

# Graduate Student Handbook

Department of Chemical and Materials Engineering

2024-2025

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UNIVERSITY OF  
ALBERTA

**Disclaimer:** All the information in this booklet is compiled on a best efforts basis and is believed to be correct at the time of publishing. In the event of a conflict between these rules and those stated in the calendar, the rules in the calendar shall have precedence. From time to time, rules and regulations change. It is the student's responsibility to be aware of the latest rules and regulations.

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## 1. Welcome

Welcome to the Department of Chemical and Materials Engineering at the University of Alberta. On behalf of the entire academic staff, we hope that your studies will be rewarding.

Most new graduate students find that the first several weeks are demanding. If you experience any problems, you should consult with one of the graduate advisors shown in the list below, as they are here to assist you.

The graduate program assistants are also a valuable source of information and will assist you throughout your studies. The academic staff members are genuinely interested in meeting new graduate students – you are encouraged to introduce yourself to the academic staff.

The first part of this booklet gives general information, and the second part gives information about the various graduate programs and student responsibilities.

Every student should **read this booklet in its entirety**.

In particular, **pay special attention to your program requirements**, since you will not be able to graduate if you have not met each of those requirements.

## 2. Key Departments Contacts

A listing of department staff with contact information can be found on the department website: <https://www.ualberta.ca/engineering/chemical-materials-engineering/index.html>

The following are key department contacts:

Position	Name	Email
Associate Dean of Graduate Students	Dr. Hao Zhang	<a href="mailto:Hao.zhang@ualberta.ca">Hao.zhang@ualberta.ca</a>
Graduate Program Assistant - Admissions	Mia Law	<a href="mailto:chemmat@ualberta.ca">chemmat@ualberta.ca</a>
Graduate Program Assistant - Program	Marcy Doyle	<a href="mailto:cmegps@ualberta.ca">cmegps@ualberta.ca</a>
Graduate Advisor for Chemical Engineering	Dr. Samir Mushrif	<a href="mailto:mushrif@ualberta.ca">mushrif@ualberta.ca</a>
Graduate Advisor for Materials Engineering	Dr. Hyo-Jick Choi	<a href="mailto:hyojick@ualberta.ca">hyojick@ualberta.ca</a>
Department Chair	Dr. Leijun Li	<a href="mailto:leijun@ualberta.ca">leijun@ualberta.ca</a>
Academic Department Manager	Aneta Thompsom	<a href="mailto:Aneta.Thompson@ualberta.ca">Aneta.Thompson@ualberta.ca</a>
Executive Assistant to the Chair	Lisa Carreiro	<a href="mailto:cmeea@ualberta.ca">cmeea@ualberta.ca</a>
Office Space Assignment	CME Reception	<a href="mailto:cmeinfo@ualberta.ca">cmeinfo@ualberta.ca</a>

## 3. Administration Procedures

### 3.1 Student ID Card – ONECard

After Registration you can get your student ID card (ONEcard), from the ONEcard office located in 9104 HUB Mall. The ONEcard contains your student number, picture and barcode. This card allows the use of the libraries and the sports center. For a description of the services available to you through the ONEcard, please see their [website](#).

### 3.2 Department Payroll

A copy of your Study Permit and Social Insurance Number (SIN) and Canadian Banking information, when available, should be sent to [Shared Services](#).

To receive a Social Insurance Number, you will need to apply through the Government of Canada. Detailed information can be found on the website [here](#).

You may **apply** online [here](#), or by mail [here](#). Be sure to **read the instructions carefully**.

If you wish to apply in person, please follow the instructions posted [here](#).

In Edmonton, the local Service Canada Center is at the address below:

#### **Canada Place**

**#1440, 9700 Jasper Avenue, Edmonton**

They are open between 8:30 AM and 4:30 PM, Monday to Friday. They are **not** open on statutory holidays.

A chequing account with a Canadian Bank must be opened before you will receive payment from our department. Further banking information can be found in section 6.3. Your pay advice can be viewed using Bear Tracks.

Graduate students will be paid twice a month.

The University's payroll system **automatically deducts outstanding tuition and fees from the paychecks of graduate teaching and research assistants** one month after the start of Fall, Winter, and two weeks after the start of Spring and Summer terms.

That is, any Fall tuition owing as of October 1 will be **automatically deducted from the student's**



**October, November, and December paychecks in six semi-monthly installments to a maximum of 80% of your salary.**

If there is tuition left owing at the end of the term, Financial Services will issue a statement letting you know the amount that is due in their office by a certain date.

Similarly, any Winter tuition owing as of February 1 will be **automatically deducted from the student's February, March and April paychecks in six semi-monthly installments.**

Also, students will have automatic deductions from their paychecks in June, July and August for the Spring/Summer tuition and fees.

**Students cannot exempt themselves from this payroll deduction.**

Note: The automatic payroll deduction is only taken from assistantship funding. Installments are not withdrawn from any scholarship funding students may be receiving.

