

MAE Department Graduate Orientation

8 September 2026

Prof. Jeremy Laliberté (Assoc. Chair –
Aerospace) on behalf of Prof. Mostafa
El Sayed

Associate Chair (Graduate Studies – Ph.D., M.A.Sc. & M.Eng)

MAE Graduate Orientation

10:30 - Department Presentation

11:00 - GSA Video

11:15 - CEGSA Presentation - Eleanor Mcsporrان

11:30 - CUPE 4600

11:45 - Q&A

- 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** (JanetPerras@Cunet.Carleton.Ca), the graduate administrator, located in the main Mech & Aero Office (3135 ME)
 - course credits, registration, seminars, defenses,...
- For SERG program students, your first point of contact is **Gwen Morgan** (GwenMorgan@cunet.carleton.ca) and Prof. **Jean Duquette** (JeanDuquette@cunet.carleton.ca)
- For computer and network support **Chris Kirupairajah** (ChrisKirupairajah@cunet.carleton.ca), System & Network Specialist, (2232 ME) is the person to consult
 - account issues, access to computer licences, various graduate lab spaces,
- If Janet or Chris are not available, you may seek help from **Irene Helder**, the department administrator

People who can help you

- For less routine issues or those involving faculty, see associate chair for graduate studies (CB3206 – Mostafa.elsayed@carleton.ca)
 - **Prof. El Sayed** is your advocate to help you succeed with your degree
- 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** (Stephan.biljan@carleton.ca), supervisor of the machine shop (2159ME), to coordinate your activities.
- For Lab operations (research and teaching) consult **Steve Truttmann** (steve.truttmann@carleton.ca), MAE Lab Operations Manager (office in the EDC)

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.

- 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 your supervisor/instructor, technologist staff, and/or Prof. Matida (Dept Chair)
- Speak with the appropriate technologist BEFORE running any experiment or equipment (see **Steve Truttmann**, MAE Lab Operations Officer)
- Complete MANDATORY online training (asynchronous Brightspace)
 - Access for Ontarians with Disabilities Act (AODA)
 - Environmental Health and Safety (EHS)
 - Violence and Harassment
- Complete any MANDATORY training (offered by EHS)
 - Laboratory safety (in person 2-3 times per term)
 - Biosafety (in person 1-2 times per term)
 - Laboratory supervisors (online)

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

Academic Integrity Issues

carleton.ca/registrar/academic-integrity/

Examples of violations (The following is a partial list of violations. See the full Academic Integrity Policy for more information).

Plagiarism:

- Submitting work written in whole or in part by someone else
- Failing to acknowledge sources through the use of proper citations when using work of someone else

Test and Exam Rules:

- Attempting to read another student's exam paper
- Speaking to another student (even if subject matter is irrelevant to test)
- Using material not authorized by the examiner

Other Violations

- Improper access to confidential information such as exams or test questions
- Disruption of classroom activities or periods of instruction
- Misrepresentation of facts for any academic purpose

Responsibilities as a graduate

Listed in graduate calendar

- Aerospace, Mechanical and Materials

<https://calendar.carleton.ca/grad/gradprograms/mechanicalandaerospaceengineering/>

- Biomedical

<https://calendar.carleton.ca/grad/gradprograms/biomedicalengineering/>

- Sustainable Energy

<https://calendar.carleton.ca/grad/gradprograms/sustainableenergy/>

The Graduate Calendar

- The graduate calendar defines the expectations/requirements of your degree and **MUST BE FOLLOWED**
 - You should all bookmark the graduate calendar of your program 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 Prof, El Sayed

Course Requirements

- A full course load for a graduate student is considered 2-4 courses per term
- No graduate courses at Carleton during summer term
- 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) from the **start** of your studies

Course Requirements – Degrees with Thesis

- MSc students expected to take 5 x 0.5 credit *graduate level* courses as part of their degree requirements.
- PhD students are expected to take 3 x 0.5 credit *graduate level* courses as part of their degree requirements.
- 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 – *exceptions*’
 - Fourth year courses are very rarely used to satisfy these requirements with the ‘approval of the department - *exceptions*’
- The intent of these exceptions 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/relevant to them.

Course Requirements – M.Eng.

- M.Eng. students expected to take 10 x 0.5 credit *graduate level* courses as part of their degree requirements.
- M.Eng. projects are possible, but you must speak with a professor to define a project
 - Project is the equivalent of 3 courses (1.5 credits)
 - Summer is a good time to complete the project

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 and **presentation of a seminar on your research**
 - For MEng students, no seminar requirement.
- At least 50% of these must be official seminars offered by our department or the Mechanical Engineering department at the University of Ottawa
- Outside seminars must be accessible and advertised to all MAE students
- 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

Proposal/Comprehensive Exam (PhD)

- For PhD students the oral comprehensive exam must be attempted before the end of your fourth 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 4 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.

- 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 MSc. and PhD Awards
- Conference Travel Grant

Campus Services and Training Opportunities

Campus Services

- Health and counselling
- Graduate Students Association (GSA)
 - Health, dental, travel bursary
- Carleton Engineering Graduate Student Association (CEGSA – new)
 - <https://carleton.ca/engineering-design/cegsa/>
- Teaching and Learning Services (TLS)
 - 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,
 - Recorded lectures, note takers, priority seating, etc...
- 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

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)

Laboratory Health and Safety - Personnel

- Safety is the joint responsibility of students and everyone at Carleton
 - MAE Dept. Chair (also covering Lab Operations Associate Chair Role): Edgar Matida
 - Your supervisor(s)/Instructor(s)
 - MAE Computer supervisor: Chris Kirupairajah
 - Laboratory and Shop Staff:
 - Steve Truttmann (Lab Supervisor)
 - James Cann
 - Rob Fatoric
 - Oksana Kutova
 - Salman Shafi
 - Stephen Vickers
 - Reda Yassin
 - 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 Workplace Hazardous Materials Information System(WHMIS) and Worker Safety Awareness
- Additional training
 - **All TAs who supervise 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 lab staff

Health and Safety Training Summary

Training Name	Provider	Format	Who Completes
Supervisor Health and Safety Training	Environmental Health and Safety (EHS)	Online - asynchronous	Anyone supervising, coordinating, or organizing the work of others; <u>TAs</u>
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 Section 123 (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 students working in MAE/EDC shops)
 - <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/>

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 – Edgar Matida – edgar.matida@carleton.ca
- Lab Supervisor steve.truttmann@carleton.ca
- Shop Supervisor stephan.biljan@carleton.ca
- MAE Computer Systems ChrisKirupairajah@cunet.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 training you need to complete before you start in a lab as a student or a TA
 - Absolutely, no compromise with safety, not only for you, but for the ppl around you.

MAE Graduate Orientation

10:30 - Department Presentation

11:00 - GSA Video

11:15 - CEGSA Presentation - Eleanor Mcsporrان

11:30 - CUPE 4600

11:45 - Q&A