



Materials Science & Engineering  
UNIVERSITY OF TORONTO

# MSE GRADUATE STUDENT HANDBOOK 2020-2021

## **Special note for 2020-2021**

This handbook provides easy access to information policies and protocols unique to MSE under normal circumstances. No modifications have been made to adjust for changes due to COVID-19 as these will likely be modified throughout the 2020-2021 academic year. Regular updates on COVID-19 measures will be released by SGS and the MSE department.



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## **MSE GRADUATE STUDENT HANDBOOK 2020-21**

The University of Toronto provides a multitude of resources for students, all of which can be found through various UofT websites. On campus there are a variety of resources, including academic support, financial advice, health care services, career services, many student groups and more for all students.

An MSE student handbook is also available on our website for MSE students only. The student handbook is intended to provide easy access to information, policies and protocols which are unique to MSE. This handbook is not intended to replace or duplicate information provided in the School of Graduate Studies (SGS) official annual online calendar (<https://sgs.calendar.utoronto.ca/>). Also, it does not override or supercede the University's official policies and regulations. The MSE student handbook is a work-in-progress and is eligible for continual updates as needed; at any time students are welcome to contact the Graduate Program Counsellor & Administrator ([mse.grad@utoronto.ca](mailto:mse.grad@utoronto.ca)), with suggestions for topics to be included or clarified.

1<sup>st</sup> edition 2019-2020: compiled by Maria Fryman; approved by Uwe Erb.

2<sup>nd</sup> edition 2020-2021: updated by Uwe Erb



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## 1. MSE FACULTY, STAFF & STUDENT ASSOCIATION

### 1.1 MSE Executive



Professor Glenn Hibbard  
**Professor & Chair**  
[glenn.hibbard@utoronto.ca](mailto:glenn.hibbard@utoronto.ca)



Professor Benjamin Hatton  
**Associate Professor & Associate Chair, Graduate Studies**  
[benjamin.hatton@utoronto.ca](mailto:benjamin.hatton@utoronto.ca)



Professor Mansoor Barati  
**Professor & Associate Chair, Undergraduate Studies**  
[mansoor.barati@utoronto.ca](mailto:mansoor.barati@utoronto.ca)

### 1.2 Administrative & Advisory Staff

#### Staff Member



Fanny Manousos  
Director of Administration  
[f.strumas@utoronto.ca](mailto:f.strumas@utoronto.ca)



Jessica Barnes-Burley  
Department Assistant  
[materials.engineering@utoronto.ca](mailto:materials.engineering@utoronto.ca)



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Susset Munoz Perez  
Graduate Program Advisor &  
Administrator  
[mse.grad@utoronto.ca](mailto:mse.grad@utoronto.ca)



Sabrin Mohamed  
Undergraduate Program Advisor  
[sabrin.mohamed@utoronto.ca](mailto:sabrin.mohamed@utoronto.ca)

**1.3 Technical Staff**

Staff Member		Responsibilities
	<p>Raiden Acosta Engineering Technologist <a href="mailto:raiden.acosta@utoronto.ca">raiden.acosta@utoronto.ca</a></p>	<p>Manages/supervises the Walter Curlook Laboratory which houses a range of analytical &amp; process study instruments including X-ray Diffractometer, ICP-OES, TGA-DTA-DSC Analyzer (STA) &amp; Laser Particle Size Analyzer</p>
	<p>Sal Boccia Engineering Technologist <a href="mailto:s.boccia@utoronto.ca">s.boccia@utoronto.ca</a></p>	<p>Manages/supervises the electron microscopy section of the OCCAM Lab</p>



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Dan Grozea  
Teaching Laboratory  
Technologist  
[d.grozea@utoronto.ca](mailto:d.grozea@utoronto.ca)

Coordinates/supervises activities in the Undergraduate Teaching Laboratories and is present during practical sessions to assist with complex experiments & to monitor equipment use

## 1.4 MSE Professors

Contact details for professors can be found on the MSE website: <https://mse.utoronto.ca/faculty-staff/professors/>

## 1.5 MSE Graduate Student Association (MSEGSA) - members

Contact: [msegsa@ecf.utoronto.ca](mailto:msegsa@ecf.utoronto.ca)

### 2019-20 MSEGSA Executive

President: Michel Haché  
Vice President: Jonathan Kong  
Treasurer: Zhiying Liu  
CUPE Representative: Nahid Molaei  
GSU Representatives: Chinmay Somvanshi  
Vikramaditya Tunukoju Venkatapuram  
Student Wellness Representative: Anita Valipourkoleti

## 2. ACADEMIC SUPPORT

### 2.1 MSE Graduate Program Advisor & Administrator

Graduate Program Advisor & Administrator's door is always open. If you have any kind of concern - academic, financial, personal, etc. - Graduate Program Advisor & Administrator is here to listen. If s/he doesn't have an appropriate response, s/he will find the correct contact for you.

