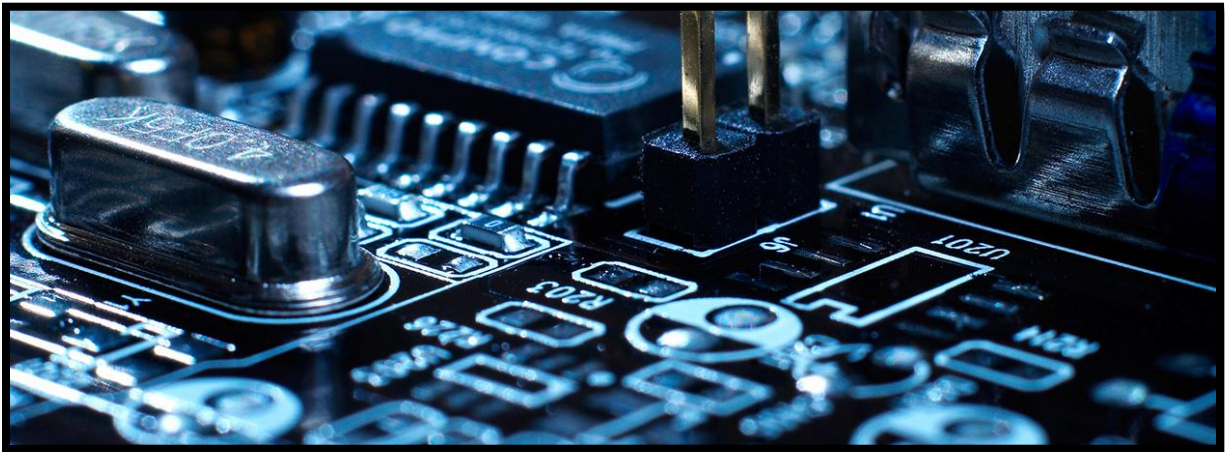




Electrical and Computer Engineering Graduate Student Handbook



2022 – 2023

| | |
|---|----|
| INTRODUCTION | 4 |
| CONTACTS | 4 |
| Chairs | 4 |
| Departmental Staff | 4 |
| Technical Staff..... | 4 |
| SCHOOL OF GRADUATE STUDIES..... | 4 |
| RESPONSIBILITIES OF GRADUATE STUDENTS TO THE UNIVERSITY | 5 |
| PLAGIARISM CHECKING SOFTWARE | 5 |
| GRADUATE WORK SUPERVISION GUIDELINES FOR FACULTY AND STUDENTS | 6 |
| GRADUATE STUDENT ORIENTATION WEEK | 6 |
| CAREER PLANNING | 6 |
| SAFETY AND SECURITY | 7 |
| Health and Safety (Mandatory Training) | 7 |
| Reporting of a Safety Incident..... | 7 |
| Security | 8 |
| Emergency | 8 |
| Walk Home Service – SWHAT..... | 8 |
| UNIVERSITY ADMINISTRATIVE INFORMATION | 9 |
| For Your Computer..... | 9 |
| Mailboxes and Desks | 9 |
| Registration | 9 |
| Students on Study Permits..... | 9 |
| Information on Student Issues | 9 |
| Employment Regulations | 10 |
| Leave of Absence..... | 10 |
| Parenting Leave Policy..... | 10 |
| Co-op..... | 11 |
| Transcripts..... | 11 |
| Scholarships and Awards..... | 11 |
| Graduate Student Holidays | 11 |
| Housing | 11 |
| Parking and Transit Services | 11 |
| Chaplaincy Centre..... | 12 |
| Student Wellness Centre | 12 |
| Student Accessibility Services | 12 |
| Student Success Centre | 12 |
| Campus Bookstore..... | 12 |
| Financial Aid and Scholarships | 12 |
| Hospitality Services..... | 13 |

| | |
|--|----|
| Equity and Inclusion Office..... | 13 |
| Ombuds Office | 13 |
| Athletics and Recreation | 13 |
| University Plans, Policies, Procedures & Guidelines | 13 |
| Graduate Students Association (GSA)..... | 13 |
| Engineering Graduate Society (EGS) | 13 |
| International Students | 13 |
| International Student Services | 14 |
| Financial Realities | 14 |
| Getting The Help You Need | 14 |
| Tips on Learning English..... | 14 |
| Student Permit/Employment Authorization | 14 |
| Immigration, Refugees and Citizenship Canada..... | 14 |
| Social Insurance Number (SIN) | 15 |
| OHIP – Ontario Health Insurance Plan | 15 |
| University Health Insurance Plan (UHIP) | 15 |
| COURSE REQUIREMENTS | 15 |
| Course Designations | 16 |
| Mandatory Meetings For M.A.Sc. Students | 16 |
| PROGRAMS WITHIN THE ECE DEPARTMENT | 17 |
| M.A.Sc. Degree | 17 |
| M. Eng. Degree | 17 |
| M. Eng. in Electrical and Biomedical Engineering | 18 |
| Ph.D. Degree in Electrical and Computer Engineering..... | 18 |
| GRADUATE COURSES AND SELECTION..... | 19 |
| Registering for Courses..... | 19 |
| Course Placeholders | 19 |
| DEPARTMENTAL COMPREHENSIVE EXAMINATION FOR PH.D. STUDENTS..... | 20 |
| DEPARTMENTAL AND UNIVERSITY THESIS PROCEDURE | 21 |
| Response Time for Ph.D. And Master’s Theses | 21 |
| Sandwich Theses | 21 |
| E-Thesis File Name Conventions..... | 21 |
| Master’s Thesis | 21 |
| Ph.D. Thesis..... | 22 |
| Length of Ph.D. Thesis..... | 22 |
| DEPARTMENTAL CHECK OUT REQUIREMENTS | 23 |
| McMaster Vaccination Policy | 23 |

INTRODUCTION

This Graduate Student Handbook outlines the policies and procedures followed by the ECE Department – complementary to University regulations as described in the Graduate Calendar.

Note that certain sections may vary or be made inaccurate due to COVID restriction, especially around registration, employment and funding. The university reserves the right to change its policies this year in the face of government and public health announcements.

If you have any questions, need information or have any concerns, please contact the Graduate Administrative Assistant – **Cheryl Gies** – gies@mcmaster.ca - Ext. 24305 - ITB/A112.