**Students must report all scholarships received to their supervisor.**

### 3.3 Office Assignments

The Department will assign a desk to each MSc and PhD student. If you would like a desk assigned to you please email CME Reception at [cmeinfo@ualberta.ca](mailto:cmeinfo@ualberta.ca). Please let them know who your professor is when you email them. Please inform CME Reception and your supervisor if you wish to make a desk/room change. Such changes must **NOT** be made without authorization. ONEcard access to the space will be set up by CME Reception once you have been assigned a desk space.

### 3.4 Lab Keys

Requests for lab keys are made through the [Intranet](#). You will need to sign in with your CCID and password. All students are required to complete lab safety training prior to requesting lab keys. The following courses are required. The courses can be found at this [link](#).

- Safety Seminar – arranged by Shaofeng Yang
- WHMIS
- Laboratory and Chemical Safety
- Hazardous Waste Management
- Working Safely at the U of A

For lab keys there is a \$50.00 **CASH** deposit required. The deposit will be returned to you when you return all the lab keys.

### 3.5 Personal Information

It is the student's responsibility to ensure that their personal contact information is updated with the University at all times. Students can change their contact information by accessing Bear Tracks. It is the responsibility of the student to inform the department of any changes to his/her **immigration status**.

### 3.6 Code of Student Behavior

The University's Code of Student Behavior states academic and non-academic offenses for which students will be sanctioned. Students should familiarize themselves with this code, which can be found on the [website](#). Students' attention is drawn in particular to the University's stand on plagiarism and harassment.

### 3.7 Parking and Automobile Regulations

Questions concerning parking privileges and use of automobiles on Campus should be directed to parking services. Their website is found [here](#) and their office is located at 1-051 Lister Centre.

### 3.8 Laboratory Safety and Security

You are required to attend the Department Safety Seminar during your first semester. Information regarding the seminar will be distributed accordingly. Information required certifications will be provided at this seminar.

**All graduate students (MEng, MSc and PhD) are required to take [Concepts in Safety Leadership \(CSL\)](#) course.**

On occasion, the department has experienced laboratory burglary. **Please ensure that your laboratory is locked when unattended, and all your personal belongings are locked up in a secure place at all times to prevent theft.**

### 3.9 Medical and Dental Insurance

You will need to apply for Alberta Health Care Insurance. Locations are listed in this [link](#).

The Graduate Student Association (GSA) has a dental/health plan to help with medical fees that are *not* covered by Alberta Health Care. The cost for this plan is included in your University fees. If you are covered by a comparable health or dental plan, you can opt out of the GSA plan by submitting proof of your equivalent coverage to the GSA at Triffo Hall. Full-time students are automatically re-enrolled into the dental/health plan each year. For more information, visit the GSA [website](#).

### 3.10 Computer and Network Access

After you have finished your registration, it is necessary for you to **complete the online check-in form** in the New Students folder in the CME Student Resources Drive. Doing so will ensure you are added to the department e-mail lists and that you will have access to department computing resources.

For technical issues, visit the University's IST services [here](#).

To access UWS (wifi), the username and password are the same as for your Bear Tracks account.

## 4. University and Department Services

### 4.1 Mail Service and Mailboxes

Department mail for students is placed in a filing cabinet in the room next to reception on the 12<sup>th</sup> floor of the ICE building. There are 26 files one for each letter of the alphabet. The letter corresponds to the first letter of your last name (e.g. all mail for Bob Jones would be placed in file J.) All mail will be inserted into the appropriate file, except for large items, in which case an email will be sent indicating where it may be claimed. **All personal mail must be sent to a home address or post office box.**

### 4.2 Photocopies and Fax Machines

The use of the photocopier and fax machine is restricted to office hours and care should be taken to use the equipment. You will need a PIN to access the photocopier. To obtain a PIN, you must have the permission of your supervisor.

\*The photocopiers/fax machine are to be used for university-related business only.

Theses are not to be photocopied on department copiers. Also, be aware that the University of Alberta has contractual agreements regarding copyright infringement. You should not photocopy large portions of books, because this can constitute copyright infringement.

### 4.3 Office Supplies

The department does **not** provide office supplies. They are your or your supervisor's responsibility.

### 4.4 Conference Rooms and Projector

The department conference rooms can be booked for research meetings and seminars through your google calendar or by emailing [cmeinfo@ualberta.ca](mailto:cmeinfo@ualberta.ca).

### 4.5 Ordering and Shipping Supplies

Ensure that your name is included on the address label when ordering supplies.

To order supplies for a laboratory, you must first get written permission from your supervisor or the principal investigator (PI) in the form of an email. Once you have permission, you may carry through with the order in one of two ways. Ask your supervisor which way is best for your specific order.

1. Fill out a CME Department Pcard Purchase request [here](#).
  - This order will go through reception ([cmeinfo@ualberta.ca](mailto:cmeinfo@ualberta.ca))
2. Fill out an order through SupplyNet.
  - Each lab group will have their own SupplyNet account. Ask your supervisor for more information.

