
Department of Chemical and Materials Engineering

This document is available in here:

[07. POLICY DOCUMENTS](#)

2021-2022



UNIVERSITY OF
ALBERTA

Information for Graduate Students

Chemical and Materials Engineering

2021-2022

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.

September 2021

[1. Welcome](#)

[1.2 Key Department Contacts](#)

[2. Administration Procedures](#)

[2.1 Student ID Card — ONEcard](#)

[2.2 Department Payroll](#)

[Graduate Student Assistantship Information](#)

[Automatic Deductions of Outstanding Fees and Tuition](#)

[2.3 Office Assignments](#)

[2.4 Building Keys](#)

[2.5 Personal Information](#)

[2.6 Code of Student Behaviour](#)

[2.7 Parking and Automobile Regulations](#)

[2.8 Laboratory Safety and Security](#)

[2.9 Computer and Network Access](#)

[2.10 Medical and Dental Insurance](#)

[3. University and Department Services](#)

[3.1 Mail Service and Mailboxes](#)

[3.2 Telephone](#)

[3.3 Photocopiers and Fax Machine](#)

[3.4 Department Forms](#)

[3.5 Office Supplies](#)

[3.6 Conference Rooms and Projectors](#)

[3.7 Ordering and Shipping Supplies](#)

[3.8 Machine and Instrument Shops](#)

[3.9 Purchasing](#)

[3.10 CMEGSA](#)

[3.11 GSA](#)

[3.12 Housing](#)

[3.13 University Student Services](#)

[3.14 Centre for Teaching and Learning](#)

[3.15 University Health Care](#)

[3.16 Student Counseling Services](#)

[4. Services for International Students](#)

[4.1 University of Alberta International Centre](#)

[4.2 International Student Orientation](#)

[4.3 English Language Training](#)

[4.4 Renewing Your Study Permit](#)

[5. General Information](#)

[5.1 Transportation](#)

[5.2 Alberta Health Services 'Health Link'](#)

[5.3 Banking](#)

[6. Organization and Administration of Graduate Programs](#)

[6.1 Degrees Offered](#)

[6.2 Program Requirements](#)

[6.3 Registration](#)

[6.4 Seminars](#)

[6.5 Presentation Requirement](#)

[6.6 Professional Development Requirement](#)

[7. Masters Program](#)

[7.1 MSc Program](#)

[7.2 MEng Program](#)

[8. PhD Programs](#)

[8.1 Course Work](#)

[8.2 PhD Program Following the Completion of an MSc](#)

[8.3 Candidacy Examination](#)

[9. Thesis Formatting Guidelines](#)

[10. Course Inclusion and Exclusion](#)

[10.1 Course Exclusion List \(all programs\)](#)

[10.2 Course Inclusion List \(all programs\)](#)

[11. Performance](#)

[11.1 General Academic Performance](#)

[11.2 Specific Academic Performance](#)

[11.3 Satisfactory Research Performance](#)

[12. Financial Assistance](#)

[12.1 Scholarships and Fellowships](#)

[12.2 Graduate Assistantships](#)

[13. Registration](#)

[14. Graduate Ethics Training](#)

[15. Professional Engineer \(PEng\) Status](#)

[16. Copies of Thesis](#)

[17. Checking Out](#)

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. Ignorance of rules and regulations is no excuse. 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.**

1.2 Key Department Contacts

A listing of department staff with contact information can be found on the department website: [HERE](#).

Associate Chair of Graduate Studies	Dr. Hao Zhang
Graduate Program Assistants	Mia Law, Harper Paranich
Graduate Advisor for Chemical Engineering	Dr. Natalia Semagina
Graduate Advisor for Materials Engineering	Dr. Hyo-Jick Choi
Department Chair	Dr. Vinay Prasad
Assistant Chair	Aneta Thompson
Office Space Assignment	CME Reception

2. Administration Procedures

2.1 Student ID Card — ONEcard

You can get your student ID card (ONE card), from the **ONE card office** located in **9104 HUB Mall**.

The ONE card contains your student number, picture and a barcode. This card allows the use of the libraries and the sports centre.

For a description of the services available to you through the ONE card, please see their website: [ONEcard](#)

2.2 Department Payroll

A copy of your **STUDY PERMIT** and **SOCIAL INSURANCE NUMBER (SIN)**, when available, should be **sent to payroll.operations@ualberta.ca**.

If you do not have a social insurance number, please **contact a Graduate Assistant** for information on how to apply for one as soon as possible. (The procedure for this will vary depending on the information contained in your study permit).