CONTACTS

Chairs

- Dr. M. Bakr, Chair – mbakr@mcmaster.ca
- Dr. I. Bruce, Associate Chair – brucei@mcmaster.ca

Departmental Staff

- Cheryl Gies – Graduate Administrative Assistant – gies@mcmaster.ca - Ext. 24305
- Shelby Gaudrault – Department Manager – gaudraus@mcmaster.ca – Ext. 24826
- Tracey Coop – Accounting & Academic Assistant – coopt@mmcaster.ca – Ext. 27277
- Kelly Lyth – Undergraduate Administrative Assistant – lythk@mcmaster.ca - Ext. 24347 (Currently on leave – email ugadmin@mail.ece.mcmaster.ca for undergraduate matters)

Technical Staff

- Ron Harwood – Facilities Manager – harwood@mcmaster.ca – Ext. 23105 – ITB/150
- Steve Spencer – Instructional Facilities Engineer – spencers@mcmaster.ca – Ext. 24103 – ITB/147
- Tyler Ackland – Digital Technical Specialist – ackland@mcmaster.ca – Ext. 24448 – ITB/149
- Joe Peric – Instructional Computer Specialist – pericj@mcmaster.ca – Ext. 27277 – ITB/146 (Currently on leave)
- Dan Manolescu - Research Computing Specialist – manold@mcmaster.ca – Ext. 26348 (Currently on leave)
- Stephan Olaizola – Research Computer Specialist – olaizos@mcmaster.ca – Ext. 26348 – ITB/146

SCHOOL OF GRADUATE STUDIES

School of Graduate Studies is located in Gilmour Hall, Room 212, ext. 23679 – <http://gs.mcmaster.ca>

If there are administrative questions and you need to contact the staff at SGS, please see contact list at: <http://graduate.mcmaster.ca/contacts>

RESPONSIBILITIES OF GRADUATE STUDENTS TO THE UNIVERSITY

Just as the University has responsibilities to graduate students, they have responsibilities to the University. The student's responsibilities include but are not limited to: registering annually until graduation, withdrawal, or withdrawal in good standing due to time limit; paying fees as required; complying with the regulations of the School of Graduate Studies as set out in the School of Graduate Studies Calendar. Where applicable, students are responsible for complying with such conditions as may be laid out in an accepted letter of offer. Students are also responsible for complying with the regulations of the Ontario Council of Graduate Studies, and McMaster University with respect to full-time and part-time status and in particular, for informing the School of Graduate Studies of any change in employment status. Students are further responsible for informing the School of Graduate Studies, which acts as the official keeper of student records, of any change in personal information such as address, name, telephone number, Canadian residency status, etc. Students are also responsible for reporting through the department any change in student status, course registration, or withdrawal. With regard to research and study, students are responsible for maintaining contact and meeting regularly with the faculty advisor, thesis/project supervisor or supervisory committee, for observing departmental guidelines, and for meeting the deadlines of the department and the School of Graduate Studies.

If there is a problem with supervision, it is the student's responsibility to contact the Associate Chair (Graduate). Students who undertake to write Master or Doctoral theses assume responsibility both for creating drafts of the thesis and for responding to direction from the Supervisor and the Supervisory Committee (in the case of Doctoral Students). The student shall have the responsibility to write and ultimately to defend the thesis and the Supervisor/Supervisory Committee has the responsibility to offer guidance in the course of the endeavor, and to recommend or not recommend the completed thesis for defense. In order to receive a degree, the student must fulfill all departmental or program requirements and all University regulations, including those of the School of Graduate Studies. Students who have outstanding financial accounts at the end of the academic year will not receive their academic results, diplomas, or transcripts. Since registration permits access to libraries and certain other academic facilities, it also implies a commitment on the part of each graduate student to use such facilities in accordance with applicable rules.

Full-time students are obliged to be on campus, except for vacation periods or authorized off-campus status, for all three terms of the university year. Students who absent themselves from campus for more than two weeks during the fall or winter terms or four weeks in the summer term, without permission from the Department and the appropriate Associate Dean of Graduate Studies, will be deemed to have withdrawn voluntarily from graduate study. Students may arrange, through the Department and the Associate Dean of Graduate Studies, to be "full-time off-campus" for periods of up to a year. In cases of unauthorized absence the student will have to petition for readmission. The appropriate Committee on Graduate Admissions and Study will rule on each request on a case-by-case basis. No guarantee of readmission or of renewal of financial arrangements can be made.

PLAGIARISM CHECKING SOFTWARE

Effective October 1st, 2022, the university requires all Master's and Doctoral theses to be reviewed by Ouriginal, a plagiarism checking software, before being seen by an external reviewer (Doctoral) or the finished copy submitted (Master's). This requirement can be found in Section 3.2.3 of the Graduate Calendar and the University's Research Plagiarism Checking Policy (found on the Secretariat website). This requirement is not meant to catch plagiarism, but rather to prevent it. By helping students detect sections of text requiring revision before the document is released to the public, the use of this tool can avoid otherwise serious allegations.

Each faculty member has access to the software through AVENUE and is responsible for providing access to their students. Student and supervisor will work together to revise any sections of the thesis that may be overlapping with previously published content that the student does not have permission to copy; sandwich theses are expected to have a substantial amount of already published content, but in this case the student should have sought, and been granted, permission to use it in their document. The student's supervisor is responsible for confirming the thesis is ready to submit. Videos and guides on using Ouriginal are located on the School of Graduate Studies website: <https://gs.mcmaster.ca/current-students/resources/ouriginal-urkund-plagiarism-software-testing-phase/>

GRADUATE WORK SUPERVISION GUIDELINES FOR FACULTY AND STUDENTS

Posted at:

https://gs.mcmaster.ca/sites/default/files/resources/graduate_work_supervision_guidelines_1.pdf

This document provides suggestions to initiate, promote, and sustain successful student-supervisor/advisor relationships.

Please remember to change in MOSAIC any changes such as personal information, name, address, telephone number, as well as a change in status or visa information.

GRADUATE STUDENT ORIENTATION WEEK

Please refer to the following:

<https://www.facebook.com/McMasterGradStudentWeek>

CAREER PLANNING

Graduate students entering into M.Eng., Masters or Doctoral programs within the Faculty of Engineering are required to complete a career planning exercise within their first academic year (September to August). Students will book through their department a planning session with a career specialist within the faculty and subsequently produce a report before the end of their first year. The report may be of any length and must be submitted to the department before the end of August in their first year. Students entering in the summer term of a given year may choose to submit the report in the second academic year instead. It is not mandatory to attend a career planning exercise, but the report IS mandatory.