When a package is received in the department, an email will be sent to you to notify you of its arrival. The Department assumes no responsibility for the ordering or delivery of any supplies. Mail is delivered to the department every second day.

When having items shipped to the department, please add at least two full days to your estimated time of arrival for distribution from Supply Management Services. For any problems with delivery of packages, contact Supply Management Services ([customerservices@sms.ualberta.ca](mailto:customerservices@sms.ualberta.ca)).

Shipping of dangerous goods **must** be done with the supervision of the Department's safety officer Shaofeng Yang ([shaofeng@ualberta.ca](mailto:shaofeng@ualberta.ca)).

#### 4.6 Machine and Instrument Shops

The department has well equipped and staffed machine and instrument shops. Consult your supervisor about access to these facilities.

#### 4.7 CMEGSA

The Chemical and Materials Engineering Graduate Student Association (CMEGSA) provides new graduate student orientations, social and recreational activities, representation of graduate students, seminar refreshments, etc. Visit their [website](#) or email them at [cmegsa@ualberta.ca](mailto:cmegsa@ualberta.ca).

#### 4.8 GSA

The Graduate Students Association (GSA) is located at 1-49 Triffo Hall. It provides official representation for graduate students via committees, councils and the media; promotes the general welfare of members; serves and furthers the intellectual, cultural, social, and recreational activities of its members; and represents all academically employed graduate students. For more information on their services, please visit their [website](#).

#### 4.9 Housing

The University's Residence Services rents housing in several residences, including Graduate Student Residences, HUB International and housing for married students. The link to their website is [here](#).

The Students Union Housing Registry maintains a list of rooms and apartments in the city [here](#). Neither the University nor the Department assumes responsibility for finding accommodation for students; that is the student's responsibility.

#### 4.10 Office of the Dean of Students

The Office of the Dean of Students is an interconnected portfolio of programs and services. They are Academic Success Centre, Career Centre, Counselling and Clinical Services, First Peoples' House, Office of the Student Ombuds, Residence Life, Sexual Assault Centre, Student Conduct and Accountability, University Health Centre, Wellness Supports, Women in Scholarship, Engineering, Science & Technology. For more information please visit their [website](#).

#### 4.11 Centre for Teaching and Learning

The Centre for Teaching and Learning provides opportunities for graduate students to develop their teaching skills through theory classes and teaching experience. More information on this program is available on their [website](#).

#### 4.12 University Health Care

The University of Alberta Health Centre is located on the second floor of SUB. More information about the Health Centre is available [here](#).

A [pharmacy](#) is located on the main floor of SUB and is open Monday – Friday (8:30am – 4:30pm)

#### 4.13 Counselling and Clinical Services

Counselling and Clinical Services offers psychological treatment services to current students. They provide accessible professional psychological services to students who may be experiencing on-going or situational personal, academic or career-related difficulties. For more information please visit their website [here](#).

## 5. Services for International Students

### 5.1 University of Alberta International

The University of Alberta [International Centre](#) provides excellent services and programs to both Canadian and foreign students, such as orientation programs and information on study abroad opportunities.

### 5.2 International Student Orientation

International students are encouraged to participate in the international orientation seminar held at the International Centre.

### 5.3 English Language Training

Students whose speaking and/or writing skills need improvement are encouraged to acquire basic skills through formal courses. The International Centre has information on language schools and individual tutors. English language training courses are also offered by:

- Faculty of Extension
- Academic Success Centre
- Continuing Education through Metro Community College
- MacEwan University
- Norquest College

### 5.4 Renewing your Study Permit

If you want to extend your stay in Canada as a student, please visit these two websites:

- <https://www.ualberta.ca/international/international-student-services/immigration/study-permit-extension.html>
- <https://www.canada.ca/en/immigration-refugees-citizenship/services/study-canada/extend-study-permit.html>

Check the expiry date on your study permit and make sure you apply well **before** that date.

If you apply for renewal of your study permit, and the permit expires before you receive an answer, you can continue to study in Canada under the same conditions until you receive a decision. Please send a copy of your payment receipt as well as the Canada Post receipt to [cmegps@ualberta.ca](mailto:cmegps@ualberta.ca). The receipts should list the date of the application as well as your full legal name.

You should apply to renew your study permit if you intend to travel outside Canada and your permit will expire while you are travelling. You cannot extend your study permit beyond the expiry date on your passport. If your study permit has expired and you have not applied for an extension, you must leave

Canada.

## 6. General Information

### 6.1 Transportation

The City of Edmonton has a public transportation system. The LRT (Light Rail Transit) system offers convenient transportation from the University to downtown Edmonton (NAIT/Royal Alex Hospital/Kingsway), Rogers Place, Commonwealth Stadium, communities in north Edmonton, as well as links to South Campus (including Saville Sports Centre), Southgate Mall and Century Park. The bus system also offers transportation to and from the University. A listing of routes and schedules is available [here](#).