Graduate Program Advisor & Administrator, WB140, [mse.grad@utoronto.ca](mailto:mse.grad@utoronto.ca)

### 2.2 Campus Resources

In addition to support available within the department, there are various programs offered through SGS and other groups. Visit the SGS website:





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<http://www.sgs.utoronto.ca/currentstudents/Pages/default.aspx>

## 2.3 Health & Wellness Resources

The following link takes you to: Accessibility Services, Academic Success Centre, Career Centre, Counseling & Psychological Services, Family Care Office, First Nations House, Centre for International Experience, Multi-Faith Centre, Student Housing Service and more.  
<http://www.sgs.utoronto.ca/gradlife/Pages/default.aspx>

## Mental Health Community Resources

- UofT Health & Wellness: 416-978-8030
- Good2Talk Helpline: 1-866-925-5454
- Assaulted Women's Helpline: 416-863-0511
- Gerstein Crisis Centre: 416-929-5200
- Toronto Distress Centre: 416-408-4357
- Drug and Alcohol Helpline: 1-800-565-8603
- CAMH (Center for Addiction & Mental Health) 250 College Street

## 2.4 Time Off

**Leave of Absence - for details refer to the SGS Calendar:**

<https://sgs.calendar.utoronto.ca/general-regulations#6>

**Vacation** - Sometimes MASc/PhD students have enquired about vacation time allowed. MSE does not have scheduled summer breaks. However, if you feel that you must take a short absence, please discuss this with your supervisor.

## 2.5 Intellectual Property

Intellectual property issues should be understood within the framework of research policies of the University of Toronto. Graduate students and their supervisors should be aware of these policies and ensure that they are engaged in research in a manner consistent with those policies. Relevant information can be found here:

<http://www.sgs.utoronto.ca/currentstudents/Pages/Intellectual-Property.aspx>

## 2.6 Supervision – What to expect

SGS provides guidelines for graduate supervision; this document outlines the responsibility of the students and supervisor/s: <http://www.sgs.utoronto.ca/Documents/Supervision+Guidelines.pdf>. If



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you have concerns or issues which you would prefer not to discuss with your supervisor, you are encouraged to speak with the MSE Graduate Program Counsellor & Administrator, or Professor Hatton, MSE Graduate Chair. All communications are treated with respect and confidentiality.

## 2.7 Professional Skills and Career Planning

The **Graduate Professional Skills (GPS) Program**, an initiative of the School of Graduate Studies, is designed to help all graduate students become fully prepared for their future.

<http://www.sgs.utoronto.ca/currentstudents/Pages/Professional-Development.aspx>

**Grad PACS** is an initiative to support PhD, MASc and MEng students to identify career pathways to launch their career planning early in their degree.

<https://gradstudies.engineering.utoronto.ca/gradpacs/>

## 2.8 Writing Support

The **Graduate Centre for Academic Communication (GCAC)** provides graduate students with advanced training in academic writing and speaking. These programs are free. Workshops, courses and one-on-one writing consultations are available. Visit their website:

[www.sgs.utoronto.ca/gcac](http://www.sgs.utoronto.ca/gcac)

The Faculty of Applied Science and Engineering also offers a series of **Graduate Scientific Writing Courses**. These courses are offered at both the English as a Second Language (ESL) and English as a First Language (EFL) levels. There is a fee of \$100 which may be covered by your supervisor. Details of the courses here: <http://gradstudies.engineering.utoronto.ca/research-degrees/graduate-scientific-writing-courses/>.

## 3. ADMINISTRATIVE INFORMATION & PROCEDURES

### 3.1 Booking a Room and Equipment

Visit <https://mse.utoronto.ca/services/bookings/> to determine availability of rooms & equipment for events, exams and meetings. Then book through Jessica at our front desk. You can do this in person or by email. Be sure to tell her why the room is needed.

### 3.2 Business Cards

To facilitate effective networking and professional practice, MSE students may request limited quantities of complimentary business cards when **confirmed** to attend an event of a professional nature in the near future. Allow at least 1 week for processing. Apply for cards through the MSE website: <http://mse.utoronto.ca/current/career-development/student-business-cards/>



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### 3.3 Change of Address - Moving?

To ensure continued payment of stipends/awards, if you move during the school year (or in the summer between years), you must update both your mailing and permanent addresses in ACORN. You must update this information even if your payments are deposited directly to your bank account.

### 3.4 Email

Since UofT uses email as an official form of communication, all students are required to have a university-issued (UTOR) email account and to provide that email address on ACORN. Students are required to monitor and retrieve emails on a frequent basis. The University regularly uses email to deliver official correspondence regarding such matters as your program, scheduling, fees, etc. For more information, refer to the Policy on Official Correspondence with Students at: <http://www.governingcouncil.utoronto.ca/policies/studentemail.htm>

### 3.5 IT Support

If you require IT assistance/support for UofT-owned equipment consult with Jessica at the front desk.

### 3.6 Keys & Fobs

Students who require keys/fobs for their offices, labs or building access must download a request form from the MSE website: <http://mse.utoronto.ca/current/forms/> Complete the form and acquire your supervisor's signature. Submit the form plus a \$60.00 (refundable) deposit to Jessica who will then provide you with keys/fobs as requested. *Note: if you have not yet completed & passed the requisite Safety Training, keys/fobs will not be issued.*

**Fob** – Your fob must be frequently tapped on the hot spot beside WB158. If your fob stops working, try tapping it on the hot spot before consulting with Jessica.

### 3.7 Mailboxes for Hardcopy Mail

Professor's mailboxes are located in WB140, outside the Graduate Program Counsellor & Administrator's office. Students are not expected to receive personal mail but if any should arrive it is placed on the bookshelf near the mailboxes. Students should have personal mailed directed to their residences.