SAFETY AND SECURITY

Health and Safety (Mandatory Training)

Graduate students must complete all Health and Safety Training which you will find in Mosaic, including:

- SGS 101 (Academic Research Integrity and Ethics), the course can be found on Avenue to Learn: <http://avenue.mcmaster.ca/>
- SGS 201 AODA Training (Accessibility for Ontarians with Disabilities Act) <http://www.mcmaster.ca/accessibility/>
- For health and safety training please go to: <http://www.workingatmcmaster.ca/eohss>

Below is what needs to be completed in Mosaic:

1. Office WHMIS
2. Fire Safety
3. Asbestos Awareness
4. Slips, Trips, and Falls
5. Ergonomics

Training can now be completed and immediately graded on Avenue to Learn and automatically recorded on your training summary in Mosaic.

Reporting of a Safety Incident

Any incident which would have resulted in injury, must be reported to the Department immediately. The department contact is:

Tyler Ackland – Digital Tech. Specialist – ackland@mcmaster.ca – Ext. 24448 – ITB/149
Shelby Gaudrault – Department Manager – gaudraus@mcmaster.ca – Ext. 24826
Your Faculty Supervisor

The university is required by law to report such incidents to the Workplace Safety and Insurance Board.

In case of fire, or the sounding of an alarm, “**GET OUT AND STAY OUT**”. You should be at least 50 feet away from the building and not return until the “All Clear” is given by the fire department of the local fire wardens.

Security

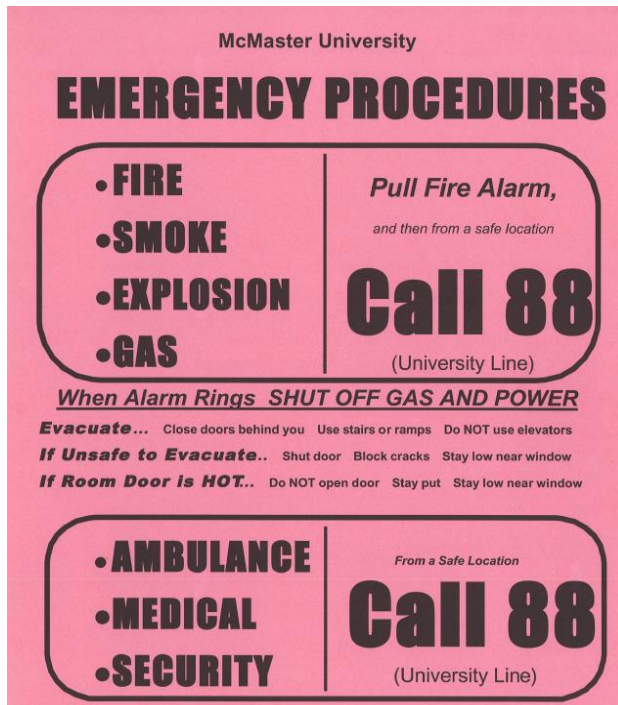
McMaster Security Officers act under the authority of the Ontario Police Act to enforce federal and provincial regulations. They are here to protect you. Students who violate statutes and bylaws are subject to arrest, prosecution and/or disciplinary action under McMaster's Student Code of Conduct.

Smartphone App Emergency Notification is now available to the campus community. The Alertus Mobile App provides push notifications for emergency alerts for your cell phone or mobile device to advise the McMaster community during significant emergencies on campus. The Alertus Mobile App can be downloaded for free, from the Apple App Store or the Google Play Store.

The McMaster Security office is located in E.T. Clarke Center 201 and can be contacted at ext. 24281. The office is responsible for overall security on campus. In addition you will find a Lost and Found service ext. 23366. Any lost items will be held for 30 days.

Emergency

In case of Emergency call **88** from any campus phone.



McMaster University

EMERGENCY PROCEDURES

| | |
|--|--|
| <ul style="list-style-type: none">• FIRE• SMOKE• EXPLOSION• GAS | <p><i>Pull Fire Alarm, and then from a safe location</i></p> <h2>Call 88</h2> <p>(University Line)</p> |
|--|--|

When Alarm Rings SHUT OFF GAS AND POWER

Evacuate... Close doors behind you Use stairs or ramps Do NOT use elevators

If Unsafe to Evacuate.. Shut door Block cracks Stay low near window

If Room Door is HOT.. Do NOT open door Stay put Stay low near window

| | |
|--|--|
| <ul style="list-style-type: none">• AMBULANCE• MEDICAL• SECURITY | <p><i>From a Safe Location</i></p> <h2>Call 88</h2> <p>(University Line)</p> |
|--|--|

Walk Home Service – SWHAT

During the months of September through April, students operate a service called "Students Walk Home Attendant Team" (SWHAT). After dark, if you telephone ext. 27500, you can arrange to be escorted to your car or residence by a male and a female student. During the summer term, Campus Security will escort you to your car or residence and they can be reached at ext. 27500.

UNIVERSITY ADMINISTRATIVE INFORMATION

For Your Computer

This policy applies to both University owned computers and personally owned computers. Users must adhere to all University requirements and policies. Examples of these policies include, but are not limited to, the following documents:

- Computer Access Accounts – this form is in the ECE department for filling out
- Code of Conduct <https://mdprogram.mcmaster.ca/docs/default-source/general-resources-page/student-code-of-conduct/student-code-of-conduct---university.pdf?sfvrsn=4>

IP addresses are assigned by the Computer/Instrument Technician. Any computer connected to the University network and assigned an IP address must have registered operating system (OS) which has current security patches and updates applied. If the OS is not registered, then it will not be connected to the University network and no IP address will be issued.

Mailboxes and Desks

Each student will be provided a mailbox in ITB-A110 which is next to the main office. Any incoming mail will be distributed to your personal box.

Each student will also be assigned a desk in a graduate student office. It is **your responsibility** to keep your desk clean and **empty and clean your desk** at the end of your studies to ensure a new student is assigned a clean & available desk. Failure to do so will cause a delay in defending your thesis. *The desk you are assigned is the desk you must stay at for the duration of your degree.* If there are any issues, please see Tracey Coop.

It is also your responsibility to keep the refrigerators and microwaves clean or they will be removed from the offices.

Bathrooms

It is your responsibility to keep the bathrooms clean. They are for the public to use. If you make a mess, please show respect to others, and clean it as though you were never there.

Registration

All students must register for the forthcoming academic year using Mosaic. The registration is sent to all students by mail from The School of Graduate Studies.

Students on Study Permits

When students who have a study permit register, they will receive the message “Study Permit Required”. Registration will not be complete until a copy of the study permit has been presented to the School of Graduate Studies.

Information on Student Issues

Address changes – please ensure that your Hamilton, Ontario address/phone number is up to date in the Mosaic system for receiving tax forms at the end of the year.

