

**Welcome to  
Electrical and Computer  
Engineering  
MAsc. & Ph.D. Orientation**

**Friday, September 13, 2024  
10:45 a.m. – 11:30 a.m.  
ITB A113 B**

***Dr. Shiva Kumar  
Associate Chair  
Graduate***



# Welcome to ECE!

## Agenda

- Introductions
- Message from the Chair
- About ECE
- Degree Options
- Course Offerings
- Graduate Exams
- Student Requirements
- Teaching Assistantship
- Lab Safety
- Co-op, Career & Experience
- Health and Safety
- Before You Ask
- Get Involved



# Introduction - ECE Main Contacts



Clara Lau  
Administrative Graduate Assistant  
(interim)



Cheryl Gies  
Administrative Graduate Assistant  
(on leave)



Mary-Anne Bechamp  
Team Lead,  
Academic Programs



Dr. Shiva Kumar  
Associate Chair, Graduate  
Professor



Dr. Mohamed Bakr  
Department Chair  
Professor



Shelby Gaudrault  
Academic Department Manager



Brittany Donovan  
Administrative Assistant



Tracey Coop  
Undergraduate Administrative Assistant

[More Faculty and Staff](#)



Dr. Mohamed Bakr  
Department Chair

# A Message from Our Chair

Welcome to the Department of Electrical and Computer Engineering (ECE)!

Our department is one of the fastest growing in McMaster with 44 faculty members from diverse areas of electrical and computer engineering. Our talented professors and students are changing the world through their research.

Our faculty and staff members are committed to delivering the best learning experience to our students.

We are proud to welcome a pool of new talented graduate students.



# ECE by the Numbers

44

Faculty

- 2 Canada Research Chair holders
- 6 IEEE fellows
- 3 funded chairs
- 3 Fellows of the Royal Society of Canada
- 2 Distinguished University Professor
- 4 Emeritus












14

Administrative  
and Tech Staff

# ECE by the Numbers

9  
Areas of  
Specialization

 <p>Biomedical Technologies</p>	 <p>Communication Technologies, Systems &amp; Networks</p>	 <p>Electrified &amp; Autonomous Transportation</p>
 <p>Electromagnetics &amp; Photonics</p>	 <p>Integrated, Embedded and Interconnected Systems</p>	 <p>Microelectronics &amp; VLSI</p>
 <p>Optimization, Learning &amp; Control</p>	 <p>Power Electronics &amp; Electric Machines</p>	 <p>Signal, Image &amp; Video Processing</p>



McMaster University Automotive Research Centre



Centre for Research in Micro- and Nano-systems

2  
Centers and  
Institutes

# ECE by the Numbers

291

Graduate  
Students

## Graduate Students:

- 74 Meng
- 63 MASc
- 154 PhD

1078

Undergraduate  
Students

## Undergraduate Students:

- 265 Level 2
- 275 Level 3
- 299 Level 4
- 55 Level 5
- 184 Co-op





Dr. Shiva Kumar  
Associate Chair,  
Graduate

# Degree Options & Requirements

## MASc

### Course Requirement

- Completion within 24 months
- 4 “half” (3 unit) courses or equivalent
- 2 must be 700-level within ECE
- Maximum of one ECE 600-level\*
- ECE 790 or ECE 792
- Courses outside ECE\*
- Consult with supervisor

\*department consent required

### Degree Requirements

- Completion of SGS 101 – due Sept 30, 2024
- Completion of SGS 201 – due Sept 30, 2024
- Completion of Career Planning Report (CARP) - due 1 year from start of term
- Health & Safety
- Supervisory Meeting Progress Report – due 1 year from start of term, or as directed
- MASc thesis submission and oral defence

\* Refer to ECE handbook for dates

Option to transfer to PhD – must discuss with supervisor and apply through to SGS

 [Request for In-Program Adjustment Form](#)  
Complete this form if taking courses outside of ECE to count towards your degree completion

# Degree Options & Requirements

## PhD

### Course Requirement

- Completion within 48 months
- 3“half” (3 unit) 700-level courses or equivalent from within ECE
- ECE 790 or ECE 792
- Courses outside ECE\*
- Consult with supervisor

\*department consent required

### Degree Requirements

- Completion of SGS 101 – due Sept 30, 2024
- Completion of SGS 201 – due Sept 30, 2024
- Completion of Career Planning Report (CARP) - due 1 year from start of term
- Health & Safety
- Supervisory Committee Meeting – due 1 year from start of term, and every year afterwards\*
- Comprehensive Exam – due by 24 months
- PhD thesis submission and oral defence

\* Refer to ECE handbook for dates

 [Request for In-Program Adjustment Form](#)  
Complete this form if taking courses outside of ECE to count towards your degree completion

