

# APPLIED SUSTAINABILITY

The collaborative specialization in Applied Sustainability offers M.Eng. and M.A.Sc. students training in a multidisciplinary environment spanning engineering departments and linking with researchers in the School of Policy Studies. The collaborative specialization allows students to undertake cutting-edge research under the supervision of internationally recognized investigators in diverse Applied Sustainability fields, and provides opportunities for multidisciplinary research and learning that will be invaluable for the graduate student's career development. Areas of research interest include:

1. Applied Sustainability and Energy Technology,
2. Applied Sustainability and Fresh Water Systems,
3. Applied Sustainability and Resource Management and
4. Applied Sustainability and Policy Studies.

Building on the applied sustainability strategic theme of the Faculty of Engineering and Applied Science, the objective of the collaborative specialization is to expose students to the implementation of sustainable engineering solutions within the context of broader sustainability theory. To do this properly, engineering students must not only advance their technical education, but must gain insights into how public policy impacts on the success of engineering solutions to multidisciplinary sustainability problems.

The collaborative specialization available to Master's students is associated with these six graduate programs at Queen's University:

- Chemical Engineering
- Civil Engineering
- Electrical and Computer Engineering
- Geological Sciences and Geological Engineering
- Mechanical and Materials Engineering
- Mining Engineering

## Application Procedure

Applicants are accepted under the general regulations of the School of Graduate Studies and of the member graduate programs.

The collaborative specialization is offered at only the Master's level. For further details, interested students are encouraged to contact the representative from the department that is best aligned with their current research interest.

## Program of Study

The collaborative specialization is available to eligible, approved Master's students associated with the six member programs at Queen's University.

Students will enroll in their respective home departments and must meet the program requirements of their home departments.

There will be two mandatory core courses students in the collaborative specialization must take: CMAS 801 Topics In Applied Sustainability and CMAS 897 Applied Sustainability Seminar.

M.A.Sc. students take four courses plus a thesis, plus the seminar series. M.Eng. students take eight courses, one of which may be a project course, plus the seminar series.

Upon graduation, students will have "with specialization in Applied Sustainability" added to their official transcripts.

## Financial Support

Full-time students are encouraged to seek external financial support and are encouraged to apply for NSERC and OGS graduate scholarships. Fellowships and teaching assistantships are available through the University and students are automatically considered for these, on a competitive basis, upon admission to one of the member programs.

## Courses

### CMAS 801 Topics in Applied Sustainability

Applied sustainability is the application of science and innovation to meet human needs while indefinitely preserving the life support systems of the planet. This course provides an overview of the field with particular focus on implementation of engineering solutions. The course will be divided into three sections in which the technical and policy-related issues will be explored: 1) Sustainable Energy Technologies, 2) Sustainability and Fresh Water Systems and 3) Sustainable Resource Management. (3.0 credit units)

### CMAS 897 Applied Sustainability Seminar Series

The objective of this course is to expose students enrolled in the Collaborative Masters in Applied Sustainability (MAS) program to the different areas of applied sustainability research and practice, providing a shared learning experience to link students from each of the departments participating in the MAS program. An additional objective is to provide opportunities to develop and refine presentation skills, the



ability to give and receive constructive criticism, and to pose and respond to questions. This course shall be graded on a Pass/Fail basis. (3.0 credit units). Fall and Winter terms.

**CMAS 898 Master's Project**

**CMAS 899 Master's Thesis Research**