Bus passes – All full-time students are eligible for a Hamilton Street Railway (HSR) bus pass. Please see the MSU link for more details: <https://gsa.mcmaster.ca/>

Direct Deposit is mandatory. Your payment will be deposited directly to your bank account. A Statement of Earnings shows the details of your payment and can be accessed in Employee Self Service in Mosaic using the Pay icon.



If you are receiving a Teaching Assistantship or a Research Assistantship in lieu of TA you are a member of the Canadian Union of Public Employees, Local 3906. Union dues are deducted when you receive TA/RA monies. The union office is located in KTH/B111.

<http://www.cupe3906.org/>

Dental Plan – All full-time graduate students who are receiving a TA and/or RA in lieu of a TA of 130 hours or greater will have dental plan premiums deducted each month for the full year (September to August). Provisions for opting out of the dental plan or for obtaining family coverage are covered in a separate document which describes the CUPE Dental Plan. Dental claim forms and opt out forms are available at: <http://www.cupe3906.org/wordpress/benefits-forms/unit-1-benefits/dental>

Employment Regulations

There are 3 terms in the School of Graduate Studies: Fall (September to December), Winter (January to April), and Summer (May to August). Students who begin as full-time students are expected to remain full-time until the degree requirements are completed, or until they take up employment of more than 1005 hours per academic year, which includes work as a Teaching Assistant or RA in Lieu of TA. In the latter case, they are no longer considered full-time students (but continue to pay the fee schedule set out for the regular program). Once the student has ceased full-time status, it cannot be regained unless approved by both the Department and School of Graduate Studies.

If a student is to be employed at the University as other than as a TA, the School of Graduate Studies will track the hours and flag any student who is above the 1005 hour threshold.

Leave of Absence

Students wishing a pause in their academic program requirements may apply for a Leave of Absence under the categories of medical illness, seeking work experience or personal issues. Students seeking a Leave of Absence should hand in the completed form to the Graduate Administrator/Graduate Advisor of the program. Specific details can be found in the Graduate Calendar:

http://academiccalendars.romcmaster.ca/content.php?catoid=25&navoid=4667#2-5-7_leaves_of_absence

Parenting Leave Policy

See https://academiccalendars.romcmaster.ca/content.php?catoid=25&navoid=4667#2-5-7_leaves_of_absence

Co-op

The Co-op Program for Graduate students is an optional program for full-time domestic and international Masters and Ph.D. students in good academic standing that allows students to gain engineering work experience prior to graduation. Students are required to complete a minimum of 8-months of work experience for Masters students, and 12-months of work experience for Ph.D. students prior to graduation. It is administered by the Career Development & Relationship Manager - Graduate Studies. <https://www.eng.mcmaster.ca/co-op-career/co-op-program#FAQs>

Transcripts

Copies of your unofficial transcripts are available through MOSAIC. If you require an official transcript, please contact the Office of the Registrar (Room 108, Gilmour Hall).

Scholarships and Awards

McMaster University usually offers full-time M.A.Sc. and Ph.D. funding. A Ph.D. student is normally funded for 4 years and M.A.Sc. students for 2 years. Recipients of graduate scholarships, prizes and fellowships are made on the basis of academic merit/or other achieved merit.

Major Graduate Scholarships

A major scholarship includes the following: NSERC, CGS-M, CGS-D, PGS-D, Vanier Graduate Scholarship, OGS, QEII GSST, or any similar award of \$10,000.00 or greater. If a student holds a major graduate scholarship, the total stipend provided by the program cannot be reduced more than \$2,500.00/term for each term in which the student holds the award (i.e., maximum stipend clawback of \$7,500.00 per year).

Graduate Student Holidays

Students should discuss any vacation request with the supervisor(s). Vacation must be approved in advance by the supervisor(s). In addition to statutory holidays and the weeklong closing of the University from late December until early January, normal vacation entitlement is **two weeks of vacation during the year**, to be scheduled by mutual agreement with the research supervisor and the employment supervisor. Exception to this allotment requires approval from the supervisory committee. <http://www.workingatmcmaster.ca/med/document/Holiday-Schedule-2015-2018-1-12.pdf>

Housing

Students can search for housing through the University at Off-Campus Housing Office. The office is located in the Student Centre (MUSC), Lower Level, Room B/112.

- General Inquiries: (905) 525-9140 ext. 24086
- E-mail: ocho@mcmaster.ca
- Website: <http://macoffcampus.mcmaster.ca/>

There are no provisions for Graduate students for on-campus housing.

Parking and Transit Services

If parking on campus is required, please contact the Parking Office in the E.T. Clarke Center, Room 102. Special arrangements can be made for disabled parking privileges.

Chaplaincy Centre

The Chaplaincy Centre has an open-door policy and offers responsive pastoral support to the whole community with personal counseling, bereavement support groups, public memorial services, and participation in McMaster networks and programs. It is located in the McMaster Student Center in room MUSC-231. <http://www.mcmaster.ca/chaplain>

Student Wellness Centre

You can access health services on campus in the Campus Health Centre, which is located in the McMaster Student Centre 8101 ext. 27700. They provide medical care similar to a family physician and health care is available throughout the year for all students. There is also a pharmacy located in the McMaster Student Centre. For more information on health care and wellness services and office hours, please visit. <https://wellness.mcmaster.ca/>

Student Accessibility Services

The McMaster University Accessibility Hub is a collaborative endeavour amongst a number of departments and groups taking shared responsibility to advance the University's 3rd strategic goal of "building an inclusive community".

This website aims to be a one-stop-shop for all things related to accessibility at McMaster University. Whether you are a student (prospective or current), staff member, faculty member, instructor or member of the wider community, this website is intended to be the primary portal where you can find information and links to accessibility-related information at McMaster.

<https://accessibility.mcmaster.ca/>

Student Success Centre

Career Services is located in Gilmour Hall 110 and is designed to offer students in all programs/faculties to establish a more focused view of their academic career options. Provided is a full range of career and employment related services, including career counseling, job postings, on-campus recruitment (OCR), career information, resume workshops and coaching, interview skills and job search workshops, personality and interest testing, educational planning, as well as mentoring and experiential education opportunities.