# Degree Options & Requirements

## Transfer from MASc to PhD

Student can apply to transfer from MASc without defending a Master's thesis with supervisor permission and re-apply for PhD. Direct entry PhD must also meet the following requirements:

### Course Requirement

- 6 “half” (3 unit) 700-level courses or equivalent
- 4 must be within ECE
- Max 2 700-level can be taken outside the department\*
- Maximum of one ECE 600-level\*
- ECE 790 or ECE 792
- Consult with supervisor

\*department consent required

### Degree Requirements

- Completion of Career Planning Report (CARP) - due 1 year from start of term
- Supervisory Committee Meeting – 1 per academic year\*
- Comprehensive exam – due within 24 months of start of program
- PhD thesis submission and oral defence

\* Refer to ECE handbook for dates and information

 [Request for In-Program Adjustment Form](#)  
Complete this form if taking courses outside of ECE to count towards your degree completion

# Course Offerings: ECE Courses

- Graduate level courses are numbered using 700 series (e.g. 701, 702, ...)
- 600 level courses are combined with 400-level undergraduate courses.
  - Courses at the 600-level usually have an additional assignment
  - Limited seating is available
  - Reminder – instructor permission is required for 600-level courses
- Course offering are available on:
  - ECE website
    - Courses Tab
    - Resources/Graduate Tab
  - Mosaic
  - Academic Calendar
- Unless otherwise indicated, courses are held in person
- Most courses use Avenue to Learn
- Consult with your supervisor.



# Course Offerings: Other

- 700-level courses outside ECE may require permission from instructor
- Must complete permission form, for the courses to count towards degree completion
- Courses outside of McMaster may count towards degree completion, only if similar courses are not offered by the department or the University.

Additional questions consult with your supervisor.

General inquiries consult with grad admin.



**Final date to add course: September 20!**

**Final date to drop a course without a W/F grade on transcript - October 8!**



[Request for In-Program Adjustment Form](#)

Complete this form if taking courses outside of ECE to count towards your degree completion

# ECE 790/792

## Foundational Communication Skills for Graduate Research in ECE

Students in MEng Project must take either ECE 790 or ECE 792

### ❖ ECE 790

- develop skills in communicating their research to a broad audience via a series of workshops and coaching sessions, culminating in a graduate student research presentation day

### ❖ ECE 792

- an enriched version of ECE 790 providing coaching on technical presentations, such as those typically given at conferences or in group meetings, and on technical writing

Consult with your supervisor about which course to take.

REMINDER! Non-credit, pass/fail grading.




# F Grade

The minimum passing grade in a graduate course is a B-

- Failure in a course is reviewed by the School of Graduate Studies and requests a departmental recommendation regarding the student
- In the absence of a department recommendation, the student will be required to withdraw
- Those allowed to remain, must either repeat or replace the failed course
- A second F-grade will not normally be allowed to continue in the program
  
- F-grades remain on the transcript
- If you run into difficulties, talk to graduate advisor or your project supervisor before the DROP date

Ref: [Academic Calendar Section 2.6.11](#)

 Final date to add course: September 20!  
Final date to drop a course without a W/F grade on transcript - October 8!



# Comprehensive Exam

- ❑ Must be taken with 24 months from start of term
- ❑ Must have had a satisfactory supervisory committee meeting

## Objective:

1. to demonstrate **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.
2. 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.

## Structure:

Supervisor + comprehensive exam committee members + comprehensive committee chair (ECE faculty member)

## Part A:

Oral examination on any 2 topics chosen by the examination committee of which the student has taken

## Part B:

A report and 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.

# Comprehensive Exam - Unsuccessful

- Students who are unsuccessful will be notified by the chair.
- If the student fails one or more parts of the examination, he/she needs to re-do only the ones that he/she failed.
- Unsuccessful comprehensive exams will be communicated to the School of Graduate Studies. The grade will not be reported on transcript.
- A 2<sup>nd</sup> attempt date will be discussed by the committee and/or upon review by the School of Graduate Studies.
- A 2<sup>nd</sup> fail will be reported and be required to withdraw from the program.

# Supervisory Committee Reports

- Each student must declare their supervisor within 5 months from start of term.
- Each PhD student must declare their supervisory committee member within 8 months from start of term.
- Watch for communication from the grad admin.

- Supervisory Meeting Progress Report – due 1 year from start of term, or as directed
  - Paper/digital form
  - Complete form and send completed form to Grad Admin
  - Grad Admin will update to SGS for entry into Mosaic

• If planning to transfer, a report within 6 months will be required.

