SMITH ENGINEERING
Queen's University

Robert M.Buchan
Department of Mining

The Robert M. Buchan Department of Mining
Graduate Teaching Assistantship
MINE 339
Winter Term 2025

All graduate students are invited to apply for a Graduate Teaching Assistantship for the winter 2025 term for MINE 339 – Ventilation & Hydraulics.

Following the Collective Agreement, students who are studying in The Robert M. Buchan Department of Mining will be given preference over students from outside the department.

It is recommended that you read the PSAC Local 901, Collective Agreement for Graduate Teaching Assistants found at:
https://www.queensu.ca/facultyrelations/psac%20901-1/collective-agreements/MoAs/LoUs

The posted positions are conditional upon enrollment figures and budgetary approval. Positions will remain posted until they have been filled (no less than 7 business days) from the date of posting and remuneration will be in accordance with the Collective Agreement.

TA assignments could include duties such as leading laboratories, tutoring, hosting virtual office hours, marking of assignments, reports, quizzes, and exams. Due to changes in enrollments, some positions may have their hours adjusted once the semester begins. Any necessary training will be included in the assignment.

It is your responsibility to ensure you make yourself available to complete the TA work. If you are planning on being away from internet access for a significant amount of time during the semester, please indicate this when submitting your application and keep your employment supervisor up to date.

Note that for winter 2025, final exams are scheduled until April 23rd so it is possible that marking may be required right to the end of the month.

As TA-ships do not form part of the funding package for graduate students in The Robert M. Buchan Department of Mining, TA-ships will only be offered as per the criteria outlined in Second Preference – Group B or to candidates in Group C or D. In addition, we will do our best to match your preference to course offerings.

Second Preference – Group B: for qualified graduate students registered as:
(i) students in a department or program in which the TA-ship will be offered; or
(ii) students in an interdisciplinary program with TA budget resources, and for whom
(iii) the TA-ship will not form part of the funding commitment offered by Queen's University; or
(iv) there is currently no funding commitment provided by Queen's University.

Third Preference – Group C: for qualified graduate students that have previously held a TA-ship or TF-ship for the Employer.

Fourth Preference – Group D: for qualified graduate students that have not yet met the criteria as set out in A, B, or C.

Application Process

- Review the available TA position for the Winter 2025 Term.

  MINE Undergraduate - https://www.queensu.ca/academic-calendar/engineering-applied-sciences/courses-instruction/mine/

- Complete the application form. Please note that you are required to upload your CV, cover letter, and transcript **in PDF** in the application form.

Applications will be reviewed at the end of the application period.

Applications are due by 12noon, Friday, January 3, 2025

Undergraduate Courses

Course Code	Title	Term	Instructor	Estimated Enrollment	# of TA ships and hours	Required Background/Skills	Description
MINE 339	Ventilation and Hydraulics	W	Mahmoud Alzoubi	33	1 at 60hrs	Previous experience and/or background in mine ventitlation and fluid mechanics.	Hydraulics of air flow through mine openings and ducts is first studied, leading to mine ventilation Hydraulics of air flow through mine openings and ducts is studied, leading to mine ventilation design calculations and ventilation network analysis. Topics related to the design of mine ventilation systems include: statutory regulations and engineering design criteria, ventilation circuit design, natural ventilation, testing, application and selection of mine ventilation fans, auxiliary ventilation design, psychrometry, mine air heating and cooling, dust and fume control, and ventilation economics. Health hazards of mine gases, dust and radiation are reviewed, together with statutory requirements for air quality. Procedures for conducting air quantity and quality surveys are also taught.