Departmental Orientation

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Carleton University

Outline

- Important contacts
- Responsibilities as a TA
- Responsibilities as a graduate student with a thesis
- Campus services/Training opportunities
- Safety information

Important Contacts

People who can help you

■ First point of contact for most graduate student issues should be **Janet Perras**, the graduate administrator, located in the main Mech & Aero Office (3135 ME)

– course credits, registration, seminars, defences,...

– if Janet cannot help, she can direct you to someone who can!

■ For computer and network support **Shadi Laham**, supervisor of computer operations, (2232 ME) is the person to consult

– account issues, access to computer licences, various graduate lab spaces, ...

■ If Janet or Shadi are not available, you may seek help from **Irene Helder**, the departmental administrator

– please be mindful that Irene can often be very busy as she handles issues for the entire department (both graduate and undergraduate student issues as well as faculty issues)

People who can help you

■ For less routine issues or those involving faculty, you may come to see me, the associate chair for graduate studies (4513 EDC)

– I am your advocate with respect to helping you succeed with your degree

– If you are a coursework only student (MEng program), Prof. Andrew Spiers is who you should see.

■ For issues related to your research that involve various shared lab spaces or equipment, obviously your supervisor should be your first point of contact.

■ Should your research require any departmental manufacturing equipment then you should consult **Stephan Biljan**, supervisor of the machine shop, to co-ordinate your activities.

Responsibilities as a TA

Responsibilities as a TA

- If you do not have the priority TAship in your offer letter, I would highly recommend you apply for the non-priority TA for Winter 2026

- Run tutorials/PA sessions/Labs
- Provide feedback and mark assignments
- Assist with proctoring
- Be available for office hours/Respond to emails
- Read, complete, and sign the ‘Assignment of Duties’ form on Carleton Central

- You need to go to Carleton Central and accept the TAship in order for the instructor to assign duties.

Role of a TA

■ You represent part of the Carleton educational experience to the undergraduate population in a manner similar to professors

- Although many of you were recently in the role of undergraduate student, you are now in a position of authority with respect to undergraduate students
- Be professional and courteous at all times

■ From this side of the fence, as someone who is now trying to help students learn (not simply graduate) it is important to:

- Encourage students to develop *independent* problem-solving techniques
- Help students *understand* the problem, *not simply get the right answer*
- Understand the problem/lab/etc. that you are dealing with better than the students to whom you are trying to explain it

Running a Tutorial or Lab

- **SAFETY FIRST**
  - If you have any concerns/questions you can speak with Prof. Laliberte, associate chair of lab operations

- Speak with the appropriate technologist BEFORE running any experiment or equipment (see Steve Truttmann, MAE Lab Operations Officer)

- Complete MANDATORY online training
  - Access for Ontarians with Disabilities Act (AODA)
  - Environmental Health and Safety (EHS)
  - Violence and Harassment

- Complete any MANDATORY in person training (see Prof. Laliberte)
  - Laboratory safety
  - Biosafety
  - Laboratory supervisors

TA Feedback and Grading

- Remember what you expected from your TA when you were an undergraduate student
  - Communicate your expectations clearly
  - Provide as many clear guidelines, marking schemes, rubrics, etc. as you can ahead of time
  - Be consistent with what the professor is telling the students so as to help provide a coherent learning environment

- Don't be afraid of highlighting when a student has done well
  - Highlight good approaches or excellent solution techniques

- Calibrate your feedback to maintain a supportive learning atmosphere
  - Indicate errors in a solution while also suggesting improved methods or techniques to try
  - Let the professor be the 'bad cop' (if one is even needed)

Academic Integrity Issues

- If you identify a possible case of plagiarism defined as (see (https://carleton.ca/registrar/academic-integrity))
  - Submitting work written in whole or in part by someone else
  - Failing to acknowledge sources through the use of proper citations when using another's work

- Provide a typical amount of feedback and grade the work as if you did not, in your judgement, think there was an issue of plagiarism

- Submit the work to the professor explaining what you found
  - DO NOT: write 'you cheated' on the report or accuse the student directly

- There is a process to be followed which protects and tries to provide fairness to everyone involved which the *professor* is responsible for following.