## MASc

1<sup>st</sup> report due 1 year from start of term

- Must complete once a year
- Online reporting process
- Initiated by grad admin
- Supervisory committee members must be updated and accurate
- Upon completion and approval by the department, SGS will update for degree requirement

## PhD

1<sup>st</sup> report due by Nov 30, 2025



[Supervision guidelines for programs](#)



Mary-Anne Bechamp  
Team Lead, Academic Program

# Student Requirements

By now the following should be complete:

- SGS 101 – due Sept 30
- SGS 201 – due Sept 30
- Enrolled in all three terms
- Have your McMaster email and MS Teams
- Have your student card – One Card
- Updated your personal information and banking details
- Received graduate funding

<p><b>Step 1: Register</b></p> <p>On-time registration opens June 25 and runs until August 1. To avoid late fees, please register before the on-time registration deadline.</p> <p><a href="#">How to enrol</a></p>	<p><b>Step 2: About your Mac ID</b></p> <p>Your Mac ID is essentially your username for accessing services and systems at McMaster.</p> <p><a href="#">Learn more about Mac ID</a></p>	<p><b>Step 3: Your McMaster email address</b></p> <p>Once you have your Mac ID set up and have enrolled in your courses, your McMaster email will become active. A link to your McMaster email will be sent to your applicant email address. Please continue to monitor your applicant email address in the meantime.</p> <p><a href="#">Visit the MacCard website to</a></p>	<p><b>Step 4: Upload your photo for your student card</b></p> <ul style="list-style-type: none"><li>review photo upload guidelines and a helpful video tutorial</li><li>learn about the different card pickup dates and locations</li></ul> <p>Please upload your photo no later than August 1, to ensure your card is ready for pickup at the scheduled delivery sites.</p> <p><a href="#">Visit MacCard for details</a></p>
<p><b>Step 5: Update your personal information</b></p> <p>It's important to update your personal and contact information – especially your address – in <a href="#">Mosaic</a>, so that you receive all important information. You can add a new address or revise an existing one. Your "Mailing Address" will be the address to which you receive any mail from the university.</p> <p><a href="#">Go to Mosaic now</a></p>	<p><b>Step 6: How to enrol in – and complete – SGS 101, 201</b></p> <p>All new graduate students must complete SGS 101 and 201. Learn more about enrolling and completing the courses by the Fall deadline: <b>September 30, 2024</b>.</p> <p><a href="#">SGS 101 and 201</a></p>	<p><b>Step 7: Receiving your scholarship monies, research funds and TA pay</b></p> <p>Make sure you update and/or set up your information to ensure you receive your scholarship and research funds when expected, as well as your teaching assistant (TA) pay on time (for those students who have a TA position).</p> <p><a href="#">Fees and payment</a></p>	<p><b>Step 8: Review all dates and deadlines</b></p> <p>Dates and deadlines to help you</p> <ul style="list-style-type: none"><li>avoid late fees and interest payments</li><li>receive your first grad pay on time</li><li>more</li></ul> <p>NOTE: The Graduate Calendar is the most accurate source for sessional dates and deadlines.</p> <p><a href="#">See dates and deadlines</a></p>

Getting ready for life at McMaster!

I'm starting my journey  
in September 2024.

# Student Requirements

## Your degree is your responsibility!

Please make sure to review the following department requirements:

- Carefully review the [ECE handbook](#) – ECE website/Resources/Graduate
- Enroll in all three terms
- Complete SGS 101 & SGS 201- due Sept 30
- Complete Career Planning report – due 1 year from start of program
- Complete appropriate Health and Safety
- Review your academic advisement report in Mosaic for updates on degree requirement/completion
  
- Update your Degree Checklist – Coming Soon!



# Student Requirements – Career Planning

Graduate students are required to attend 1 of 3 Career Action Report Planning workshops during their 1st year of studies.

- Register in Oscar
- Attend a workshop
- Complete the required report
- Submit the completed report to the grad admin within 1-year of start of program

**Deadline:** August 31, 2025

# Teaching Assistantship

Please check your offer to see if you have a teaching assistantship.

- TAs will be assigned as outlined in your offer letter.
- Most are assigned in Fall and Winter term.
- Your supervisor may decide to give you a RA in lieu. This means they will pay the amount of the TAship and instead you will focus on research.
- You can decline or defer your TAship. You can defer once, but once you decline you decline all benefits that come with your TAship.
- All TAs must complete 3 paid hours of Health and Safety training. Your instructor will tell you which training to complete.





# Teaching Assistantship – Potential TA Duties

Please check your offer letter to see if you have a teaching assistantship.



## Tutorial Instructure

Presents problems, solutions, take ups assignments, etc.

May develop and post tutorial problem/solutions on course website or library.

Provides valuable experience in teaching and presentation skills



## Lab Assistant

Assist undergraduate students in the labs.

Security and Safety is a primary concern.

The lab should never be left unattended, and locked when the lab is complete.

Discuss with the instructor at the start of term



## Marking /Grading

Mark and grade mid-terms, lab write-ups exams.

It is very important you do not leave graded exams left out in the open.

Return all exams to the instructor for proper dispersal or destruction.