### 3.8 Purchase Orders & Deliveries

#### 3.8.1 Orders under \$5000 CAD

To purchase items that total under \$5000 CAD, download and complete, in full, a Departmental Purchase Order from the MSE website (<https://mse.utoronto.ca/current/forms/>). Your



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Supervisor/Professor must then sign the form as the authorized approver and provide relevant account numbers that will be charged for your purchase. When the form is complete, submit it to the front desk in WB140; the order is then placed on your behalf.

Once the order has arrived, you will be notified by email and you must then immediately come to WB140 to pick up your item and sign off on the packing slip to complete the order. The invoice is then processed by the main office and payment is issued to the vendor.

### **3.8.2 Orders over \$5000 CAD**

To purchase items that total over \$5000, request a Formal Purchase Order from Fanny Manousos; and, provide documentation of 2 additional quotes for the item you wish to buy. Before a Formal Purchase Order is created, you must provide confirmation from your Supervisor/Professor as the authorized approver and provide relevant account numbers that will be charged for the purchase.

Once the order has arrived, you will be notified by email and must then immediately come to WB140 to pick up your item and sign off on the packing slip to complete your order. The invoice is then processed by the main office and payment is issued to the vendor.

### **3.8.3 Items not ordered through the front desk**

Personal items are not to be delivered to the front office. However, if research-related items which have not been ordered through Jessica are delivered to the office note that tracking these purchases is your responsibility.

### **3.9 Reimbursements**

Information regarding expense claims can be found by accessing the following link:

<https://mse.utoronto.ca/faculty-staff/forms/>

Prior to attending a conference/meeting, please see Fanny Manousos, Director of Administration, WB 140, for documentation required to submit a claim.

### **3.10 Safety Training (Mandatory)**

This requirement is strictly enforced. In order to work in labs, hold TA positions or acquire keys/fobs, initial safety training is mandatory for MASc and PhD students. Training is also mandatory for those MEng students working on projects which require time in a lab. All students who take the training must pass the training exam. The passing grade is 70%.

Speak with Fanny in the front office regarding training.



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### 3.11 Software

You may be eligible for some free software. Check here for details:  
<https://onesearch.library.utoronto.ca/ic/available-software>

### 3.12 Student Groups

#### 3.12.1 University of Toronto Education Workers – CUPE3902 Unit 1

For information about your UofT teaching assistant employee union, including benefits, training, documents and bargaining visit this website:

<https://cupe.ca/local/cupe-3902-university-toronto-unit-1-tas>

#### 3.12.2 University of Toronto Graduate Student Union (UTGSU)

16 Bancroft Avenue

415 978-2391

<https://www.utgsu.ca/>

Your student union administers health & dental benefits and is an advocate and voice for the graduate student body on various University committees.

#### 3.12.3 MSE Graduate Student Association (MSEGSA) - responsibilities

Contact: [msegsa@ecf.utoronto.ca](mailto:msegsa@ecf.utoronto.ca)

Members of Executive identified here 1.5.

Materials Science & Engineering Graduate Student Association (MSEGSA) is a student-run organization that is committed to enhancing the graduate school experience for students in the MSE department. Activities and events such as weekly coffee breaks, summer barbecue and department lunches create a family-like atmosphere for hardworking graduate students. We aim to build strong bonds between prospective students, current students, and alumni through our active support of department seminars and professional events. MSEGSA encourages all MSE graduate students to further develop their own leadership and professional skills through engagement in school initiatives across the campus.

### 3.13 Transcripts

Official transcripts are ordered through ACORN or the University Transcript Centre (<https://transcripts.utoronto.ca/>). Unofficial transcripts can be downloaded from ACORN. When applying for awards/scholarships sometimes official transcripts are required but sometimes unofficial transcripts will suffice. Pay attention to application requirements.



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## 3.14 Wireless Internet Access

UofT's wireless network listed as "UofT" is available throughout the campus. Access using your UTORid.

"Eduroam" service is available for visiting academics from other universities. Visiting academics can use eduroam to connect to the UofT network using their home university credentials.

## 4. FINANCIAL INFORMATION

### 4.1 Deferral of Fees

You may request to register without payment (i.e. make a fee deferral) through the [Student Web Services \(ACORN\)](#) if you have no outstanding fees from a previous session and are the recipient of one of the following which exceeds the Minimum Payment to Register amount on your [Student Web Services \(ACORN\)](#) invoice:

- Ontario Student Assistance Plan (OSAP) loan
- Other provincial government loan
- US government loan
- University funding package (major award, research stipend or teaching stipend)

Students who are not receiving loans or a university funding package, but have proof of university funding (TA, RA, major award, etc.) which exceeds the Minimum Payment to Register may request a fee deferral by submitting the [Register Without Payment \(Fee Deferral\) form](#) to the Graduate Program Counsellor & Administrator.

If you are registering late, you must complete the online late registration form and online payment [here](#). You will be charged a late registration fee of \$44.00 in order to register.

### 4.2 Funding

MASc – guaranteed funding for 2 years; self-funding is not allowed – for details visit <https://mse.utoronto.ca/current/graduate/tuition/>

MEng – no funding is provided; all tuition & related costs are the student's responsibility

PhD – guaranteed funding for 4 years; self-funding is normally not allowed – for details visit <https://mse.utoronto.ca/current/graduate/tuition/>

### 4.3 Scholarships

Throughout the year various scholarship and award competitions are announced. Note that most opportunities are for MASc and PhD domestic students only.