All students are eligible to receive their Arc Card when they receive their ONEcard, which allows use of the ETS systems during the periods September to April. Some students will also receive a Spring/Summer U-pass for the months of May to August. For more information, see:

<https://www.ualberta.ca/upass>

### 6.2 Alberta Health Services “Health Link”

“Health Link” is a 24 hour a day, seven days a week telephone health advice service answered by registered nurses that anyone in Alberta can call. They provide Albertans with a greater role in managing their own health so they can make informed decisions about their health and what resources to use from their own homes. Anyone with a health concern can call 811 (for out-of-province or internet phone users, call 1-866-408-5465). <https://www.albertahealthservices.ca/>

### 6.3 Banking

All students must open a chequing account with a recognized Canadian banking institution to receive their pay. Listed below are some banks that you may be interested in opening your chequing account at:

- [TD Canada Trust](#)
- [RBC Royal Bank](#)
- [CIBC](#)
- [Bank of Montreal](#)

After you have opened a chequing account, you need to send the information to [Student Service Centre](#).

## 7. Organization and Administration of Graduate Programs

### 7.1 Degrees Offered

The Department of Chemical and Materials Engineering offers the degrees of MSc and MEng in Chemical Engineering, Process Control, Materials Engineering, and Welding Engineering. It offers PhD degrees in Chemical Engineering, Process Control and Materials Engineering. Students who initially register in a given degree program require department approval before changing to another program.

### 7.2 Program Requirements

The Faculty and Departmental requirements for graduate programs are given in the University of Alberta Calendar. Each graduate student is responsible for being familiar with all regulations and requirements specified therein. The calendar can be found [here](#). If flexibility within these requirements is permitted, it is left to the Department of Chemicals and Materials Engineering to supplement and interpret these regulations pertaining to graduate students in the Department. Each graduate student is responsible for being familiar with the University's major deadlines, found in the Academic Schedule of the University calendar.

### 7.3 Registration

Registration in the Faculty of Graduate Studies and Research (FGSR) is required immediately for students entering at the beginning of September or January. Course registration should be completed no later than the first week of classes. You should consult your graduate program assistant or supervisor for advice on registration.

*Students must be registered full-time in 9 credits each term (Fall and Winter) to be eligible to receive funding from the department. Full-time students will be registered for 6 credits in Spring/Summer by the Faculty of Graduate Studies and Research (FGSR). Such students must maintain full-time registration until their degree is finished, regardless of whether they are working on the University campus or not.*

It is your responsibility to be aware of all deadlines in the University of Alberta Calendar pertaining to registration, **especially the add/drop deadlines**. Registration can be completed through the Bear Tracks web-based system at <https://www.beartracks.ualberta.ca/>. Please see section 14 of this handbook for further registration information. If you have any difficulties registering, please see a Graduate Assistant for assistance.

### 7.4 Seminars

The Department offers a distinguished seminar series, called the *D.B. Robinson Distinguished Seminar Series*, of which the premier event is the ICI lectures. Other seminars may be offered from time to time. Attendance at a minimum of 75% of these seminars per academic year is **required** by all **MSc** and **PhD** students throughout the duration of their program. Students starting their program in January must



attend at least three of these seminars in their first term. Attending these seminars is options but recommended for **MEng** students. Students who miss the attendance requirement for the D.B. Robinson series will be assigned additional work.

Seminars will be emailed to the department.

### 7.5 Presentation Requirement

All MSc and PhD students are required to deliver **one** public presentation on their research. The approval of an external conference presentation to satisfy the seminar requirement is at the discretion of the Associate Dean Graduate Students. A presentation made at the Faculty of Engineering Graduate Research Symposium (FEGRS) qualifies towards the presentation requirement. MSc students can request permission for presentations that were at venues other than conferences and FEGRS to be considered for meeting the presentation requirement, but approval of those requests is at the discretion of the Associate Dean Graduate Students. The form for requesting permission is available in the form's cabinet on the CME department's website.

### 7.6 Professional Development Requirement

#### **Requirement for Students starting from Fall 2017 to Summer 2023**

Engineering graduate students must undertake a minimum of 12 hours professional development over the course of their degree. As of Fall 2017 the Faculty of Engineering requires training in preparation of a student's Individual Development Plan (IDP) and 4 hours of career development workshops provided by the Faculty of Engineering. In addition, 8 hours are required by the Faculty of Graduate Studies and Research (FGSR).

As of Fall 2017, Engineering Graduate students must meet their Professional Development through the completion of two virtual courses available through e-class: ENG GRAD PD 01 and ENG GRAD PD 02.

