

FACULTY OF ENGINEERING AND APPLIED SCIENCE  
2022-2023 International Exchange Program



**GENERAL QUEEN'S UNIVERSITY INFORMATION**

Graduates from Queen's Engineering program have gone on to successful careers at some of the largest global corporations and provide a powerful network of alumni contacts.

Queen's University is consistently ranked as one of Canada's top universities. It is among Canada's oldest degree-granting institutions, established in 1841 by Royal Charter of Queen Victoria—26 years before Canada was founded as a country.

Today, the Queen's University community features tradition, academic excellence, research, and a beautiful waterfront campus with venerable, ivy covered, limestone buildings side by side with modern research and teaching facilities. Queen's students come from across Canada and more than 70 countries worldwide.

Since 1894, the Faculty of Engineering and Applied Science has been providing the best engineering education Canada has to offer, preparing students for leadership in a global society with top-quality, technically rigorous engineering programs.

Queen's Engineering admits fewer than 900 of the highest-caliber undergraduate students from Canada and abroad each year. Ninety-one per cent of Engineering's undergraduate students complete their degrees—the highest success rate of any engineering program in Canada.

Graduates leave Queen's with an outstanding, committed alumni network that will sustain them throughout their careers.

**CONTACT INFORMATION**

University Website:	<a href="http://www.queensu.ca/">http://www.queensu.ca/</a>
Faculty Website:	<a href="http://engineering.queensu.ca/">http://engineering.queensu.ca/</a>
Faculty Inbound Exchange Website	<a href="https://engineering.queensu.ca/Current-Students/exchange-programs/incoming/index.html">https://engineering.queensu.ca/Current-Students/exchange-programs/incoming/index.html</a>
Exchange Coordinator Incoming/Outgoing:	Julie Hao <a href="mailto:engineering.intladvisor@queensu.ca">engineering.intladvisor@queensu.ca</a>

Mailing Address :	Queen's University Faculty of Engineering and Applied Science Beamish Munro Hall  45 Union St, Room 300 Kingston, Ontario, Canada K7L 3N6
Telephone number :	613-533-6000 ext. 78289
Fax number:	613-533-2721
Main Reception :	<a href="mailto:engineering.reception@queensu.ca">engineering.reception@queensu.ca</a>

### TERM DATES 2022-2023

<b>Term</b>	<b>Dates</b>	<b>Expected Arrival Date</b>
Fall 2022	September 1, 2022 – December 31, 2022	August 29, 2022 (Orientation begins)
Winter 2023	January 1, 2023 – April 30, 2023	January 2, 2023 (Orientation begins)

### NOMINATION/APPLICATION INFORMATION

Partner exchange offices will be emailed a link from the Queen's Admission office to the online application to nominate their students. After receiving the online nomination, students will be contacted at their home university address, directing them to the Queen's exchange online application. The nomination and application portals will only be open during the submission acceptance periods.

	<b>Nomination Deadline</b>	<b>Application Deadline</b>
Fall 2022 & Full year 2022-2023	April 1, 2022	April 30, 2022
Winter 2023	September 1, 2022	September 30, 2022
Contact Information:	Nathan Martin Admission Coordinator, International Exchange E-Mail: <a href="mailto:intstudy@queensu.ca">intstudy@queensu.ca</a>	

## APPLICATION REQUIREMENTS FOR FACULTY OF ENGINEERING AND APPLIED SCIENCE

<b>Requirement</b>	<b>Details</b>
GPA	Incoming students must have GPA equivalent to a 2.7 (for information on Queen's grading scales, please see <a href="http://www.queensu.ca/registrar/transcripts/legends/current">http://www.queensu.ca/registrar/transcripts/legends/current</a> ) but all applicants will receive individual consideration.
Supporting Documentation	<ul style="list-style-type: none"> <li>• Completed Queen's on-line exchange application</li> <li>• Confirmation of English language test (if required)</li> <li>• Official academic transcript</li> <li>• Academic letter of reference</li> <li>• Completed course selection form, <a href="https://engineering.queensu.ca/international-students/FEAS-Incoming-Exchange-Study-Plan.pdf">https://engineering.queensu.ca/international-students/FEAS-Incoming-Exchange-Study-Plan.pdf</a></li> </ul>