<https://studentsuccess.mcmaster.ca/>

Campus Bookstore

Office supplies and computer supplies are available along with full postal facilities. Located in Gilmour Hall/B101 <http://campusstore.mcmaster.ca>

Financial Aid and Scholarships

The Office of Financial Aid is located in GH-120 and can help students address the financial obligations associated with University study through loans (i.e. OSAP, BCSAP), bursaries, and work programs and scholarships. <http://sfas.mcmaster.ca/>

Hospitality Services

Visit <http://mealcard.mcmaster.ca> for Meal Plans, Meal Card Info., Account Status & History, Meal Card Deactivation, and other on-campus dining. Office location CB-116.
<http://hospitality.mcmaster.ca/>

Equity and Inclusion Office

The services offered by EIO are available to the entire McMaster community- students, staff, and faculty. The overall goal is to create an environment where everyone can learn, work, teach or live in an atmosphere free from all forms of violence, harassment and discrimination. For more information, visit <https://equity.mcmaster.ca/>

Ombuds Office

The Ombuds Office provides impartial, independent, and informal dispute-resolution advice and assistance to all members of the University community. The Ombuds Office is located in MUSC 210 <http://www.mcmaster.ca/ombuds/>

Athletics and Recreation

The Athletics and Recreation department aims to enhance the student experience and the McMaster community through engagement in programs and services built on a foundation of physical activity, health, well ness and sport. It is located at the Ivor Wynne Centre
<http://www.marauders.ca/>

University Plans, Policies, Procedures & Guidelines

University Plans, Policies, Procedures & Guidelines pertaining to Graduate Studies. Office location: Gilmour Hall, room 210. <http://www.mcmaster.ca/policy/>

Graduate Students Association (GSA)

The mandate of the GSA is to promote the welfare and interests of the members through the provision of facilities and opportunities for social, athletic and intellectual activities, to represent the members before the duly elected and appointed authorities of McMaster University, and to promote communication and participation in all matters of common interest between the members of other student organizations, both at McMaster and in other educational institutions. Office location: Refectory, 2nd Floor. <http://www.mcmaster.ca/gsa/>

Engineering Graduate Society (EGS)

The Engineering Graduate Society is an officially-recognized McMaster association for Engineering graduate students dedicated to representing the concerns of its members to the Faculty and University as well as promoting a cohesive student population through the organization of events, both educational and social. Every student in Engineering is a member though elections for council positions or its executive are held at different times throughout the year. More information can be found at:
<http://egs.mcmaster.ca/>

International Students

As a newcomer to Canada, you are probably undergoing a double culture shock; not only are you stepping into the "culture" of the School, but you are also experiencing the larger disorientation that comes from being a newcomer to Canada. If you can, arrive 3–4 weeks before classes start. This gives you a chance to set up a place to live and get to know Hamilton before your hectic life as a student begins.

International Student Services

ISS is a vibrant and essential part of Student Affairs, and as a student service aims to provide core services and programs for international students, visiting scholars, post-doctoral fellows and faculty at McMaster University and their families. They are very helpful, especially in matters concerning health care, tax problems, and visas. In early September, the office organizes a week of activities to help you get to know Hamilton and features of the McMaster Campus. Take them up on this; it is really fun and useful. ISS also provides information to students at McMaster on a range of options from independent study and externally sponsored programs, formal student exchange programs, and opportunities to work and study abroad. ISS is also responsible for the administration of the University Health Insurance Plan (UHIP) for all international students. Office location is GH-104. <https://iss.mcmaster.ca/>

Financial Realities

Be aware that if you are living on a Departmental Scholarship and teaching assistantship, this will not allow you to afford a lifestyle of the rich and famous. The cost of food and accommodation and other living expenses will account for most of this income, so be prepared to live modestly. Make allowances for this by bringing as much money as you can to cover setting yourself up in accommodations, buying books and school items, and to provide you with a little more of a social lifestyle.

Getting The Help You Need

Feel free to approach people in the Department with questions or concerns. Get into the spirit of the Department and participate in as many activities as you can. Take advantage of this situation by getting to know as many people as possible.

Tips on Learning English

A key to getting the most out of your graduate study period is to deal with language barriers at the outset. However, getting past these barriers is not an easy matter. Below are some tips that might be helpful in improving your language skills: Using English in both social and academic settings will improve your language skills substantially. Don't be afraid to speak out because you may be unsure of how to express yourself. Remember that other students in the Department have gone through the same experience as you now face, so don't hesitate to use them as resources or for peer support.

Student Permit/Employment Authorization

International students are required to provide photocopies of their study permit and/or employment authorization to the School of Graduate Studies at Graduate Registration and each time such authorizations are renewed. Failure to do so will result in the withholding of their pay. Please leave a copy of your forms with the ECE Department.

Immigration, Refugees and Citizenship Canada

The local immigration office is located at 55 Bay Street North, Hamilton, telephone 1 888-242-2100. When renewing your study permit, please call this number as they are now handling these renewals by telephone.

Social Insurance Number (SIN)

It is essential that the School of Graduate Studies have your Social Insurance Number on file. If you do not have a SIN number, please apply immediately using a Social Insurance Number Application Form. Forms are available through GH 104 or through the Human Resources and Skills Development Canada. (HRSDC)

Web page at: <http://www.servicecanada.gc.ca/en/sc/sin/index.shtml>. It will take 3 or 4 weeks to receive your card in the mail. Your new SIN card will have the same expiry date as your study permit. Please inform the department your number once you have received this document. Also remember to renew both documents at the same time and give copies to the department.

OHIP – Ontario Health Insurance Plan

Permanent residents who require health coverage under OHIP may obtain application kits from Student Wellness Centre in the McMaster Student Centre, Room B101 (on campus). You may also download the application form at: <http://www.health.gov.on.ca/en/public/programs/ohip/> Completed applications should be delivered as soon as possible to the Ministry of Health Office at 119 King Street West (the 10th floor of the Convention Centre) in Hamilton. The telephone number is (905) 521-7100. You will be required to produce two pieces of identification (e.g. birth certificate, driver's license).

University Health Insurance Plan (UHIP)

Your UHIP coverage will begin once you arrive on campus, enrollment is done automatically once you are fully registered in the program. All students with dependents living in Ontario must submit an application form to enroll their dependents and pay the appropriate additional fees. To complete an application form, please visit the International Student Services (ISS) office in Gilmour Hall room 104. For the 2018/2019 academic year, the cost of single coverage for 12 months is \$612.00. This amount is pro-rated for students who begin in January or May.

COURSE REQUIREMENTS

All Graduate students are required to complete the following courses in their first term of study:

1. SGS-101-Academic Research Integrity & Ethics
2. SGS-201-Accessibility for Ontarians with Disabilities Act (AODA) Training.

These courses are to be completed during the first term of the student's first year. SGS-700/701 (RESEARCH/WRITING) – placeholder course – you do not need to take this course this is for enrollment for a term only that you are not taking any graduate course.