When ready, you will go to the following location to **apply for your SIN**:

CANADA PLACE

#1440, 9700 Jasper Avenue, Edmonton

8:30 A.M. – 4:00 P.M.

Monday - Friday (except stat holidays)

Directions to Canada Place:

Take the Light Rail Transit system (LRT) to get to Canada Place.

Board the train at University Station and get off at Churchill Station.

TD1 and TD1AB forms (these forms are **optional**) are available at the links below:

[TD1 form](#)

[TD1AB form](#)

You may complete these forms (**optional**) and forward them to a Graduate Assistant.

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 of this document**.

Your pay information can be viewed using [BearTracks](#).

Graduate Student Assistantship Information

Graduate students will be paid twice a month.

All payments are made by direct deposit to the student's personal bank account. Students must set up direct deposit in [BearTracks](#).

For **instructions** on how to set up direct deposit, [CLICK HERE](#).

Automatic Deductions of Outstanding Fees and Tuition

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, Spring and Summer terms.

That is, **any Fall tuition owing as of October 1 will be 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. Deductions will occur twice a month, on each paycheck.

Students cannot exempt themselves from this payroll deduction.

Full tuition for the Fall, Winter, Spring and Summer terms must be paid by the respective deadlines in order to have no fees deducted from your paycheck.

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 a Graduate Assistant.

2.3 Office Assignments

The Department will assign a desk for each student during the first semester.

Office assignments are done by CME Reception.

The necessary keys are issued by CME Reception upon authorization by the research supervisor or the Department Chair.

All students must pay a \$50.00 deposit **IN CASH ONLY** and return a signed "New Employee/Student Information Form" **before** they will be given keys.

Please inform CME Reception **BY EMAIL** if you and your supervisor wish to make a desk/room change. Such changes must **NOT** be made without authorization.

Make requests for keys and office assignments **BY EMAIL FIRST** to make sure that you understand the requirements.

2.4 Building Keys

The CME floor & DICE building are locked late each evening and all day on holidays.

The building hours are posted on the main doors.

To permit **access to the CME building**, each student can obtain a key. Submit forms to CME Reception **BY EMAIL**.

The Department **cannot** issue keys for the DICE building. **For access to DICE, refer to the Dean's office reception on the 9th floor.**

2.5 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 [BearTracks](#).

It is also the responsibility of the student to **inform the Department of any changes** to their **immigration status**.

2.6 Code of Student Behaviour

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:

[Code of Student Behavior](#)

Students' attention is drawn in particular to the University's stand on **plagiarism and harassment**.

2.7 Parking and Automobile Regulations

Questions concerning parking privileges and use of automobiles on Campus should be directed to Parking Services [[CLICK HERE](#)].

Their office is located at **1-051 Lister Centre**. **CHECK THE WEBSITE** for office hours.

2.8 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 on required safety certifications will be provided at this seminar.

Please fill out the **Working Alone form** [available on our website](#) and return the signed copy to a Graduate Assistant.

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.**

2.9 Computer and Network Access

After you have finished your registration, it is necessary for you to **complete an [on-line form](#)** to ensure that you will be added to the **department e-mailing lists** and that you will have access to **department computing resources**.

2.10 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. University and Department Services

3.1 Mail Service and Mailboxes

Department mail for students is placed **in a filing cabinet in the room next to reception on the 12th 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 Bill Jones would be placed in file J.)

Mail that does not have a proper mailing address will be placed inside a box (outlined in red) and this mail **will be sent back if unclaimed after one month**.

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.**

3.2 Telephone

Public call boxes are located in various places. Supervisors may also provide a telephone handset in the lab space for students and research staff members to use. The prime purpose of these handsets is to allow convenient contact with local equipment and material suppliers; consequently, personal calls should be kept to a minimum during business / office hours.

3.3 Photocopiers and Fax Machine

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 photocopiers.

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.

3.4 Department Forms

Many of the forms that you will need are available on our website [here](#).

3.5 Office Supplies

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

3.6 Conference Rooms and Projectors

The department conference rooms and the department computer and projector can be **booked** for research meetings and seminars **through your google calendar**.

3.7 Ordering and Shipping Supplies

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

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.**

For any problems with delivery of packages, contact Supply Management Services. When having items shipped to the department, please add at least one full day to your estimated time of arrival for distribution from Supply Management Services.

All forms (i.e.: invoices, indent copies, purchase order copies, shipping forms, etc.) must be given to the department bookkeeper.

Shipping of dangerous goods **must** be done with the supervision of the Department's safety officer.