Challenges a TA may Face

■ Try to prepare ahead of time by thinking about what you might do under circumstances where students:

– are disruptive
– arrive late or do not pay attention
– complain about your feedback
– ask you a question that you do not know the answer to
– challenge your authority or instructions

■ You may also want to consider cases where the professor teaching the course you are a TA for:

– does not define your duties
– asks you to do something to feel is inappropriate/not within the duties as you understand them

Responsibilities as a graduate student with a thesis

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The Graduate Calendar

- The graduate calendar defines the expectations/requirements of your degree and MUST BE FOLLOWED
  - You should all bookmark the graduate calendar and know the exact requirements to obtain your degree

- In addition to your degree requirements, the graduate calendar can be a useful reference for all the regulations surrounding your academics here at Carleton (transferring credit, examinations, thesis requirements,...)

- In cases where the calendar says ‘with the approval of the department’ this means you must speak with me

Course Requirements

■ You are expected to take 5 x 0.5 credit (one term) *graduate level* courses to obtain an MASc degree and 3 x 0.5 credit *graduate level* courses to obtain a PhD degree for most degrees offered by our department

– Courses offered at the University of Ottawa Mechanical Engineering department can be used to meet these requirements

– Courses offered at Carleton in other departments might be eligible to satisfy these requirements with the 'approval of the department'

■ In general, if an Arts or Policy student could take a course and expect to do well then, the course cannot be counted as credit towards a graduate level *engineering* course requirement

– Fourth year courses are very rarely used to satisfy these requirements with the 'approval of the department'

■ The intent of this exception is to accommodate students who are in difficult circumstances due to events beyond their control, not to simply allow graduate students to take undergraduate courses that are of interest/relevance to them

Course Requirements

■ If your supervisor requires that you take an undergraduate course to address a perceived deficiency in your background, this must be added as a condition to your offer or taken as a course that is extra to your degree (i.e., it will not count towards your 5 x 0.5 credit course requirement)

■ Thesis students working on their thesis must be continuously registered in MECH 5909 (MASC thesis) or MECH 6909 (PhD thesis)

Seminar Requirements

■ For the degrees offered in our department the graduate calendar lists a requirement as 'Participation in the Mechanical and Aerospace Engineering seminar series'

- For MASc students this requires attendance at 10 seminars
- For PhD students this requires attendance at 15 seminars

■ At least 50% of these must be official seminars offered by our department or the Mechanical Engineering department at the University of Ottawa

■ Attendance at a 1.5 hour session at a conference can be counted as 1 credit towards the required 10 (a maximum of 2 credits of the 10 can be from attendance like this)

■ Not more than 50% of seminars attended can be from those given by individual research groups

Comprehensive Exam (PhD)

■ For PhD students the oral comprehensive exam must be attempted before the end of your fifth semester of registration

■ Your supervisor should arrange the examining committee, timing, and provide you with a list of resources related to the areas to be covered in the exam

– The purpose of the comprehensive exam is to test a student's understanding of fundamental principles and knowledge in the *undergraduate* fields related to your field of research

■ Following the comprehensive exam, PhD students must also pass the proposal exam based off their work so far and their PhD proposal document (max. 50 pages)

Defence Requirements

■ For MASc students you must have your thesis ready for review, committee members set, and date/time organized 3 weeks in advance of your defence date

■ For PhD students the same is required but 6 weeks in advance of your defence date

■ It is your supervisor's responsibility to organize the committee members and timing, but ***it is your responsibility to ensure they have sufficient time to do this***

■ It is your responsibility to be aware of all your program requirements (i.e., read the graduate calendar) in terms of required courses, deadlines, fees, etc.