#### Step 1: ENG GRAD PD 01 (IDP and 4 Hours Faculty of Engineering Related Workshops)

Students can self enroll in this virtual course at the following link:

<https://eclass.srv.ualberta.ca/enrol/index.php?id=40832>

Information on ENG GRAD PD 01 (Faculty of Engineering IDP and 4 hours PD requirement) can be found at:

<https://www.ualberta.ca/engineering/student-services/academic-support/graduate-studies-professional-development>

**ENG GRAD PD 01** is an eClass course to be used for submitting the signed review documents of the

student's Individual Development Plan (IDP), and to track participation in the selected Professional Development sessions, focusing on engineering-relevant career skills. More information is available at the following links:

Individual Development Plan (<https://www.ualberta.ca/engineering/student-services/academic-support/graduate-studies-professional-development.html>)

Link to Engineering Sessions and Workshops (<https://www.ualberta.ca/engineering/student-services/academic-support/graduate-studies-professional-development>)

Step 2: ENG GRAD PD 02 (Minimum of 8 hours FGSR Professional Development)

Students can self-enroll in these courses through [campusBRIDGE](#).

### **Requirement for students starting from Fall 2023**

Engineering graduate students must undertake a minimum of 8 hours professional development over the course of their degree as required by the Faculty of Graduate Studies and Research (FGSR).

Step 2: ENG GRAD PD 02 (Minimum of 8 hours FGSR Professional Development)

Students can self-enroll in these courses through [campusBRIDGE](#).

Upload PD Activities Completion form, along with your attendance record to the [ENGG GRAD PD](#) eClass page.

## **8. Masters Programs**

### **8.1 MSc Program**

The requirements for the MSc degree consist of successful completion of course work, participation in seminars, completion of the Ethics course INT D 710, completion of the professional development requirement and a presentation of their work at a conference or an equivalent venue (see section 7.5)

In addition, MSc students must successfully defend their thesis which embodies the results of independent research at the end of their program (MSc final oral exam). Please refer to the document on Exam Procedures in the Forms Cabinet of the CME Department's web page for details on the procedure for the MSc final oral examination.

All MSc students are also encouraged to take on one Teaching Assistantship position as part of their program. MSc students must complete all of the requirements within four years from the time they first register as graduate students.

The MSc minimum course requirement is four courses plus the Ethics course (INT D 710). At least two courses must be 600 or higher-level courses in the Department of Chemical and Materials Engineering.

(Also, see section 10.2 for courses that are equivalent to 600 level courses in CME). The balance of the courses shall be at the 500 or higher level in the Faculty of Engineering, or at the 400 or higher level in a Science Department. Students specializing in Materials Engineering must take 2 of the 4 core courses (MAT E 640, MAT E 664, MAT E 666 and MAT E 661), these count as your two 600 level courses. Students specializing in Welding engineering must take one of welding core courses (MAT E 673 and MAT E 681) as well as one of the Material core courses (MAT E 640, MAT E 664, MAT E 666 and MAT E 661), these count as your two 600 level courses. Reading or independent study courses will **not** count towards the total course requirement. Science courses at the 400 level must be approved by the supervisor and Associate Dean Graduate Students.

## 8.2 MEng Program

The MEng program is a course-based program designed primarily for the working professional. MEng programs must be completed within **six years** of initial registration.

The MEng course requirement is eight one-term courses, plus the project course (CME 900) and the Ethics course (INT D 710). In addition, students must fulfill the professional development requirement. At least four of the eight courses must be taken from the Department of Chemical and Materials Engineering, of which at least three must be 600 or higher-level courses (also see section 10.2 for courses equivalent to 600 level courses in CME). The balance of the program consists of courses at the 500 or higher level in the Faculty of Engineering, or at the 400 or higher level in a Science Department. The course program must be approved by the Associate Dean Graduate Students.

Students specializing in Materials Engineering must take 2 of the 4 core courses (MAT E 640, MAT E 664, MAT E 666 and MAT E 661), these count as two of your 600 level courses. Students specializing in Welding engineering must take one of welding core courses (MAT E 673 and MAT E 681) as well as one of the Material core courses (MAT E 640, MAT E 664, MAT E 666 and MAT E 661), these count as two of your 600 level courses.

Under normal circumstances, it should be possible to complete the project within four to six weeks of concentrated work. The project is to be selected and then completed under the supervision of a faculty member in the CME department, with the work being recorded in a report which is evaluated to determine if the student has passed or failed. Students are to select the topic for the project in consultation with the prospective supervisor before the term in which they register for CME 900. The project topic may involve research investigations, design calculations or in some cases, a literature review. In the term in which they register for CME 900, students must complete the work and a report on the same, and obtain and incorporate the supervisor's feedback on the report. The completed report is evaluated by the supervisor and another person at arm's length (who is chosen by the Associate Dean Graduate Students). The entire process is to be completed in the same term.

The guidelines for the report are: the main body is expected to be between 5,000 and 10,000 words, and the report is to be written in the 12-point font (Arial, Calibri, Times New Roman) with double line spacing

and 1-inch margins all around. Ideally, the front matter would consist of an executive summary, a table of contents, a list of figures/tables and nomenclature/definitions. The main body of the report would include an introduction, a literature review/foundational information, a problem statement, methods, results and discussion, conclusions/recommendations and references.