3.8 Machine and Instrument Shops

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

3.9 Purchasing

Equipment and supplies for teaching or research needs must be requisitioned on either indent forms (for internal university suppliers) or purchase requisition forms (external suppliers). The forms must be approved or signed by staff members with the appropriate signing authority. In all cases, **all financial paperwork must be given to Aneta Thompson**

3.10 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 for more information.](#)

3.11 GSA

The Graduate Students Association (GSA) is located at 1-37 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 see their website](#)

3.12 Housing

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

The Students Union Housing Registry maintains lists of rooms and apartments in the city. For example, [this website](#).

Neither the University nor the Department assumes responsibility for finding accommodation for students; that is the student's responsibility.

3.13 University Student Services

University Student Services is comprised of nine units, which are located in the Students' Union Building:

- Academic Support Centre, Sexual Assault Centre (SAC)
- Career and Placement Services (CaPS)
- Student OmbudService (SOS)
- Native Student Services (NSS)
- Student Counseling Services (SCS)
- Student Financial Aid and Information Centre (SFAIC)
- Services for Students with Disabilities (SSD)
- University Health Centre (UHC).

For more information, [see the Dean of Students website](#).

3.14 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 [online](#).

3.15 University Health Care

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

A pharmacy is located in the SUB and is open Monday – Friday (8:30 am - 4:30 pm).

3.16 Student Counseling Services

Student Counseling Services (SCS) offers **psychological counseling** to current students.

There is **no charge for individual sessions** with counselors.

They provide accessible professional psychological services to students who may be experiencing on-going or situational personal, academic, or career-related difficulties. For more info, [please visit their website](#).

4. Services for International Students

4.1 University of Alberta International Centre

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.

Find their website [here](#).

4.2 International Student Orientation

International students are encouraged to participate in the international orientation seminar held at the International Centre. Please see the website link above for more information.

4.3 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](#)

4.4 Renewing Your Study Permit

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

- [UAlberta Study Permit Extension](#)
- [Canadian Study Permit Extension](#)

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 bring a copy of your payment receipt as well as the Canada Post receipt to a Graduate Assistant. 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.**

5. General Information

5.1 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 northern Edmonton
- South Campus (including the Saville Sports Centre)
- Southgate Mall
- Century Park.

The Edmonton Transportation Services (**ETS**) **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 a U-pass when they receive their ONEcard, which allows use of the ETS systems during the periods September to April. **The U-Pass sticker will be replaced by the U-Pass Arc (Smart Fare) card.** From Aug 25 to mid-Sept, you will be able to use your ONEcard without a sticker, until the Arc card distribution is complete.

Distribution details will be posted [here](#).

5.2 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.

To get health advice or information 24 hours a day, seven days a week, anyone with a health concern can call:

- 811, if phone number is in-province
- 1-866-408-5465, if phone number is out-of-province, or if making an internet call

Find more information [here](#).

5.3 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 will need to enter your banking information and set up Direct Deposit in [BearTracks](#).**

*Direct Deposit Instructions are available [here](#).

6. Organization and Administration of Graduate Programs

6.1 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.

6.2 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.

If flexibility within these requirements is permitted, it is left to the Department of Chemical 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.**

6.3 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 end of the first week of classes. You should consult your graduate advisor 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 [BearTracks web-based system](#).

Please see section 13 of this handbook for further registration information.

If you have any difficulties registering, please see a Graduate Assistant for assistance. **EMAIL FIRST** to book a time or ask a question.

6.4 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 **optional but recommended for MEng students**. Students who miss the attendance requirement for the D.B. Robinson series will be assigned additional work.

Seminar notices will be e-mailed to the department and posted on the departmental website. Notices of interest to graduate students and official notices are posted on the bulletin board at several locations in the department.

6.5 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 Chair (Graduate). 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 made 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 Chair for Graduate Studies. The form for requesting permission is available in the forms cabinet on the CME department's website [here](#).

6.6 Professional Development Requirement

Engineering graduate students must undertake a **minimum 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 this [link](#).

Information on ENG GRAD PD 01 (Faculty of Engineering IDP and 4 hours PD requirement) can be found [here](#).

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:

- [Individual Development Plan](#)
- [Engineering Sessions and Workshops](#)

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

Students can self enroll in this virtual course at this [link](#).

Information on ENG GRAD PD 02 (FGSR 8 hours PD requirement) is available [here](#).

ENG GRAD PD 02 is a **system to track** verifiable Professional Development offered by the Faculty of Graduate Studies and Research (FGSR) conference workshops, NAIT courses, etc. Verifying 8 or more hours of Professional Development activities must be documented in ENG GRAD PD 02.