All students must be registered in a course each term. If the student is not enrolled in a traditional course, they must register SGS-700 (full-time student) and (part-time student). These courses are for Research/Writing, and show the student is active on their transcript.

The enrollment process will automatically assign a course towards the primary academic program that a student is enrolled in for a particular term. This process does not determine whether the course will exceed the requirements outlined the curriculum. Where a student wishes to designate a particular course towards a program other than their primary academic program a special request is required during the normal add period outlined in the sessional dates. The requirement designation form is available on the School of Graduate Studies website.

Course Designations

Masters (Count towards the primary academic program requirements of a Master's degree)

This category identifies the courses that are to count towards the Master's degree requirements (including any additional graduate requirements or undergraduate courses specified by the supervisory committee or Department Chair). The passing grades for a Masters course are A+, A, A-, B+, B, and B-.

Doctoral (Count towards the primary academic program requirements of a Doctoral degree)

This category identifies the courses that are to count towards the Doctoral degree requirements (including any additional graduate requirements or undergraduate courses specified by the supervisory committee or Department Chair). The passing grades for a Doctoral course are A+, A, A-, B+, B, and B-.

Extra Courses (Extra Course)

This category identifies courses that the student is taking with the approval of the supervisor but that are not necessary to the student's current degree program. In order to designate a course as extra, a student will have to submit a course designation request during the normal add period of enrollment in a particular term. The form is submitted to the program office and once approved will have the designation added to the enrollment record for that course only.

If a failing grade (i.e., less than B-) is received in a course taken as Extra, the courses (and grade) will not appear on the student's transcript unless because of academic dishonesty. Students may petition to change the designation of an Extra Course to a Masters or Doctoral course prior to the deadline to drop a course provided that this change is supported by the supervisor and program. Changes of designation after the drop date will not be approved. Courses designated as Extra Course may subsequently be counted towards graduate degree requirements and the course designation changed to Masters or Doctoral, if approved by the Faculty Admissions and Study Committee or the Associate Dean acting on its behalf. The passing grades for an Extra Course are A+, A, A-, B+, B, and B-.

Courses that are required by the supervisory committee or the Department Chair as additional requirements in excess of the stated minimum for the program must be designated as Masters or Doctoral.

Mandatory Meetings For M.A.Sc. Students

M.A.Sc. students will need to fill out a Supervisory Committee Report form with their supervisor/co-supervisor (if applicable).

Using the M.A.Sc. supervisory committee meeting report form, a faculty member must give each of their Masters students (M.A.Sc.) a mid-program progress review and submit that form to their department (and ultimately to SGS). The review should come within 6 months for students who are considering transferring to the Ph.D. program. Otherwise, the review occurs within the first 12 months

Part-time students must also receive a review after their first year. A student starting in September must have the report done by September 1 the following year; starting in January it is due January 1; starting in May it is due May 1.

This form can be found here:

M.A.Sc.:

https://www.eng.mcmaster.ca/sites/default/files/masc_supervisory_report_february_2018.pdf

First Time Teaching Assistants (TA)

McMaster University requires all first time TAs to take five hours of training at the start of their first term of employment (i.e., first time a student starts to TA). Those who do not complete all five hours will not receive payment for the training and may, at the discretion of McMaster's Human Resources, incur disciplinary action. All new TAs in Engineering will be required to take MacPherson's online **anti-oppression training** module in AVENUE, which takes two hours to complete. A quiz at the end of the module will record completion of the course. In addition, Engineering TAs **MUST** take the three-hour virtual (Fall term) or in-person (hopefully Winter term) **Engineering TA training workshop**. Engineering has carried out this workshop for over three years, consisting of information on the professional requirements of a TA and many exercises to help new TAs understand the expectations of marking and running tutorials in the Faculty. Engineering TAs **may NOT substitute** the workshop with other courses through MacPherson, though TAs are welcome to take additional courses through MacPherson's online offerings with no compensation. Once a TAs receives payment for the five hours of training, they will receive no further compensation for any training modules taken, either in the first term or later.

PROGRAMS WITHIN THE ECE DEPARTMENT

Master's Degree

A candidate for the Master's degree may proceed by one of three routes: the Research Program (M.A.Sc.), the course and project program (M. Eng.) or the M. Eng. in Electrical and Biomedical Engineering.

M.A.Sc. Degree

Required Courses

A candidate is required to complete successfully at least four graduate half courses (or equivalent), of which at least two must be from among the 700-level graduate courses offered by the Electrical and Computer Engineering Department, and to prepare a thesis embodying the results of the research taken on by the candidate. M.A.Sc. students may take a maximum of one ECE 600-level course approved by the department towards their degree requirements.

General Requirements

Candidates for the degrees of M.A.Sc. and Ph.D. must present a seminar on a topic approved by the Department at least once during the course of their programs. Grading will be restricted to Pass/Fail. The thesis or report submitted by the candidate must be defended orally at the conclusion of the study. All M.A.Sc. and Ph.D. graduate students are required to register ECE 790 *Communication Skills for Graduate Research in Electrical and Computer Engineering*. M. Eng. students registering for ECE 701, with the exception of those registered in the combined B. Eng./M. Eng. Biomedical Engineering program, must register for ECE 790 as well.

M. Eng. Degree

Required Courses

A candidate is required to successfully complete a program of seven graduate half courses (or equivalent), of which at least four must be 700-level courses within ECE. The three remaining courses may be taken as 700-level courses outside of ECE and/or up to two 600-level courses within ECE, with prior approval by the department. Up to two 600-level ECE courses can be taken in the final undergraduate year at McMaster for graduate credit. All courses toward the M.Eng. degree in ECE may be taken on a part-time basis.

General Requirements

Candidates for the degrees of M.A.Sc. and Ph.D. must present a seminar on a topic approved by the Department at least once during the course of their programs. Grading will be restricted to Pass/Fail. The thesis or report submitted by the candidate must be defended orally at the conclusion of the study. All M.A.Sc. and Ph.D. graduate students are required to register ECE 790 *Communication Skills for Graduate Research in Electrical and Computer Engineering*. M. Eng. students registering for ECE 701, with the exception of those registered in the combined B. Eng./M. Eng. Biomedical Engineering program, must register for ECE 790 as well.