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MSE top-ups for NSERC/OGS/other scholarship recipients – for details visit:  
<https://mse.utoronto.ca/current/graduate/tuition/>

## 4.4 Teaching Assistantships (TA)

MSE TA positions are open to MASC & PhD students; they are not open to MEng students.

Fall TA positions are typically posted in July; positions are assigned by August. Winter TA positions are typically posted in October; positions are assigned in November. Jobs are posted on the MSE website, the CUPE3902 Unit 1 Job Postings website and an email is issued to all MSE MASC/PhD students. All TA positions assigned are administered in accordance with the CUPE3902 collective agreement [http://agreements.hrandequity.utoronto.ca/#CUPE3902\\_Unit1](http://agreements.hrandequity.utoronto.ca/#CUPE3902_Unit1)

## 5. PROGRAM INFORMATION

### 5.1 500 Series Courses

MEng students may take a maximum of 2. MASC/ PhD students may take a maximum of 1. These are the only undergraduate level courses graduate students may take.

### 5.2 Adding/Dropping Courses

Be mindful of these deadlines. It is unlikely that you would be allowed to add a course after the add deadline date.

If you wish to drop a course, do so immediately. SGS will **NOT** allow anyone to drop a course after the drop deadline.

September 21, 2020	last date to add a Fall term course
October 26, 2020	last date to drop a Fall term course
January 18, 2021	last date to add a Winter term course
February 22, 2021	last date to drop a Winter term course

### 5.3 Auditing

The decision to permit a student to audit rests with the department and the course instructor. An auditor will not receive evaluations of participation and will not be allowed to submit assignments or write examinations/tests. Audited courses are not recorded on the student's official transcript. Students who wish to receive a Certificate of Attendance must accordingly notify the instructor in writing at or before the first meeting of the class, otherwise the faculty, school, or college is under no obligation to issue a certificate.



## 5.4 Failed Courses

To be in good academic standing, a student registered in a degree program (MAsc, MEng, PhD) in the School of Graduate Studies must:

- comply with the General Regulations of the School of Graduate Studies as well as with the Degree Regulations and program requirements governing that degree program; and,
- make satisfactory progress towards the completion of the degree

Satisfactory performance in a degree program requires the completion of every course taken for graduate credit with a grade of at least a B- (70%). If a student fails to complete a graduate course in a satisfactory manner (i.e., receives a grade report of FZ or NCR), then the graduate unit in which the student is registered may recommend to the School of Graduate Studies the termination of registration and eligibility of that student. If the student is permitted to continue, he/she must successfully repeat the relevant course, or an alternative course recommended/approved by the graduate unit and the School of Graduate Studies.

Note that failed grades (FZ) remain on the transcript and are never removed.

## 5.5 Graduate Research Seminars – MSE1000 (MAsc) & MSE2000 (PhD)

### 5.5.1 Attendance

Attendance and participation at the weekly Seminar is mandatory for MAsc & PhD students. Attendance is recorded. If you are unable to attend a Seminar send an email to the Graduate Program Counsellor & Administrator to briefly explain the reason for your absence.

In the summer, just prior to the new academic year, the seminar presentation schedule for the upcoming fall and winter terms will be available for sign-up. When signing-up, students must confirm supervisor's availability.

MEng students are welcome and encouraged to attend the Seminars but attendance is neither mandatory nor recorded.

All in attendance are encouraged to ask questions of the presenter and to complete the Feedback forms.

### 5.5.2 Your Presentation

On the Friday before your presentation, the Graduate Program Counsellor & Administrator will request a written abstract which will be distributed to the MSE community. At that time you will also be provided with details regarding coffee pick-up for your presentation day.





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Your presentation, with PowerPoint, should be approximately 20 minutes long with about another 10 minutes for Q & A. The attending professors will evaluate & grade your presentation and an averaged grade, with anecdotal comments, will be provided to you the following week.

MASc students present once. PhD students present twice. The only exception to this is by-passed MASc students who continue to research the by-pass topic at the PhD level.

## **IBBME-MSE Students**

If you are registered in MSE, you must take at least 1 MSE course and attend the weekly MSE Seminar – no negotiation will be considered.

## **6. International Students**

### **6.1 Study Permit (MASc/MEng/PhD)**

You are required to have an appropriate, valid study permit throughout your studies at UofT. You cannot be on campus without a valid study permit. If your study permit expires, immediately consult with the Immigration Advisor at UofT's Centre for International Experience <http://www.studentlife.utoronto.ca/cie>. Be sure to bring your study permit to the front office so that both the Graduate Program Counsellor & Administrator and Fanny can take photocopies for the files.

### **6.2 Legal Status (including IVGS – International Visiting Graduate Students)**

If you have any questions regarding your legal status in Canada or your study permit, consult with the Immigration Advisor at UofT's Centre for International Experience.

## **7. MSE DEGREE PROGRAM REQUIREMENTS**

### **7.1 Master of Engineering (MEng)**

#### **7.1.1 MEng Registration Options**

MSE offers three registration options for the MEng program. Applicants must select a registration option at the time of application.