Student Awards

- There are many department/faculty/university awards available throughout the year

https://carleton.ca/mae/graduate-programs/graduate-scholarships-3/

- *NEW* International PhD students can now apply for tri-agency (i.e. NSERC doctoral award)

- Ontario Graduate Scholarship
- Graduate Student Association MASc. and PhD Awards
- Conference Travel Grant

Campus Services and Training Opportunities

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Campus Services

- Health and counselling
- Graduate Students Association (GSA)
  - Health, dental, travel bursary
- Educational Development Centre (EDC)
  - Offers additional training and workshops
  - TA Skills Certificate

Paul Menton Centre (PMC)

- Centre to assist students with disabilities at Carleton

- Students self-identify at the Centre and then accommodations are made with the course Professor

- Can arrange accommodations for:
  - Exams
  - Additional time, quiet room, assistive technology, etc..
  - Classrooms
  - Recorded lectures, note takers, priority seating

- Accommodations do not extend to assignments and labs

- Arrangements for late assignments are at the Professor's discretion

Lab/Shop Safety and Services

Prof. Jeremy Laliberté (jeremy.laliberte@carleton.ca)
Department of Mechanical and
Aerospace Engineering

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Who to Call

- **To report an Emergency** call University Safety at:
  - **Extension 4444** from any office or lab telephone, or
  - **613-520-4444** from any campus pay phone or cellphone for Police/Fire/Ambulance response
  - **Do not** call 911 directly – this may delay the response
  - University Safety will dispatch campus safety personnel and coordinate with external first responders
- Non-emergency 24 hr Campus Safety contact desk
  - 613-520-3612
- Facilities/Maintenance issues (e.g. lighting, cooling, elevators, etc)
  - Email FMP.Service.Centre@CUNET.CARLETON.CA
  - CC Steve Truttmann (steve.truttmann@carleton.ca)

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Laboratory Health and Safety - Personnel

- Safety is the joint responsibility of students and everyone at Carleton
- Key personnel:
  - MAE Dept. Chair: Edgar Matida
  - Associate Chair, Laboratory Ops and Research: Jeremy Laliberte
  - MAE Computer supervisor: Shadi Laham
  - Laboratory and Shop Staff:
    - Steve Truttmann (Lab Supervisor)
    - Jason Anstey
    - Rob Fatoric
    - Sherry Ghandali
    - Salman Shafi
    - Stephen Vickers
    - Stephan Biljan (Shop Supervisor)
    - David Raude
    - Kevin Sangster
    - Eamonn Tuck
    - Tao Zhang

Laboratory Health and Safety Training

- https://carleton.ca/ehs/
- Mandatory training
  - Graduate students must complete online WHMIS and Worker Safety Awareness
  - Undergraduate students must complete WHMIS and one of ECOR, FED or EHS Worker Safety Awareness training
- Additional training
  - All TAs who supervise any teaching labs must complete Supervisor Safety Training
  - Graduate/undergraduate students conducting research in any MAE lab space must complete the in-person LabSafety training course
  - Hazard-specific training for Lasers, Biosafety, Radiation, Fieldwork, etc.
  - Discuss with your supervisor and/or Chair of Lab Operations (Prof. Laliberté)

Health and Safety Training Summary

Training Name	Provider	Format	Who Completes
Supervisor Health and Safety Training	EHS	Online - asynchronous	Anyone supervising, coordinating, or organizing the work of others; TAs
LabSafety	EHS	In Person - Scheduled	Anyone working in a lab
WHMIS	EHS/Chemistry	Online- asynchronous	All staff, students, faculty, graduate students, and TAs including casual
Worker Health and Safety Awareness (equivalent to FED H&S)	EHS	Online - asynchronous	All staff, faculty, graduate students, and TAs including casual
FED Health and Safety (equivalent to Worker H&S)	FED Training page	Online- asynchronous	All Capstone and Design Teams
Basic Shop Tool Training	FED Training page		All Capstone and Design Teams; other students
Advanced Shop Tool Training	EDC Staff	In person by appointment	As required for specific equipment
Composite Health and Safety	FED Training Page	Online- asynchronous	As required prior to booking Composites Shop

Laboratory Health and Safety Guidelines

- Students are expected to read and understand the Laboratory Health and Safety Manual available at:
  - https://carleton.ca/ehs/wp-content/uploads/sites/12/Laboratory-Safety-Manual_FINAL_Jan-2020.pdf
- If you have any questions ask your supervisor/staff **before** you begin
- No open toed shoes or sandals are allowed in the machine shop or any MAE Laboratory including EDC
- No shorts when working with “chip/debris” making processes

Laboratory Health and Safety Guidelines

- During regular work hours (0800-1600), ensure that a Laboratory Support Staff is aware of your presence.
- Outside of work hours (0800-1600), work in any Carleton Laboratory:
  - must be performed only after consultation with your supervisor;
  - **must not be done alone without a work alone plan;**
  - must be performed in compliance with the Carleton University Health and Safety Manual (https://carleton.ca/ehs/programs/working-lab/laboratory-health-and-safety/)
- Ensure your WHMIS/EHS training requirements have been met!