M. Eng. in Electrical and Biomedical Engineering

Requirements

This program is open to graduates who have maintained a minimum average of B in each year of the B. Eng. program in Electrical and Biomedical Engineering at McMaster University. The program consists of a minimum of three consecutive terms in which the candidate is required to complete successfully six graduate half courses (or equivalent), of which at least four must be 700 level and up to two 600 level courses approved by the department, followed by an independent study term. The 600 level courses that can be taken in the fourth undergraduate year for graduate credit are ECE 6BC3, ECE 6BD4, ECE 6BE4, ECE 6BF3, ECE 6CL4, ECE 6TL4 and ECE 6TN4. At the conclusion of the final term, the candidate is required to submit and defend a report on an approved project which must demonstrate ability to carry out independent study and reach a satisfactory conclusion in an area of biomedical engineering.

Ph.D. Degree in Electrical and Computer Engineering

Requirements

The general requirements for the degree Doctor of Philosophy appear earlier in the McMaster Graduate Calendar.

The minimum number of graduate courses required for students who began the PhD program prior to September 2020 is four half courses (or equivalent) if they have a Masters degree, or eight half courses (or equivalent) if their last degree was a Bachelor's degree.

PhD students entering in September 2020 or after are required to take 3 half courses (or equivalent) if they have a Masters degree. Also as of September 2020, students who transfer from MASc to PhD, or do not have a Masters degree require a total of 6 courses. See:

https://academiccalendars.romcmaster.ca/preview_program.php?catoid=42&pooid=22440&returnto=8767

Ph.D. candidates are required to take the Ph.D. Comprehensive Examination, which is designed to test the knowledge and skills necessary to pursue research at the PhD level in Electrical Engineering. The examination will normally be attempted no later than 24 months from the student's start date in the PhD program, but after the first supervisory committee meeting. The outcome of the most recent supervisory committee must be at least "satisfactory" in order to proceed with the comprehensive examination.

Within approximately one year of commencement, a Ph.D. candidate must submit a report to the Supervisory Committee outlining the proposed line of research in sufficient detail so that the Committee can decide on its suitability.

Form for the Ph.D. Supervisory Committee:

Ph.D.:

https://gs.mcmaster.ca/sites/default/files/resources/supervisory_committee_report_march_2018.pdf

General Requirements

Candidates for the degrees of M.A.Sc. and Ph.D. must present a seminar on a topic approved by the Department at least once during the course of their programs. Grading will be restricted to Pass/Fail. The thesis or report submitted by the candidate must be defended orally at the conclusion of the study. All M.A.Sc. and Ph.D. graduate students are required to register ECE 790 *Communication Skills for Graduate Research in Electrical and Computer Engineering*. M. Eng. students registering for ECE 701, with the exception of those registered in the combined B. Eng./M. Eng. Biomedical Engineering program, must register for ECE 790 as well.

Industrial Ph.D. Option

The general Regulations for the degree Doctor of Philosophy appear earlier in the Calendar. This program option offers the candidate the potential to conduct all or a portion of their research at their company or research institute of employment. To be enrolled under the option, the candidate must be a full-time student in the degree program, have previously completed a Masters of Applied Science or its equivalence, and be employed by a company or research institute outside of McMaster continuously till degree completion. A candidate is required to complete the normal course requirements of their enrolled department as well as any milestones, but is exempt from seminar requirements. As a doctoral candidate they must take the Ph.D. Comprehensive Examination that is designed to test the breadth of knowledge and the ability to synthesize and integrate ideas from within and peripheral to the candidate's research area. The Comprehensive Examination will normally take place between 6 and 18 months after the candidate initially registers in the Ph.D. program. A supervisory committee monitors the progress of a Ph.D. candidate and determines when he/she is ready to write the thesis. The student is required to defend the thesis at a Final Oral Examination.

GRADUATE COURSES AND SELECTION

The complete list of graduate courses in ECE are listed in the School of Graduate Studies Calendar. The courses that are being offered during 2022–2023 academic year are listed on our website: <http://www.ece.mcmaster.ca/grads.htm>

Registering for Courses

All full time and part time graduate students in ECE will be required to register online using MOSAIC. For more information please see the following link:
<https://gs.mcmaster.ca/academic-services/how-enroll>

Students will need to register for the current academic year even if they have finished all their course requirements.

Course Placeholders

All 3 terms need either a 700 Level course or placeholder SGS 700 even if you will graduate before the term/academic year is finished. Tuition and all financial information will not be correct on the system if this procedure is not followed. If you're on a leave of absence you will NOT need to enroll for that term, but you need to put in a course or placeholder for the terms you will be here.

DEPARTMENTAL COMPREHENSIVE EXAMINATION FOR PH.D. STUDENTS

The objectives of the examination are to ensure that the student can:

- a. demonstrate his/her knowledge and skills necessary to pursue research at the PhD level, respond to questions related to them, solve problems when faced with an unfamiliar situation related to them and know how to apply them to practical problems.
- b. understand a specific problem involving the integration of ideas with imagination and innovation, research on the state-of-the-art related to it, envision new ways to solve it, conduct preliminary theoretical analysis and/or experiments, write a formal report on the findings, present the findings in an effective manner and defend them in front of a committee of experts.

The comprehensive examination committee will consist of four faculty members including the thesis advisor and at least one regular ECE faculty member outside the supervisory committee who will act as the chair. The chair, who needs to be approved by the Department Chair, is responsible for all administrative aspects of the exam in ensuring that all proper procedures are upheld. The chair should also ensure that the student is examined rigorously, while also being treated fairly and with respect. All committee members, including the thesis advisor and the chair, will play an active role in the examination. Up to three supervisory committee members can be part of the examination committee. At most one adjunct faculty member can be part of the committee.

In order to achieve the above objectives, the examination will consist of two parts, respectively:
Part A: Oral examination on any two courses chosen by the examination committee out of those the student has already taken at McMaster or elsewhere at the graduate level with questions on theory and application. The committee may choose particular skills or topics within the combined scope of the graduate courses the student has already taken instead of two separate courses if they are deemed more appropriate to assess the student's ability to integrate ideas.
Part B: A report and a presentation on a specific problem involving the integration of ideas related, but not the same as the student's thesis topic, specified by the examination committee.

The examination will normally be attempted not later than 20 months, and definitely not later than 24 months, from the student's start date in the PhD program, but after the first supervisory committee meeting.

The whole examination will last no more than two hours with at most 50 minutes for Part A, 60 minutes for Part B and 10 minutes for a break between the two parts.

Four weeks before the examination date, the chair of the committee will provide the student with the two courses or skills or topics, as appropriate, for Part A and the problem involving integration of ideas for Part B.

For Part A, no questions will be given to the student prior to the examination. If specific courses are selected for Part A, the scope of the questions during the examination will be restricted to the syllabi of those courses and their application to the student's research area or to general engineering problems. If a skill or topic is suggested for Part A, its scope will be defined clearly along with at least one reference material.