##### **7.1.1.1 Part-time Option #1:**

- September or January start
- Students take a minimum of three years to complete the program
- Students may take a maximum of six years to complete the program
- Maximum course load is two courses per term, four per year (can be over three terms)



#### 7.1.1.2 Full-time Option #2:

- September or January start
- Students can complete program in just one year
- Students may take a maximum of three years to complete the program
- Students enrol in 10 courses (or, 7 courses + project) per year, over three terms
- Once registered as regular full-time, students cannot transfer to the extended full-time option

#### 7.1.1.3 Extended Full-time Option #3:

- September or January start
- Students complete the program over two years
- Students may enroll in a maximum of 6 courses per year, over three terms (maximum course load per term is 3)
- Tuition is paid over two years (half tuition in first year and half in second year)—note that full incidental fees must be paid each year
- Once registered in the extended full-time MEng, students cannot transfer to the regular full-time option

### 7.1.2 MEng Program Options

MSE offers 2 program options.

#### 7.1.2.1 Course-Only Option

The normal program, a course-only option, includes 5.0 FCE (10 half courses). An advisor is not required for this option.

#### 7.1.2.2 Course + Project Option

An MEng project may be substituted for 1.5 FCE (3 half courses). A student following this *course+project option* works in consultation with a professor who acts as an advisor throughout the student's program. Please refer to our MEng projects list on our website for more information. Also note that some professors offer additional projects which are not listed here.

Many students choosing this option tend to take courses in the first term and then start a project in the subsequent term. A project cannot be sufficiently completed in a single term; it will take 2 – 3 terms to complete. Finally, if completing a project, the minimum of 3 MSE courses must still be fulfilled.



### 7.1.3 Master of Engineering (MEng) MSE Program Requirements

Half-course requirements	Minimum # of required MSE courses	Project course equivalents	Non-technical courses (e.g. ELITE) allowed	500-level courses allowed
10	3 half-courses	3 half-courses	4 half-courses (max.)	2 half-courses (max.)

Of the 10 courses required, a minimum of 1.5 Full-Course Equivalents (FCE), or 3 half courses, must be taken from courses offered by MSE. *If completing a project, the minimum of 3 MSE courses must still be fulfilled.*

The passing grade for each course is a minimum of B- (70%). If a course is failed, the student must repeat the course or take another in its place. If the student fails a second time or a second course is failed, MSE may choose to terminate the student’s registration. Note: all courses taken, failed and passed, remain on the official transcript.

A maximum of 2.0 FCE (four half courses) can be taken from various non-technical certificate programs, such as ELITE (Entrepreneurship, Leadership, Innovation, & Technology in Engineering), Globalization, or Engineering & Public Policy, etc.

MEng students are welcome to attend the weekly Graduate Research Seminar but attendance is not mandatory.

*\*If a student should want to take a technical course, not available through APSC, from a non-engineering department this may be allowed after consultation with the Graduate Chair or Graduate Counsellor. With approval, a maximum of 2 technical, non-engineering graduate level courses may be allowed.*

**Funding** – there is no funding or scholarship available for this program.

**Teaching Assistantships (TA)** are not available to MEng students.

### 7.1.4 Transfer from MEng to MASc

Subject to meeting **all** of the following criteria, transferring from the MEng program to the research-stream MASc program may be permitted:

- The request to transfer must be submitted at the beginning of the second term of enrolment. For example, students enrolled in September would be allowed to make this request early in January.
- Successful completion of 1.5 FCE technical courses (at least one of which must be from MSE) with an equivalent entrance average required for the MASc degree (i.e. B+ or 78%) must be achieved within the first term of enrolment.



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- A supervisor must be willing to provide funding for an MASc research project starting in the second term of enrolment.
- Technical courses taken during MEng will be credited toward MASc.
- *Note:* there is only a single window of opportunity to transfer. If transfer is not possible after your first term, then you complete your MEng program to graduate with an MEng degree.
- *Note:* if 7 or more courses, without a project, have been completed then transfer to MASc will not be allowed.

## 7.1.5 MEng Cross-Disciplinary Areas of Study & Emphasis

In addition to our three graduate degrees, the Faculty of Applied Science & Engineering also offers cross-disciplinary areas of “emphasis”:

- Advanced Manufacturing
- Advanced Water Technologies & Process Design
- Entrepreneurship, Leadership, Innovation, & Technology in Engineering (ELITE)
- Engineering & Globalization (Global)
- Forensic Engineering
- Sustainable Energy

Additional information about MEng areas of study & emphasis can be found on the U of T Engineering Graduate Studies website.

## 7.1.6 Computer Facilities for MEng Students

Computer Labs available– GB144, GB150, GB158, WB255, SF1012/1013/1106 – with limited printing capability (If you encounter difficulty accessing labs, go to the ECF office, EA212, 2<sup>nd</sup> floor of the Annex Building.)