## 9. PhD Programs

The requirements for the PhD degree consist of successful completion of course work, participation in seminars, completion of the ethics courses INT D 710 and INT D 720, and completion of the professional development requirement. In addition, PhD students must successfully defend their thesis which embodies the results of independent research at the end of their program (PhD final oral exam).

Moreover, PhD students must have made a presentation on their work at a conference or an equivalent venue (see section 7.5). All PhD students are also encouraged to take on two Teaching Assistantships as part of their program. PhD students must complete all the requirements within **six years** from the time they first register as graduate students.

### 9.1 Course Work

The minimum course requirement is six one-term courses plus the ethics course (INT D 710 and INT D 720) and CME 600 (Introduction to research methods). Note that CME 600 must be taken by PhD students in the first year of their program. At least three courses must be 600 or higher-level courses in the Department of Chemical and Materials Engineering (also see section 10.2 for courses that are equivalent to 600 level courses in CME) The balance of the courses shall be at the 500 or higher level in the Faculty of Engineering, or at the 400 or higher level in a Science Department. Students specializing in Materials Engineering must take 2 of the 4 core courses (MAT E 640, MAT E 664, MAT E 666 and MAT E 661), these count as two of your 600 level courses.. Reading courses will **not** count towards the total course requirement. The final course program for students shall be approved in writing by the supervisory committee and is subject to final approval by the Associate Dean Graduate Students.

### 9.2 PhD Program following the completion of an MSc

A student admitted to the PhD graduate program in the Department of Chemical and Materials Engineering **may** be eligible for a Department course exemption if the student has previously completed a recognized graduate degree program at an accredited university. The number of courses will be evaluated and approved on a case-by-case basis. The criteria that must be met before Departmental course or course unit exemption will be considered are:

1. The supervisory committee and Department agree that the course(s) in question is (are) applicable to the student's degree program, and that an equivalent course exists at the University of Alberta
2. The student achieved a grade acceptable to the Department
3. The student must not have completed or intend to complete a course of identical course content

at the University of Alberta

The student's course performance at the previous university and the University of Alberta will be considered prior to departmental approval of course exemptions. To request a course exemption, the **student's supervisory committee** (not the student) should submit a written request to the Associate Dean Graduate Students with the following information for each course to be considered:

1. Course Number
2. Course Description
3. Course Content
4. Course Textbook
5. U of A Course Equivalent
6. Grade achieved in the course

The request should be submitted on the form provided for this purpose **after the completion of at least two academic terms and the successful completion of the candidacy exam**. The student's academic record will be evaluated and a written decision to the request will be distributed to the student and supervisor, and a copy placed in the student's file. It is the responsibility of the student with the advisement of the student's supervisor or supervisory committee to ensure all academic course requirements are met prior to graduation.

Normally, FGSR permits a maximum of two courses to be exempted from the program. In exceptional cases (e.g., a previous master's degree was obtained at the University of Alberta), an exemption exceeding two courses may be granted after candidacy exam, however, in all cases **at least two graduate courses must be taken at the University of Alberta.**

The final decision shall rest with the Associate Dean Graduate Students.

### 9.3 Candidacy Exam

The Faculty of Graduate Studies and Research requires that a PhD student pass an oral Candidacy Examination. Please refer to the document on Exam Procedures in the Forms cabinet of the CME Department's web page for details on the procedures for the PhD candidacy examination.

The Department of Chemical and Materials Engineering (CME) has specific regulations:

1. The Candidacy Examination must be held within **16 months of initial registration** in the PhD program for full-time students. Part-time PhD students must complete the Candidacy Examination successfully by 3 years of initial registration. A different (shorter) deadline will be imposed in cases where the student has entered the doctoral program through a change of category from a Master's program in the CME Department (see below). No financial support from the department will be available to students who do not meet this deadline. Departmental support also includes TA and RA appointments, as discussed in a following section. Students failing to meet the deadline without compelling extenuating circumstances may also be required to convert to the MSc program.
2. Full-time PhD students shall submit a copy of a Research Proposal within **13 months of initial**

**registration.** The Associate Dean Graduate Students will provide details about the format for the submission at the time. Currently, submissions are to be made electronically as a pdf document through a [Google form](#) created for this purpose.

A student who is enrolled in the MSc program and subsequently converts (Change of Category) to the PhD program shall be subject to the following rule:

- The candidacy report shall be submitted within *one month of the effective date of program transfer, or 13 months from the date of first registration in the MSc program, whichever is later.*
- The candidacy exam shall be held within *four months of the effective transfer date or 16 months from the date of first registration for the MSc, whichever is later.*

Exceptions to this timeline for students converting to the PhD program can only be made by the Associate Dean Graduate Students.

A student who wishes to be admitted directly into PhD program after graduation from a BSc program is required to have first class standing (G.P.A. of 3.5 out of 4 at the University of Alberta, or equivalent).