The integration problem in Part B will generally be open-ended with scope for imagination and innovation. However, at least one reference material will be suggested as the starting point.

The student will submit to the examination committee a report on the problem involving integration of ideas in Part B at least one week prior to the examination. The double-spaced report should be no longer than 20 letter-sized pages in length when typeset in 12-point Times Roman fonts with 2.54 cm margin on all sides. All figures, tables and other supporting material excluding references must be within these 20 pages. The report should address in sufficient detail

the motivation for the problem, include a thorough literature search on it, present the student's proposed solutions, any preliminary theoretical and/or experimental analysis, and conclusions. The student shall give an overview of the report in a 10–15-minute oral presentation at the start of Part B of the examination.

A pass/fail decision on the student's performance in each part of the examination will be made at the completion of that part, but will not be conveyed to the student until the completion of both parts. If the student fails one or more parts of the examination, he/she needs to re-do only the ones that he/she failed.

DEPARTMENTAL AND UNIVERSITY THESIS PROCEDURE

The School of Graduate Studies has forms, regulations and information regarding thesis preparation, available from the School of Graduate Studies website:

https://gs.mcmaster.ca/sites/default/files/resources/guide_for_the_preparation_of_masters_and_doctoral_theses- december_2016.pdf

Students submitting their theses must have them checked using the new plagiarism-checking software Ouriginal (formerly known as *Urkund*). This will be in effect in the Fall term (October 1, 2022), and will be scanned using their supervisors' account in Avenue to Learn. More information is found at: <https://gs.mcmaster.ca/student-guide-to-using-ouriginal-urkund-plagiarism-checking-software/>

Response Time for Ph.D. And Master's Theses

Supervisors should respond to the draft of a thesis within 2 months. Providing comments on individual chapters will take proportionately less time. Very long theses or chapters may take more time. There are busy periods within the academic year when the time taken to provide comments might be a bit longer than this norm. However, in no case should the response time exceed 3 months. For Master's theses, the corresponding times are 1 month and 2 months.

Sandwich Theses

If some of the research undertaken expressly for the degree has previously been published or prepared for publication by the student as one or more journal articles, or parts of books, those items may be included directly within the thesis subject to the School of Graduate Studies' regulations and to obtaining permission from the supervisory committee. Please consult the "Guide for the Preparation Theses" for more detailed information on Sandwich Theses. Note that you may wish to temporarily embargo the thesis if text from the thesis will be submitted to journals for publication.

E-Thesis File Name Conventions

Your E-thesis will be published via MacSphere. All information about the regulations related to this submission of your thesis can be found at:

https://gs.mcmaster.ca/sites/default/files/resources/guide_for_the_preparation_of_masters_and_doctoral_theses- december_2016.pdf

Master's Thesis

The administration of the M.A.Sc. thesis defense examinations is the responsibility of the Department. We recommend that the thesis follow the format described by Graduate Studies at https://gs.mcmaster.ca/sites/default/files/resources/guide_for_the_preparation_of_masters_and_doctoral_theses- december_2016.pdf

The student is responsible for ensuring that the format satisfies the University requirements. The sequence of events is as follows:

1. The student's supervisor gives him/her permission to prepare his/her thesis. The student is responsible for submitting a thesis, which is reasonably free of grammatical, typographical and technical errors. If the thesis is found to contain an excessive number of errors, it will be returned to the student and the oral examination postponed until a satisfactory thesis has been resubmitted.
2. It is strongly recommended that a student submit a first draft of his/her thesis, acceptable to the supervisor, before taking up full time employment. Past experience has shown that students who do not follow this recommendation are seriously delayed in completing their thesis, and in some cases never graduate.
3. The candidate should inform the Department of his/her intention to submit the thesis at least
4. 6 weeks prior to the anticipated defense date so that an examining committee can be struck and an oral defense date set.
5. An electronic copy and any requested printed copies must be submitted to the Department at least 2 weeks prior to the defense date.
6. The student's advisor(s) and two other faculty members, one of whom may be from a department other than Electrical and Computer Engineering, sit as an examining committee for the candidate. The Chair, with the advice of the research supervisor, appoints the examining committee. After the presentation (to be approximately 15-20 minutes in length) the examining committee will conduct an examination of the candidate on his/her thesis. The seminar presentation and this examination constitute the oral examination of the candidate.
7. Upon successful completion of this examination, the candidate is requested to correct any misprints that may exist in the thesis and to submit the thesis to the School of Graduate Studies. Upon completion of all degree requirements, the student is required to "Sign out" from the Department. A checklist is available in the office.

Ph.D. Thesis

Students close to submitting their Ph.D. thesis (about 2 months) should complete on-line the Thesis Defense System (TDS). You will be asked for your thesis title and estimated date to submit your thesis. Your supervisor will be asked to submit the name of an external examiner which must be approved by your supervisory committee and department. A final date and time of the defense will be scheduled and approved by the student, supervisory committee and external examiner. The student will then submit an electronic copy of the thesis to the School of Graduate Studies and Supervisory Committee members.

Length of Ph.D. Thesis

Doctoral students and their supervisors should keep in mind that theses of extraordinary length are to be discouraged. The preparation of a lengthy Ph.D. thesis almost certainly extends the time that the student takes to complete his or her degree. As a general rule, doctoral students are urged to limit theses to no greater length than three hundred (300) manuscript pages. In cases where students and their supervisors believe that responsible scholarly treatment of the thesis topic requires substantially greater length than that specified above, they are expected to receive written approval from the Associate Dean of Graduate Studies before the thesis is submitted for the defense.

DEPARTMENTAL CHECK OUT REQUIREMENTS

Upon completion of all degree requirements, the student will be required to “Sign out” from the department. A checklist has been compiled for this purpose. Keys must be returned, and your lab and study areas be left tidy. Please leave a forwarding address with office. Mail will be forwarded for up to three months.

McMaster Vaccination Policy :

As of May 1, 2022, McMaster paused its [Vaccination Policy](#) but will continue to follow emerging guidance from University experts and Public Health officials.

Should pandemic circumstances shift, the University will review the situation, which may result in the reinstatement of a mask mandate and/or the resumption of a vaccination policy. Resumption of a vaccination policy will require that access to campus be limited to those fully vaccinated against COVID-19, unless a human rights exemption is obtained.

Students will be notified directly upon resumption of a vaccination policy. Students will be expected to adhere to any academic regulations, which are developed in compliance with Public Health guidance and the University’s health and safety policies, including any vaccination policy that is in effect. Any applicable deadline(s) for compliance will be clearly communicated.