Check lab schedule/status, print quotas here: <https://ssl.ecf.utoronto.ca>



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## 7.2 Master of Applied Science (MASc)

### 7.2.1 MSE Program Requirements & Time for Completion

The MSE MASc program of study normally includes:

- 1.5 FCE (3 half-courses, graduate level), plus mandatory attendance at the weekly Graduate Research Seminar. A minimum of 1 course must be chosen from the MSE course offerings. (A maximum of one 500-series course is allowed. Non-technical courses will not be credited to your MASc degree.) *\*If a student should want to take a technical course, not available through APSC, from a non-engineering department, it is allowed with the supervisor's written approval. A maximum of one is allowed.* The passing grade for each course is a minimum of B- (70%). If a course is failed, the student must repeat the course or take another in its place. Note: all courses taken, failed and passed, remain on the official transcript.
- One presentation at the Graduate Research Seminar
- Graduate Ethics Seminar
- Safety training (annual refresher training if deemed appropriate)
- A written thesis\* plus an oral defense.

*\*The thesis is based upon research carried out in the Department. The thesis must be presented at an oral examination.*

MASc candidates typically take between two to three years (6 sessions) to complete the requirements of the degree. Only full-time study is available.

When you are ready to schedule your MASc defense, book a room with Jessica and provide the Graduate Program Counsellor & Administrator with: date, time, location, thesis title and committee member names. **SUBMIT YOUR THESIS/DRAFT TO COMMITTEE NO LESS THAN 3 WEEKS PRIOR TO SCHEDULED EXAM DATE.**

Once you have successfully defended and any required corrections have been completed and approved by your supervisor, advise the Graduate Program Counsellor & Administrator so that she can prepare a Degree Recommendation to be submitted to SGS.

Submit your final approved thesis to SGS in accordance with the instructions provided on the SGS website. *Note that when uploading thesis for SGS the length of the Master's Abstract cannot exceed 150 words.* In addition, please provide one electronic copy to the Graduate Program Counsellor & Administrator and one hardbound copy (see samples in outer MSE office).



**7.2.2 By-pass from MASc to PhD – MSE POLICY**

*In exceptional cases, and in consultation with your supervisor, a by-pass from MASc to PhD may be possible.*

- A student who intends to by-pass from the MASc program to the PhD program must declare interest, in writing, to the Graduate Program Counsellor, no later than 12 months from the date of initial registration in the MASc program.
- The by-pass examination should be completed within the first 12 months of initial registration; however, with the approval of the Graduate Chair, this may be extended to no later than 15 months from the date of initial registration.
- In order to by-pass, a student must successfully complete 1.5 FCE (3 half- courses) graduate level courses with an overall average of “A” within 12 months of initial registration.
- Students who successfully by-pass from the MASc to the PhD program will then be required to take one more graduate (0.5) level course, in addition to completing the remaining PhD program requirements.
- Failure to successfully complete the by-pass examination within this timeline requires the student to complete the MASc thesis and subsequently apply to the PhD program in accordance with the standard application procedure.
- Note: the By-pass exam is also the Qualifying Exam.

**7.2.3 Exam Committee Memberships**

COMMITTEE	MINIMUM #	NOTES
MASc Defense	3	Includes supervisor (in case of co-supervision minimum is then 4).
MASc Bypass	3	Includes supervisor. One member may be from another graduate UofT department.

**7.3 Doctor of Philosophy (PhD) MSE PhD**

**7.3.1 Program Requirements & Time for Completion**

The MSE PhD program of study normally includes:



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- 1.5 FCE (3 half-courses) or 2.5 (5 half-courses if admitted via direct-entry), plus mandatory attendance at the weekly Graduate Research Seminar. A minimum of 1 course must be chosen from the MSE course offerings. The passing grade for each course is a minimum of B- (70%). If a course is failed, the student must repeat the course or take another in its place. Note: all courses taken, passed and failed, remain on the official transcript. *\*If a student should want to take a technical course, not available through APSC, from a non-engineering department this is allowed with the supervisor's written approval. A maximum of one is allowed. Non-technical courses will not be credited to your PhD degree.*
- Two presentations at the Graduate Research Seminar (see 5.5.2 for additional details)
- Graduate Ethics Seminar (if already taken while MAsc this requirement is waived)
- Safety training (annual refresher training if deemed appropriate)
- Qualifying Exam (to be completed within 12 months of your original registration in PhD)
- A written thesis based upon research carried out in the department.
- Departmental (internal) oral defense
- Final Oral Defense at SGS

PhD candidates typically take between four to six years to complete the requirements of the degree. Only full-time study is available.

### 7.3.2 PhD Qualifying Examination

*The PhD Qualifying Exam must be scheduled within 12 months of your initial registration in the PhD program. This is also the first Advisory Committee meeting.*

- In order to take this examination, you must have completed all required coursework, second Graduate Seminar excepted. *(This is an SGS Candidacy requirement.)*
- You must schedule and successfully complete the qualifying examination within 12 months of initial registration in the PhD program. **SUBMIT YOUR REQUEST TO SCHEDULE YOUR QUALIFYING EXAM, VIA EMAIL, TO THE MSE ASSOCIATE CHAIR, GRADUATE STUDIES. INCLUDE THE NAMES OF PROPOSED MEMBERS OF YOUR COMMITTEE.** If you have a single supervisor, you require 2 additional members with full SGS status. If you are co-supervised, then you still require 2 additional members with full SGS status. This committee must be approved by the associate chair **PRIOR** to scheduling the exam.
- Upon approval, schedule an exam date with your committee members and book a room through Jessica. Then email the exam details (member names, research/thesis title, date, time & location of exam) to the Graduate Program Counsellor & Administrator (mse.grad@utoronto.ca).