**Candidacy report (i.e. research proposal) guidelines:** The research proposal should be printed in 12-point font and not exceed 20 pages in length (excluding the table of contents and list of references). While there isn't a specific format required, it is highly recommended to include sections of motivation, background/literature review, hypothesis/objectives, methods, results, results and proposed work.

## 10. Thesis Formatting Guidelines

The FGSR minimum thesis formatting guidelines are available [here](#), and these are applicable to all thesis (MSc and PhD) in the CME Department. An important point to note is that a preface is required in all cases where any part of the work included in the thesis collaborative.

If you choose to write your thesis in a "paper-based" format, i.e. if the thesis contains published material, the following guidelines apply in the CME Department:

- Only peer-reviewed journal articles and peer-reviewed conference publications are recognized as suitable publications for inclusion in the paper-based format
- A paper-based thesis can include published, accepted and submitted papers, as long as at least one publication is published or accepted
- The student must be the first or second author in each publication that is included in the paper-based thesis
- It is acceptable for a paper-based thesis to have some material that is not a publication; normally, this is restricted to introductory material, conclusions and discussions on future work, and reviews of the literature pertinent to the thesis topic and descriptions of the research methods used that provide more detail than is present in the included publications.
- There is no specific requirement on connecting text required to link the papers included in the thesis beyond the introduction.

- For each publication included in the thesis, if the student has reason to believe that it may be included in another student's thesis in the future or that it has been included in another student's thesis in the past, this must be indicated in the preface along with the description of each author's contributions.

## 11. Course Inclusion and Exclusion

### 11.1 Course Exclusion List (all programs)

Regardless of any other statement made within this document, the courses in the following list shall **not** be counted as meeting part of the requirement for completion of graduate courses. The following list is not all inclusive and other courses may not be valid. Students are reminded that all course programs are subject to final approval of the Associate Dean Graduate Students.

- INT D 561 Energy and Environment Course (Focus on Oil Sands)
- Reading or independent study courses

### 11.2 Course Inclusion List (all programs)

For the purposes of assessing program course requirements, certain courses from other departments are considered to be equivalent to courses in CME at the 600 level. These are: ECE 540, ECE 560, ECE 561, ECE 760, ECE 662, ECE 664, ECE 665, ENGM 646, MECE 615.

Also, the courses ECE 450 & ECE 457 are equivalent to 500 level courses in Engineering for the purpose of assessing program course requirements.

## 12. Performance

All graduate students are required to maintain a satisfactory standard of performance to remain in the graduate program. The interpretation of satisfactory academic performance in the MSc and PhD programs in the Department of Chemical and Materials Engineering is as follows:

### 12.1 General Academic Performance

The cumulative grade point average (GPA) used in evaluating a student's performance for MSc and PhD programs refers to a weighted (by term hours) average of the grades in all courses in the student's graduate program. The original grade in a failed course which has been repeated or replaced by an alternate course is included in calculating the GPA.

The pass mark in any course taken as part of the program is C+. A failing grade is defined as C or lower for graduate students. All failed courses must be either repeated or replaced by an alternate course acceptable to the Department. It is required that the cumulative grade point average (GPA) at the time of graduation for all courses in the program be not less than 2.7.

A course that is not part of the course requirements should be declared as extra to the degree at the time of registration. Please fill out the “Course Extra to Degree” [form](#) available on the FGSR website, obtain your supervisor’s signature, then hand in to a Graduate Assistant.

## 12.2 Specific Academic Performance

If the GPA is less than 2.7 after one term of graduate study, the student will be placed on academic probation. A student placed on probation may remove this status by performance in the next term such that the GPA for the course work of both terms is at least 2.7. Being on probation means that students are permitted to stay in the graduate program even though their most recent record is below the standard normally required by the Department. Graduate students are not permitted to stay on probation for two consecutive terms. **Students on academic probation do not receive financial support from the Department.** If the GPA after two terms of graduate study is less than 2.7 the student may be required to withdraw. Students may also be placed on probation at any point in their program if their GPA falls below 2.7.

## 12.3 Satisfactory Research Performance

Graduate students are expected to maintain satisfactory research performance whether they are appointed as graduate student assistantship collective agreement specifies the procedure for dealing with unsatisfactory performance.

## 13. Financial Assistance

Full time graduate students admitted to the MSc and PhD programs are offered financial support. The financial terms are outlined in the department funding letter when students are admitted.

Financial support from university funds provided for graduate students is distributed on an annual basis by the Department. Eligible students who qualify for support cannot be guaranteed that this type of financial support will be maintained beyond the periods defined below, regardless of academic performance. Satisfactory progress in course work and research should normally result in continued Department support at approximately the same rate of pay for the following periods:

- For **MSc** candidates, up to **24 months** after initial registration in the Faculty of Graduate Studies and Research;
- For **PhD** candidates, up to **48 months** after initial registration in the Faculty of Graduate Studies and Research.

Students should recognize that a work week of 40 hours will normally not be adequate to complete an advanced degree within the above time frame.