## ACADEMIC PROGRAMS IN ENGINEERING AND APPLIED SCIENCE

### Learning Expectations

Language of Instruction:	English																								
Course Load:	Exchange students are <b>recommended</b> to take a <b>minimum</b> of 15 credits (CR) per term; 30 CR for the full year. As an example, 60 ECTS credits is usually considered a full course load in most European institutions and is equivalent to 30.0 Queen's units. Please note: Queen's Undergraduate degree seeking Engineering students take more than 15 credits per term – course load is to be determined by the home university and visiting student, should both feel that more than 15 credits is required for their home program																								
Course Weight:	Course weights in Engineering and Applied Science varies. 1 credit = one 50 minute lecture) and to laboratory assignments, tutorial, and significant project work (0.5 credits =one hour).																								
Course Types:	LECT – Lecture; LAB – Laboratory; TUT – Tutorial																								
Grading:	<table border="1"> <thead> <tr> <th>Letter Grade</th> <th>Grade Points</th> <th>Numeric Equivalent</th> </tr> </thead> <tbody> <tr> <td>A+</td> <td>4.3</td> <td>90-100%</td> </tr> <tr> <td>A</td> <td>4.0</td> <td>85-89%</td> </tr> <tr> <td>A-</td> <td>3.7</td> <td>80-84%</td> </tr> <tr> <td>B+</td> <td>3.3</td> <td>77-79%</td> </tr> <tr> <td>B</td> <td>3.0</td> <td>73-76%</td> </tr> <tr> <td>B-</td> <td>2.7</td> <td>70-72%</td> </tr> <tr> <td>C+</td> <td>2.3</td> <td>67-69%</td> </tr> </tbody> </table>	Letter Grade	Grade Points	Numeric Equivalent	A+	4.3	90-100%	A	4.0	85-89%	A-	3.7	80-84%	B+	3.3	77-79%	B	3.0	73-76%	B-	2.7	70-72%	C+	2.3	67-69%
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	C	2.0	63-66%
	C-	1.7	60-62%
	D+	1.3	57-59%
	D	1.0	53-56%
	D-	0.7	50-52%
	FR	0.0	40-49%
	F	0.0	0-39%
Course Choices:	Most Engineering and Applied Science courses are open to exchange students provided that they have all the appropriate prerequisite courses. Please note that availability in some courses may be limited in the event that there is limited spacing and/or the course is core for degree-seeking students. <b>Please see the course suggestions at the end of this document.</b>		
Examinations:	Requirements vary for each course. Accommodations are available for exchange students whose first language is not English. Students will need to request for this		

### Course Information and Academic Advising

The Faculty of Engineering and Applied Science offers degree programs and courses in ten disciplines. The codes for these programs and for the courses in those disciplines are given below.

For **course information**, students should visit the Faculty of Engineering and Applied Science Calendar (<http://calendar.engineering.queensu.ca/>), which lists all courses offered in the last five years under “**Academic Plans**”. Exchange students admitted into the Faculty of Engineering and Applied Science are eligible to take up to two courses outside of the Faculty.

For **academic advice**, exchange students have access to the Exchange coordinator and the Undergraduate Assistant in their host department.

Program	Program Code	Undergraduate Departmental Program Assistant
Chemical Engineering Engineering Chemistry	CHEE ENCH	Liann Joannette, <a href="mailto:liann.joannette@queensu.ca">liann.joannette@queensu.ca</a>
Civil Engineering	CIVL	Angela Brown, <a href="mailto:angela.brown@queensu.ca">angela.brown@queensu.ca</a>
Electrical & Computer Engineering	CMPE & ELEC	Alisa Darbinyan, <a href="mailto:alisa.darbinyan@queensu.ca">alisa.darbinyan@queensu.ca</a> Irina Pavich, <a href="mailto:Irina.pavich@queensu.ca">Irina.pavich@queensu.ca</a>
Engineering Physics	ENPH	Melissa Balson, <a href="mailto:4mjb5@queensu.ca">4mjb5@queensu.ca</a>

Geological Engineering	GEOE	Rebecca Dew, <a href="mailto:geolugrd@queensu.ca">geolugrd@queensu.ca</a>
Mathematics & Engineering	MTHE	Johana Ng, <a href="mailto:jn@queensu.ca">jn@queensu.ca</a>
Mechanical & Materials Engineering	MECH	Kathleen Iley, <a href="mailto:mme.advisor@queensu.ca">mme.advisor@queensu.ca</a>
Mechatronics & Robotics Engineering	MREN	Lauren Hare, <a href="mailto:mre.undergrad@queensu.ca">mre.undergrad@queensu.ca</a>
Mining Engineering	MINE	Alicia Alves, <a href="mailto:mine.undergrad@queensu.ca">mine.undergrad@queensu.ca</a>
Faculty Courses	APSC	Julie Hao <a href="mailto:engineering.intladvisor@queensu.ca">engineering.intladvisor@queensu.ca</a>