- [FGSR Sessions and Workshops](#)

Step 3: Completion and Submission to Department

Once students have completed all the activities for both PD 01 and PD 02, they will need to **fill out the completion forms and have them approved**. The completion forms for ENG PD 01 and ENG PD 02 can be found in the [CME Department's forms cabinet](#).

Both forms will need to be approved and signed off. For MEng students this would be their Supervisor/ Career Mentor and also the Graduate Associate Chair. Once signed, the student can then submit the completed PD/ IDP to a CME Graduate Assistant.

M.Sc. or Ph.D students would first have their research/ supervisor to sign before bringing the PD/ IDP Forms to the Graduate Associate Chair. Once signed by both parties, the student can then submit your completed PD/ IDP to a CME Graduate Assistant.

Note that the Individual Development Plan (IDP) must be submitted within 12 months of starting the program for M.Sc. and M.Eng. students, and within 18 months of starting the program for Ph.D. students.

START EARLY.

7. Masters Program

7.1 MSc Program

The requirements for the MSc degree consist of successful completion of **course work**, participation in **seminars**, completion of the **ethics** course ENGG 600, completion of the **professional development requirement**, and a **presentation** of their work at a conference or an equivalent venue.

Note: ENGG 600 is currently (2021-2022) being phased out for INT D 710 and INT D 720. Those enrolled in a Masters Program must take **INT D 710**.

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 procedures for the MSc final oral examination.

All MSc students are also encouraged to take on one Teaching Assistantship or one Grader 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**. At least **two courses must be 600 or higher level courses in the Department of Chemical and Materials Engineering**.

The **remaining two courses must be at the 500 or higher level in the Faculty of Engineering**, or at the **400 or higher level in a Science Department**.

Students in Materials Engineering and Welding Engineering must take MAT E 640, which counts as one of the 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 Chair (Graduate).

7.2 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 (ENGG 600)**.

Note: ENGG 600 is currently (2021-2022) being phased out for INT D 710 and INT D 720. Those enrolled in a Masters Program must take **INT D 710**.

The MEng minimum course requirement is **four courses plus the ethics course**. At least **two courses must be 600 or higher level courses in the Department of Chemical and Materials Engineering**.

The **remaining two courses must be 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 Chair (Graduate).

In addition, students must fulfill the **professional development requirement**.

Under normal circumstances, it should be possible to complete the project within four to six weeks of concentrated work.

The **capstone 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.

Under normal circumstances, it should be possible to complete the project within four to six weeks of concentrated work.

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 topic, 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 Chair for Graduate Studies). **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 5000 and 10000 words.
- The report is to be written in 12 point font (Arial/Calibri/Times New Roman) with double line spacing and 1 inch margins all around.
- Ideally, the front portion of the report would have:
 - an executive summary
 - a table of contents
 - a list of figures/tables
 - nomenclature/definitions.
- The main body of the report would include:
 - an introduction

- a literature review/foundational information
- a problem statement
- a methods section
- results and discussion
- conclusions/recommendations
- references

For easy reference, save this outline in a separate document.

8. PhD Programs

The requirements for the PhD degree consist of successful **completion of course work**, participation in **seminars**, completion of the **ethics** course ENGG 600, and completion of the **professional development requirement**.

Note: ENGG 600 is currently (2021-2022) being phased out for INT D 710 and INT D 720. Those enrolled in a PhD Program must take both **INT D 710 and INT D 720**.

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). 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 final oral examination.

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

8.1 Course Work

The minimum course requirement is **six one-term courses** plus the **ethics** course (ENGG 600) and **CME 600** (Introduction to research methods).

Note: ENGG 600 is currently (2021-2022) being phased out for INT D 710 and INT D 720. Those enrolled in a PhD Program must take both **INT D 710 and INT D 720**.

CME 600 must be taken by PhD students in their **first year** in the program.

At least three courses must be 600 or higher level courses in the Department of Chemical and Materials Engineering.

The **remaining courses must be at the 500 or higher level in the Faculty of Engineering**, or at the **400 or higher level in a Science Department**.

Students in Materials Engineering must take MAT E 640, which counts as one of the three 600 level courses.

Reading courses will not count towards the total course requirement.

The final course program for such students must be approved in writing by the supervisory committee and is subject to final approval by the Associate Chair for Graduate Studies.

8.2 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 Chair (Graduate) 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 form should be submitted 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, an exemption exceeding two courses may be granted, however, **in all cases at least two graduate courses must be taken at the University of Alberta.**

The final decision will rest with the Associate Chair for Graduate Studies.