Provided that you are making satisfactory progress towards the completion of your degree, you **may** receive funding until you complete your studies and research (i.e. beyond the period listed above). The decision on this matter rests with your supervisor. Therefore, it is expected you will devote all of your



time towards your studies. The Department or your supervisor must be notified before you accept additional employment, as this may affect the level of funding you receive from the Department.

The minimum stipends for graduate students are \$23,000 per annum for Canadian citizens/permanent residents and \$27,000 for international students on student visas. The difference in the funding levels is to partially offset the higher tuition fees that students on student visas are required to pay. Note that these amounts include, but are not limited to, income from all sources, including scholarships, bursaries, teaching and research assistantships, fellowships and external funding agencies, including governments and industry.

**The maximum amount of graduate student funding is \$36,000 per annum for Canadian citizens/permanent residents or \$40,000 per annum for international students, when any part of the funding comes from trust funds (i.e. supervisor's research funds). Of this amount, a maximum of \$30,000 can be from the supervisor's research funds.**

Payments from the following sources are used to determine salary minimums:

- Teaching Assistantships
- Scholarships
- Supervisor Support

**It is the responsibility of the student to report all scholarships received to their supervisor.**

### 13.1 Scholarships and Fellowships

Major scholarships and fellowships are usually tenable from September 1. Payments will be made monthly, in advance, i.e. on September 1 for the month of September. Holders of scholarships and fellowships are not entitled to remission of fees unless explicitly stated under the terms of the award. On occasion, scholarship stipends may be augmented with part-time graduate appointments but only to the extent permitted by the scholarship regulations applicable and by the availability of university funds.

Non-scholarship support may be provided from university funds to registered graduate students in return for specific duties during the academic year.

### 13.2 Graduate Assistantships

At the time of writing this document, graduate assistantships included graduate teaching assistantships (GTAs), graduate research assistantships (GRAs) and graduate assistantship fellowships (GRAFs). Definitions and duties for each of these are laid out in the GSA agreement. The assignment of GTA, GRA and GRAF appointments is made on the basis of academic qualifications and relevant training and experience.

Teaching assistantships (TAs), are awarded by the department to graduate students who either have clear

potential or demonstrated ability to perform well in the classroom. TAs assist a faculty member in teaching and may be responsible for portions of class development, seminar preparation and delivery, and holding office hours to answer student questions.

GRA appointments are made for the student to assist in the faculty member's academic research, while GRAF appointments are a form of financial assistance provided to graduate students to allow them to focus on their education and training, as it relates to their own thesis.

## 14. Registration

All full-time students must maintain full-time registration in each of the Fall & Winter terms and register 6 credits in Spring/Summer until they finish their degree.

Full-time registration is defined as a minimum of 9 credits per term for Fall and Winter terms. Students are not permitted to register as part time students, unless they were initially admitted with part time status.

If a student wishes to withdraw from a course after the registration deadline, they must complete a withdrawal form, which can be obtained from a Graduate Assistant.

Also, because a student must be registered full-time, an add/delete form with registration in Thesis 90X will also be sent to FGSR with a memo from the Department requesting that this course be added to the students' transcript.

This means that the student will be obligated to pay for the course that they have withdrawn from **as well as** the additional credits that must be added for them to maintain their full-time status (9 CR).

Questions concerning the organization and administration of the programs which are **not** covered in this booklet or in the Calendar should be directed to the Graduate Assistants.

## 15. Graduate Ethics Training

Ethics and academic integrity training is mandatory for all newly-admitted University of Alberta graduate students who started their program on or after September 1, 2004.

**\*\*MEng and MSc Students admitted after September 2022 must take and pass the course INT D 701, and PhD students must take and pass the courses INT D 701 and INT D 702.**

## 16. Professional Engineering (PEng) status

To practice engineering in the province of Alberta, you must be a Professional Engineer (PEng). All the information needed to obtain your PEng license can be found on the APGEA website. [www.apega.ca](http://www.apega.ca)

Please note: Completing your MSc or PhD degree does not guarantee that you have met the requirements for PEng status. It is important to read the APEGA website to acquire information about all the requirements.

## 17. Copy of Thesis

Arrangements and expenses for thesis preparation, including typing, production of photographs and tables, and duplicating are the responsibility of the student.

Thesis are to be submitted in electronic form following the rules posted on the FGSR website. Instructions regarding thesis format and methods of the thesis production are available on the [FGSR website](#).

The student and/or the supervisor may desire bound copies for their personal libraries.

## 18. Checking Out

At the conclusion of your studies, you must return all equipment and supplies (unless directed otherwise), keys, tools, etc., that you have used. In particular, irreplaceable items such as bound theses or books must be returned. All garbage and other waste must be disposed of properly and safely.

An "Exit Form" must also be completed and returned to the Graduate Assistants after you have cleared out your space.

All keys must be returned to reception. Please note that it is your responsibility to ensure that your assigned desk space is left clean for the next occupant.