Housekeeping

- Work areas must be kept clean and free of obstructions
- Stairways and halls must not be used for storage: this applies to both equipment and personal property
- **Bicycles/e-scooters are not allowed in buildings**
- Walkways and aisles in laboratories must be kept clear
- Access to emergency equipment or exits must never be blocked. (Ontario Regulation 851 Section123 (2))

Housekeeping Cont'd

- Any time you use any laboratory equipment or space, ensure that you budget enough time to do a thorough clean up before you leave the lab
  - Sweep up and dispose of any form of debris caused by your work
  - If any equipment, or furniture is moved to perform the work, return it to it's proper location after use
  - Return all borrowed materials, tools, and equipment
  - Even if you did not personally create a portion of the mess, please take the high road, and clean it up anyway!

MAE and EDC Manufacturing Facilities

- Accessible to all undergraduate and graduate students
- Main MAE Shop – ME 2159
- 3D Printing Lab – ME 2521 (EDC)
- Mechatronics Lab – ME 3512 (EDC)
- EDC Shop – ME 2515 (EDC)

MAE/EDC Fabrication Process

1. **Submission – Qreserve (https://my.qreserve.com/login)**
   - Job request is submitted for approval prior to being placed in the queue.
2. **Triage / Initial Consultation**
   - Approved work orders are reviewed with shop staff to provide feedback and ensure that the project may be manufactured as designed.
3. **Revision**
   - Changes identified during consultation are implemented and design is finalized.
4. **Fabrication**
   - Part(s) are manufactured on site based on revised design.
5. **Delivery**
   - Fabricated design is delivered for final approval.

Manufacturing and EDC Service Contacts

- MAE/EDC Machine Shop and Composites Manufacturing
  - Stephan Biljan stephan.biljan@carleton.ca
  - https://carleton.ca/mae/machine-shop/
- EDC 3D Printing Lab
  - Stephen Vickers StephenVickers@cunet.carleton.ca
- EDC Mechatronics Lab
  - James Cann james.cann@carleton.ca
- Basic shop training (mandatory for all Capstone students and EDC areas)
  - https://brightspace.carleton.ca/d2l/home/176427

Faculty EDC and Machine Shop Websites

FED Portal for all EDC Services
https://carleton.ca/engineering-design/engineering-design-centre/

MAE/EDC Machine Shop Portal
https://carleton.ca/mae/machine-shop/

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Work Order Priority*

1. Urgent teaching lab/facility maintenance
2. Undergraduate coursework (e.g. Capstones, design courses)
3. Regular teaching lab maintenance
4. Research support
5. Extracurricular projects (e.g. CPRT, CUInSpace)

*this will be adjusted at the discretion of staff at different times of the year and during peak and off-peak times

Department Contacts

- Department Chair
- Associate Chair – Lab Ops and Research jeremy.laliberte@carleton.ca
- Lab Supervisor steve.truttmann@carleton.ca
- Shop Supervisor stephan.biljan@carleton.ca
- MAE Computer Systems shadi.laham@carleton.ca

To Do List.....

- Make sure you have marked your attendance today
- Get in touch with your TA supervisor
  - Meet with the professor(s) and TAs assigned to the same course
  - Understand and discuss your duties
  - Complete and sign the ‘assignment of duties’ form
- Get in touch with your thesis supervisor(s)
  - They ultimately decide when you have completed your thesis studies
  - They are your best resource for help with course selection, reference materials, general advice with your studies
  - Most problems arise when students and supervisors stop communicating
- Finish all the safety trainings you need to complete before you start in a lab as a student or a TA
  - Absolutely, no compromise with the safety, not only for you, but for the ppl around you
- Have fun during your studies!