8.3 Candidacy Examination

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:

- A. The Candidacy Examination **must be held within 16 months of initial registration** in the PhD program for full-time students.
 - a. **Part-time** PhD students must complete the Candidacy Examination successfully by **3 years** of initial registration.
 - b. A different (shorter) deadline will be imposed in cases where the student has entered the doctoral program through a change of category from a Masters program in the CME Department (see below).
 - c. 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.
 - d. **Students failing to meet the deadline** without compelling extenuating circumstances may also be **required to convert to the MSc program**.

- B. **Full-time** PhD students shall submit a copy of a **Research Proposal within 13 months** of initial registration. The Associate Chair for Graduate Studies 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 the 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 must 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 must 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 Chair for Graduate Studies**.

A student who wishes to be admitted directly into a **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
- Do not exceed 20 pages (excluding the table of contents and list of references)
- It is highly recommended to include:
 - sections on motivation
 - background/literature review
 - hypothesis/objectives
 - methods
 - results
 - proposed work.

For easy reference, save this outline in a separate document.

9. Thesis Formatting Guidelines

The FGSR **minimum** thesis formatting guidelines are available [here](#).

These are applicable to all theses (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 is 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.

For easy reference, save these requirements in a separate document.

10. Course Inclusion and Exclusion

10.1 Course Exclusion List (all programs)

Regardless of any other statement made within this document, the courses in the following list **will 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 the final approval of the Associate Chair for Graduate Studies**.

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

10.2 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 662
- ECE 664
- ECE 665
- ECE 760
- 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.

11. 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:

11.1 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.

If a failed course is repeated or replaced by an alternate course, then the repeated or replaced grade is used 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**.

11.2 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.

11.3 Satisfactory Research Performance

Graduate students are expected to maintain satisfactory research performance whether they are appointed as graduate research assistants or through a graduate research assistantship fellowship. **The graduate student assistantship Collective Agreement specifies the procedure for dealing with unsatisfactory performance.**

For information about the Collective Agreement, contact the Graduate Student Association (GSA).

12. 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. Your appointment in the Department as a graduate student is a full-time responsibility. 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 \$22,000 per annum for Canadian citizens/permanent residents and \$25,000 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 \$35,000 per annum (for Canadian citizens/permanent residents) or \$38,000 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
- Grading Assistantships
- Scholarships
- Supervisor Support

It is the responsibility of the student to report all scholarships received to the Graduate Assistants.

12.1 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, detailed below.

12.2 Graduate Assistantships

At the time of writing of this document, graduate assistantships include graduate teaching assistantships (GTAs), graduate research assistantships (GRAs) and graduate research assistantship fellowships (GRAFs).

Definitions and duties for each of these are laid out in the GSA [Graduate Student Assistantship 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), including TA and Grader appointments, 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.

Graders/markers are primarily responsible for marking assignments in a timely fashion and maintaining a grade book for the recording of marks.

The specific responsibilities for TA and Graders for each course are determined at the beginning of the term by the faculty instructor.

The appointment is usually for one academic term, and exceptional students may be offered additional teaching assistantships for subsequent terms.

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.

13. Registration

All **full-time** students must register **9 credits in each of the Fall & Winter** terms and register **6 credits in Spring/Summer** until they finish their degree.

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 the FGSR with a memo from the Department requesting that this course be added to the student's 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**.

14. 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.

Students admitted after September 2006 must take and pass the course **ENGG 600**. This course is offered in the Fall/Winter terms and is worth 0.5 CR.

ENGG 600 is currently (2021-2022) being phased out, and will be unavailable as of Spring 2022. To maintain registration and program requirements, **enroll in the new ethic courses INT D 710 and INT D 720**.

Students registered in a **Masters Program** only need to take **INT D 710**. Students registered in **PhD Program** need to enroll in **both INT D 710 and 720**.

15. Professional Engineer (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 [APEGA website](#).

Please note: Completing your MSc or PhD degree does not guarantee that you have met all the requirements for PEng status.

It is important to read the APEGA website to acquire information about all the requirements.

16. Copies of Thesis

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

Theses are to be **submitted in electronic form** following the **rules posted on the FGSR website.**

Instructions regarding thesis format and methods of thesis reproduction are available on the FGSR website [here](#).

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

17. 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 CME Reception**. After an inspection of your assigned space is completed, the key deposit will be returned.

Please note that it is your responsibility to ensure that your assigned space is left clean for the next occupant.