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- You must prepare a short report (25-30 pages) on your research progress to date; circulate this to your committee at least three weeks in advance of the scheduled examination. Failure to provide suitable documentation in a timely fashion may result in postponement or cancellation of the Qualifying Examination.
- You must also prepare a short (20-25 min.) presentation that summarizes your research project, with particular emphasis on providing a critical assessment of the literature in the field, a central hypothesis of your thesis, proposed methodology and recent experimental progress.
- You should have a working-level knowledge of the theoretical fundamentals of materials science as it pertains to your proposed area of research, and on a broader basis, at the level of a 2<sup>nd</sup> year undergraduate student in Materials Science.

In order to successfully complete the Qualifying Exam, a simple majority of votes of the committee is required. Note that co-supervisors each have a separate vote. You will receive a copy of the examination report detailing strengths/weaknesses, key areas to improve and the date of your next Advisory Committee meeting.

### **7.3.3 Failure of the Qualifying Exam**

If you fail the Qualifying Exam, you will receive a copy of the examination report detailing strengths/weaknesses, key areas to improve and the date of your next Qualifying Exam. You will be given an additional 3 months to prepare and you must repeat the examination process, in full. The membership of your committee must remain the same. Failure to pass a second Qualifying Exam will result in termination of PhD status.

### **7.3.4 Annual Advisory Committee Meeting**

SGS mandates an annual committee meeting.

The student should prepare a short report (maximum 20 pages) on his/her research progress to date and circulate this to all members of the committee AT LEAST 3 WEEKS in advance of the scheduled examination. Failure to provide suitable documentation in a timely fashion may result in postponing or cancelling of the Advisory Committee meeting.

The candidate should also prepare a short (20-25 minutes) presentation that summarizes his/her research project with particular emphasis on issues arising from the previous Advisory Committee meeting, if applicable, and recent experimental progress.

Upon completion of the meeting, the student will receive a copy of the Examination Assessment report detailing strengths/weakness, key areas to improve and the proposed date of the next Advisory Committee meeting.





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Failure to hold the recommended annual PhD Advisory Committee Meeting may result in a “not in good academic standing” status. The implications of this **may** be as follows:

- Student will no longer be eligible to be considered for teaching assistantships
- Student will no longer be eligible for department- based graduate awards
- Student will no longer be eligible for department-based funding initiatives
- Student will no longer be nominated for external graduate awards.

When you are ready to schedule your advisory meeting, book a room through Jessica and provide the Graduate Program Counsellor & Administrator with: date, working thesis title, committee member names.

### **7.3.5 Timing of Departmental and Final Exams**

There should be at least 6 weeks between the Departmental and Final Exams. While you are preparing for the Departmental Exam, this is a good time to identify an External Appraiser (external to UofT) for your Final Oral Exam (FOE).

When you are ready to defend at the Departmental level, schedule an exam date & time which is acceptable to all committee members; book a room through Jessica; provide the following information to the Graduate Program Counsellor & Administrator: room, date, time, committee member names & emails, and, thesis title

Circulate a copy of your final thesis, as approved by your supervisor, to your committee members **NO LESS THAN 3 WEEKS PRIOR TO** the scheduled exam. Failure to provide suitable documentation in a timely fashion may result in postponing/cancelling the Departmental Exam. Prepare a short presentation (30–35 minutes) that summaries your thesis with particular emphasis on the significance, originality and theoretical basis for your thesis.

A simple majority of votes of the committee is required to proceed to the Final Oral Examination. Progress to the FOE is contingent upon passing the Departmental Exam.

If you fail the Departmental Exam, you will receive a copy of the examination report detailing your strengths/weaknesses, key areas to improve and the date of your next Departmental Exam. You will be given an additional 3 months to prepare and must repeat the examination process, in full. The membership of the committee must remain the same for both examinations.

If you fail the 2<sup>nd</sup> Departmental Exam, you will receive a copy of the examination report detailing your strengths/weaknesses, key areas to improve and the date of your next Departmental Exam. You will be given an additional 3 months to prepare and must repeat the examination process, in full. The membership of the committee must remain the same for all 3 examinations.

Failure to pass a 3<sup>rd</sup> Departmental Exam will result in termination of PhD status.



### 7.3.6 Final Oral Examination (FOE)

There should be at least 6 weeks between the Departmental and Final Exams.

#### 7.3.6.1 Selection of External Appraiser (external to UofT)

Your supervisor should identify a potential external appraiser, with appropriate expertise, from another university. Once the potential appraiser has agreed to take on that role, provide the Graduate Program Counsellor & Administrator with the name of the appraiser plus the names of those who will be on the FOE committee. The Graduate Program Counsellor & Administrator is required to acquire SGS approval of all FOE committee members. SGS mandates that there be no collaboration between the PhD candidate or the committee members and the proposed appraiser for the previous 7 years.

*The PhD candidate shall not communicate with the external appraiser prior to the FOE. Any communication will be conducted by the Graduate Program Counsellor & Administrator or your supervisor.*

Note:

- If quorum is not achieved, the FOE is cancelled
- It is permissible to have an FOE committee with only one supervisory member and four or five non-supervisory members
- If a student has more than three supervisory committee members, the extra member(s) may participate as non-voting members
- The composition of the FOE committee must be approved in advance by the Graduate Chair **prior** to scheduling the FOE with the SGS.