## GENERAL STUDENT SERVICES

For general information on coming to Queen's as an Exchange student, including general information on Kingston and Queen's University, approximate living costs, accommodations study permits, transportation, and housing, please see the following site:

<http://queensu.ca/international/incoming/exchanges>

## Queen's International Centre

The QUIC is a support service for all members of the Queen's community and through its activities promotes an internationally informed and cross-culturally sensitive learning environment. For more information, please access their website: <http://quic.queensu.ca/>

## The Integrated Learning Centre

The Integrated Learning Centre (ILC) is located in Beamish-Munro Hall and is a part of the Faculty of Engineering and Applied Science. It comprises staff, spaces and equipment that contribute significantly to the quality of undergraduate education in that Faculty, and is among the leading facilities for engineering education worldwide. The fundamental role of the ILC is to create a multidisciplinary learning environment which integrates theory with practice, develops team skills, the capability of life-long learning and open-ended program solving abilities. The ILC provides both the staff and the infrastructure necessary to improve learning effectiveness and to develop markedly enhanced professional skills. Its physical features include active learning spaces, student meeting rooms, computer labs, prototyping and fabrication facilities, teleconferencing and presentation resources, and industrial space housing competitive teams such as Fuel Cell, Aero Design and Concrete Canoe teams.

## Computing Resources

Computers in Beamish-Munro Hall are available during ILC open hours (Monday - Thursday: 7:30 am to 11 pm; Friday: 7:30 am to 5:30 pm; Saturday: 11:30 am to 7 pm; Sunday: 11:30 am to 11

pm). Software includes Solid Edge, Lab View, MATLAB, Microsoft Office, ADS, Altera Quartus, OrCAD, and others.

**Student Wellness Services (SWS)**

The Student Wellness Services department supports the personal, academic, and social development of students at Queen’s University by providing a range of programs and services appropriate to their needs. <http://www.queensu.ca/studentwellness/home>

The Faculty of Engineering also has an embedded counsellor available to students, in our main Student Services office.

**Student Academic Success Services (SASS)**

Learning Strategies Development is a learning support service for students. Several options are available for students to enhance both their learning and study skills and their academic confidence: on-line resources, group workshops, individual consultations, and peer mentoring. For more information about available services, please visit <http://sass.queensu.ca/learningstrategies/>

# Faculty of Engineering and Applied Science – Queen’s University, Kingston, Ontario, Canada

## *Incoming Exchange Student Course Selection Considerations*

The Queen’s University Faculty of Engineering and Applied Science offers degree programs in ten disciplines. Students find specific courses information at the Faculty of Engineering and Applied Science Calendar, which lists all courses offered in the last five years (<http://calendar.engineering.queensu.ca/>).

Many of our core courses are only open for general enrollment after our undergraduate students have completed their enrollment selections. Project courses are often problematic for exchange students and should only be considered if the student is extremely proficient at English for report writing and presentation requirements.

Below you will find some very specific recommendations regarding some of our more popular courses.

### **APSC COURSES**

#### *APSC 100 level courses*

First year courses are open, dependent on enrollment numbers. For the past several years, we have had full enrollment capacity in these courses, therefore they generally are not viable option for exchange students.

#### *APSC 200/221/293*

APSC 221 is open to exchange students who have a standard 1<sup>st</sup> year math course and English Proficiency.

*APSC 200 and APSC 293* - enrollment for these courses is not open to exchange students due to their pre-requisite requirements.

### **CIVL COURSES**

Exchange students are not eligible to take either CIVL 200, CIVL 300, CIVL 400 or CIVL 460.

### **CHEE/ENCH COURSES**

Most CHEE courses are open to exchange students, dependent upon their academic background. Queen’s enrollment may have priority, but if there is room in the class and students are eligible, they are welcome to attend.

- CHEE 218 - Only available when course enrollment below max capacity, with instructor approval and student has required background.

- CHEE 315 - Only available when course enrollment below max capacity, with instructor approval and student has required background.
- CHEE 331 - Must be taken at the same time as CHEE 361, with instructor approval and student has required background.
- CHEE 471 - Only available when course enrollment is below max capacity, with instructor approval and student has required background.

