positions Available - 1**

Qualifications

Minimum of M.Sc. in Mining Engineering or related field. Previous teaching experience at the University level considered an asset. Previous educational background and/or experience must be suited to teaching the course described below. Candidates must have excellent communication and presentation skills, as well as being capable of working as a member of a teaching team.

Course Description

Units: 4.5

Engineering elements of a mineral processing project are examined from the concept stage to process design. Flowsheet evaluation, process equipment selection and layout, capital and operating costs, operating and control strategies are considered for real problems.

Course Details

Format: 3 lecture hours, 1.5 lab hours and no tutorials per week for twelve weeks. (Lec: 3, Lab: 1.5, Tut: 0)

Audience: undergraduate level students

Location: in person on campus at Queen's University

Lab Supervision - Yes



Expected Enrolment (subject to change): 8 students

Percentage of Responsibility: 50%

Course Learning Outcomes:

1. Overview of metallurgical/mineralogical balancing & importance for design.
2. Process analysis: sampling, sample size, mass balancing with industrial examples.
3. Cost estimation methods in mineral processing/design.
4. Analysis, design of crushing processes-Primary crushers and circuits.
5. Design and operation of secondary and tertiary crushing and screening circuits.
6. Design and operation of grinding processes-Rod mill, ball mill circuits.
7. Design and operation of grinding processes-Autogenous and semi-autogenous mills/circuits.
8. Particle size control-classifiers, sizing of hydrocyclones.
9. Analysis, design and operation of gravity and magnetic separation processes.
10. Analysis, design and operation of flotation processes-Agitated mechanical cells.
11. Design and operation of flotation processes-Non-agitated cells; Column, Jameson, Hydrofloat, Nova cells.
12. Design of dewatering units, process control examples and case studies in process design; successes, failures.

The successful incumbent will have 50% responsibility for the course. The stipend for this position will be between \$9,500 and \$11,500. Actual salary will be commensurate with years of teaching experience, percentage of responsibility, and course weight, as per the Queen's-QUFA Collective Agreement.

As part of the application process at Queen's University, our recruitment system uses Artificial Intelligence (AI), as defined under the Ontario Employment Standards Act, to ask job-related questions and confirm eligibility for hire. All final hiring decisions are made using non-AI related processes.

The above course is in person at the Kingston, Ontario campus. Lectures and exams will be conducted in person. The contract will run from September 1, 2026 to December 31, 2026. The fall term session runs from September 8 to December 8, 2026 with exams running from December 10 to December 23, 2026.

Prior to May 1, 2022, the University required all students, faculty, staff, and visitors (including contractors) to declare their COVID-19 vaccination status and provide proof that they were fully vaccinated or had an approved accommodation to engage in in-person University activities. These requirements were suspended effective May 1, 2022, but the University may reinstate them at any point.



The University invites applications from all qualified individuals. Queen's is strongly committed to employment equity, diversity, and inclusion in the workplace and encourages applications from Black, racialized/visible minority and Indigenous people, women, persons with disabilities, and 2SLGBTQ+ persons.

The University will provide support in its recruitment processes to applicants with disabilities, including accommodation that takes into account an applicant's accessibility needs. If you require accommodation during the interview process, please contact mine.office@queensu.ca.

Academic staff at Queen's University are governed by a [Collective Agreement](#) between the University and the [Queen's University Faculty Association \(QUFA\)](#).

Application Process

In accordance with Canadian immigration requirements, Canadian citizens and permanent residents of Canada will be given priority, including any qualified individuals who have a valid legal work status in Canada.

Please indicate in your application if you have a valid legal work status in Canada. Applications that do not include this information will be deemed incomplete. Applications from all qualified candidates will be considered in the applicant pool.

Applications should include:

- a statement if you have a valid legal work status in Canada,
- a complete and current curriculum vitae,
- a statement of teaching experience,
- the names and contact details of two referees who may be contacted,
- any other relevant materials the candidate wishes to submit for consideration.

Applicants are encouraged to apply and upload all documents in their application packages electronically as PDFs on the following website:

<https://apply.smithengineering.queensu.ca/124017>

Applications should arrive no later than **Tuesday, June 30, 2026**.