#### 7.3.6.2 Determination of FOE Date

The date and time of your FOE will be negotiated by your supervisor with the external appraiser based on the availability of the appraiser and committee members. That information should be provided to the Graduate Program Counsellor & Administrator as soon as possible so that she can book an examination room with SGS. This is a necessary step so that SGS will then provide a Chair for your exam.

#### 7.3.6.3 Thesis for Review by External Appraiser

Once approval of the external appraiser and committee has been issued to the Graduate Program Counsellor & Administrator, she will request an electronic copy of your thesis which she will forward, along with documentation which she will prepare, to the Appraiser. If the Appraiser requires hardcopy of your thesis she will ask you to prepare a copy.

The appraiser will be requested to provide a written appraisal of your thesis no later than 2 weeks prior to your FOE.



### 7.3.6.4 Written Appraisal for You

When the appraisal arrives, the Graduate Program Counsellor & Administrator will forward it to you and your committee members. While you may discuss the appraisal with your committee members prior to the exam, you may not communicate with the appraiser prior to the exam. At the exam, be prepared to address all comments provided by the appraiser.

### 7.3.7 Exam Committee Memberships

COMMITTEE	MINIMUM NUMBER - PLUS SUPERVISOR/S
PhD Qualifying Exam	Minimum 3 members including supervisor (in case of co-supervision, a 4 <sup>th</sup> member is required) One member may be from another graduate UofT department.
PhD Advisory Committee	Minimum 3 members including supervisor (in case of co-supervision a 4 <sup>th</sup> member is required)
PhD Departmental Defense	The committee for the PhD Departmental Defense shall consist of the supervisor/s and at least 2 Advisory Committee members who will also serve on the FOE.
PhD External Exam (FOE)	The final oral examination committee shall comprise a minimum 4 (maximum 6) members and meet the following membership requirements: <ul style="list-style-type: none"> <li>• 1 external appraiser from <u>outside</u> UofT (<i>may be counted as one of the 2-3 non-supervisory members</i>)</li> <li>• Minimum 2-3 (<i>3 recommended</i>) non-supervisory members</li> <li>• Maximum 3 members from the advisory committee (may include supervisor/s)</li> <li>• Quorum is 4 (2 of whom <u>must</u> be non-supervisory)</li> </ul>

### 7.4 MASc/PhD Program Completion

To avoid delay of graduation, once you have successfully defended your thesis and it has been approved by your supervisor/s and uploaded to the UofT ProQuest submission site, complete the “housekeeping” tasks on the MASc/PhD Program Completion Checklist found here:

<https://mse.utoronto.ca/current/forms/>



## 8. WHERE TO FIND...

### 8.1 Bookstore

The UofT Book Store (northwest corner of College & St. George) sells textbooks, clothing, school supplies, computers and electronics, snacks, etc. It also houses a post office.

### 8.2 Centre for International Experience

33 St. George Street  
cie.information@utoronto.ca

### 8.3 Computer Facilities for MEng Students

Computer Labs – GB144, GB150, GB158, WB255 & SF106 – with limited printing capability (If you encounter difficulty accessing labs, go to the ECF offices on the 2<sup>nd</sup> floor of the Annex Building.)

### 8.4 MSE Graduate Common Room – WB145

The Graduate Common Room is operated by the Materials Science & Engineering Graduate Student Association (MSE GSA). This room is for use by all, and only, MSE graduate students. It is accessed with your own fob. The Common Room has a fridge, microwave, TV, sofa and table & chairs.

Here are the guidelines established by MSEGSA to ensure the continued cleanliness and comfort of the graduate room:

- 1) Behave responsibly. Clean up after yourself. This is a shared space available to all MSE grad students.
- 2) No open food/drink containers in the fridge.
- 3) The fridge will be cleaned out regularly (August, December and April). Everything not clearly labeled will be discarded. Advance notice will be issued.
- 4) Guests of MSE grad students should be accompanied at all times. You are responsible for your guests.
- 5) The Common Room is a great place to rest or nap but please do not use the common room as your main accommodation.
- 6) Do not give your fob to anyone.
- 7) Alcohol is not allowed in the room.
- 8) Report any improper use of the room to MSEGSA, MSE Administration (WB140) or Campus Police (416-978-2222).



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## 8.5 School of Graduate Studies (SGS)

63 St. George Street  
[graduate.information@utoronto.ca](mailto:graduate.information@utoronto.ca)

SGS 2019-20 Calendar <https://sgs.calendar.utoronto.ca/>

## 8.6 Student Accounts Office

215 Huron Street, 3<sup>rd</sup> floor  
[Info.studentaccount@utoronto.ca](mailto:Info.studentaccount@utoronto.ca)

## 8.7 UofT Libraries

The two main libraries for engineering are the Engineering Library, second floor of the Sanford Fleming Building, and the Gerstein Science Information Centre, 9 King's College Circle. Access to on-line academic resources such as journals, research help, training sessions, etc. is provided using your UTORid. Most journals can be accessed digitally and the librarians can help you to find materials that may be available only in hardcopy. This link can help you get started with your search for information: <https://onesearch.library.utoronto.ca>

Some libraries require the use of your TCard for entry. There are several other libraries available on campus as well.