Unavailable to Exchange Students:

- CHEE 408 - Not available due to limited supervisor and project capacity.
- CHEE 415 - Not available, only for students in Engineering Chemistry (ENCH) program.
- CHEE 420 - Not available due to limited supervisor and project capacity.
- CHEE 421 - Not available due to limited supervisor and project capacity.

Other Important Factors to Note:

- Students must ensure they use the up-to-date course listings from the new academic course calendar for the year of their exchange. Course offerings vary from year to year.
- CHEE courses with prerequisites require the student to have the required background and instructor approval. The best way to do this is to email a current copy of your unofficial transcript to the Undergraduate Program Assistant, Liann Joannette, who will arrange to determine if the student has the necessary background for the CHEE course(s) they would like to take.
- Full year courses require students to attend BOTH semesters.

## **ELEC AND CMPE COURSES**

Enrollment of exchange students in the following 2<sup>nd</sup> year ELEC courses will only be considered if space is available:

ELEC 221, ELEC 271, ELEC 278, ELEC 252, ELEC 274, ELEC 280, ELEC 299

**Unavailable to Exchange Students:**

ELEC 425

ELEC 472

ELEC 490/ ELEC 498 – final 4th year capstone design project course

ELEC 491/ ELEC 492 – 4+1 program project courses



**Subject to Department approval:**

ELEC 497 – The student registered in this course works on a research project under the supervision of ECE faculty member. The project is designed for completion in one session, with a project proposal describing the research submitted at the beginning, and a major report and presentation of the work at the end of the session.

ELEC 421, 431, 443, 444, 448, 474, 486, 483 – the department has limited lab components to accommodate a larger number of students in these courses. Enrollment into these courses will be considered only with the course instructor's approval.

**ENPH COURSES**

The following courses are NOT available to exchange students: ENPH 455, ENPH 555

The capstone thesis project courses are not available to exchange students as we don't have enough supervisors to offer one-on-one supervision to students from other universities.

**GEOE COURSES**

All courses are open to exchange students, dependent upon their academic background. Queen's enrollment may have priority, but if there is room in the class and students are eligible, they are welcome to attend.

**MECH COURSES**

The following courses are final year capstone design courses and are NOT available due to limited supervisors and project capacity:

*MECH 460, MECH 462, MECH 464*

The following courses are NOT available due to limited lab component capacity:

*MECH 212, MECH 210, MECH 217, MECH 273, MECH 310, MECH 323*

The following courses have limited capacity and may only be considered IF space allows. In some cases, permission of the course instructor is also required:

*MECH 230*

*MECH 350*

*MECH 396* – Only available if students take MECH 370 at the same time as a co-requisite.

*MECH 397* – Only available if students take MECH 371 at the same time as a co-requisite.

*MECH 398*

*MECH 399*

*MECH 452* – Enrolment very limited. Students must receive permission of the course instructor.

*MECH 463* – This is solely a mark/completion holder for summer research students visiting the department sponsored by an MME faculty member in collaboration with their homeschool research supervisor. Typically, not available to exchange students.

*MECH 465* – Students must receive permission of the course instructor.

### **MINE COURSES**

Most course are open to Exchange students, if they have the necessary pre-requisite knowledge. It is often best to speak directly to the instructor to obtain final approval.

**The courses with the MINE prefix that are not suitable for most exchange students are:**

*MINE 445* – Not a suitable course as it is the final-year project course for all final year mine-mine students and most exchange students will not have the necessary design software experience to complete this course.

*MINE 471* – Not a suitable course as it is the final-year project course for all final year mine-mech students and most exchange students will not have the necessary mechanical engineering background to complete this course.

*MINE 448* – Not a suitable course as it is the final-year project course for all final year mine-mine students as few exchange students will have all the pre-requisites.

### **MREN COURSES**

There is no 3<sup>rd</sup> and 4<sup>th</sup> year MREN courses available in AY2022-2023. If you are interested to take 1st and 2nd year MREN courses, please email to Lauren Hare, [mre.undergrad@queensu.ca](mailto:mre.undergrad@queensu.ca), to inquire course availability.

### **MTHE COURSES**

Most courses are open to Exchange students, if there is room in the course and they have the pre-requisites. It is often best to speak directly to the instructor to obtain final approval. Exchange students are not eligible to take MTHE 493 and MTHE 494.