# Lab Safety

Students assigned a Teaching Assignment, will be required to complete lab safety training. The instructor of the course will advise which lab safety requirements you are to select.



- Some laboratories have equipment which can be dangerous if not used properly.
- The ECE Lab Safety quiz must be taken every term by all users of ECE Labs (undergraduate students and TAs).
- The Safety Quiz should be part of the course shell on Avenue.

## Required Readings:

- general lab safety and emergency information
- Lab Safety Manual for Computer Labs
- Lab Safety Manual for Electronics Labs
- Lab Safety Manual for Electromechanical Labs (Power Electronics, Machines, Drives and Control courses)



[Visit the ECE page/Resources/Lab Safety](#)



# Co-op, career & experience

The Centre for Career Growth and Experience (the Centre) team supports students with employment preparation and career readiness, connects students with employers and provides opportunities for students to gain meaningful experiences.



[Visit Co-op for Graduate Students](#)

# Graduate Co-op and Career & Experience

Master's and PhD students may complete 4 to 12 months of co-op experience

- Attend one of the interactive Graduate Co-op Information Sessions in the fall or winter term - visit [OSCARplus event calendar](#) for dates.
- Speak to your academic supervisor (MAsc/PhD) or department admin (MEng)
- Complete the [Graduate Supervisor Permission Form](#) prior to the final date to [add courses](#)
  - MEng students only, the Associate Chair, Graduate acts as your supervisor
- **NOTE:**
  - MEng/MAsc - It is recommended that students complete ENGINEER 701 within the first 1-2 terms of study.
  - PhD – it is recommended that students complete ENGINEER 701 after 2 years of study.



[Visit Co-op for Graduate Students](#)

# Graduate Co-Op Services: Engineer 701

Once you have a comprehensive understanding of co-op, follow these steps to enroll in Engineering 701:

## Step 1

### Enroll

- Enroll directly in Mosaic for the ENGINEER 701 – C01 Work Term Preparation (Lecture) course.

## Step 2

### Register

- Complete the ENGINEER 701 Registration process  
<https://forms.office.com/r/mppBz9bTAK>

## Step 3

### Email

- Submit your signed permission form to [gradcoop@mcmaster.ca](mailto:gradcoop@mcmaster.ca)
- Include your student number in the body of your email).

# Co-op and Career & Experience

Before registering your co-op work term, here are some important reminders and information:

**Scholarships and Teaching Assistant (TA) Responsibilities:** If you are a student receiving a scholarship or have committed to being a TA in upcoming academic terms, please notify your department administrator and academic supervisor about your job opportunity.

## **International Students:**

Ensure that your co-op work permit remains valid throughout the entire duration of your co-op. If additional paperwork is required or if you have any questions regarding work permits, please contact [immigration@mcmaster.ca](mailto:immigration@mcmaster.ca) or [gradcoop@mcmaster.ca](mailto:gradcoop@mcmaster.ca)

## **GSA Supplementary Plans:**

Please be aware that certain services, such as extended health and dental coverage/access to the HSR may be temporarily impacted for students on long-term co-op placements if they are not enrolled in academic units. For more information visit <https://gsa.mcmaster.ca/services/health-and-dental/>

## **Student Loans:**

Please be aware that they may be affected by your co-op work terms, particularly if your co-op work term is longer than 6 months. If you have any questions about how your co-op work term may impact your student loans, please reach out to the Student Financial Aid office for guidance.

# Co-op and Career & Experience

## Courses While Working:

The only course that should be on your record for the term(s) while you are on co-op is Engineer 702, if you have any remaining courses other than Engineer 702, this will result in you being charged for tuition those terms. **You will not be able to drop your last course so please let us know and we will write SGS to have your last course deleted for the term.**

## Fees:

Enrollment in your first Co-op work term (done by ECCS) will trigger a one-time charge of \$1300.00 added to your student account. Payment of fees is due at the beginning of the work term, and late payment will be subject to interest/late charges. This charge is only applied to your first Co-op term, and there are no additional career fees for subsequent work terms.

Once we have reviewed and processed the submitted documents, we will respond to you and inform your department accordingly. If you have any further questions or concerns, please don't hesitate to contact us. We wish you the best for your co-op work term!

**It is your responsibility to review your mosaic record to ensure your tuition is correct so please review your record after the course has been dropped to ensure your tuition and courses are correct.**



Clara Lau  
Graduate Administrative  
Assistant



# Health & Safety Training

Health and Safety is mandatory for all graduate students.  
It is the responsibility of the student to complete the required training.

Core Health and Safety courses:

- SAFE training (replacing Slips, Trips and Falls, Asbestos Awareness, Fire Safety, Ergonomics)
- Health and Safety Orientation
- Violence and Harassment Prevention
- WHMIS 2015

**Deadline:** October 15



[Link: Human Resources Services \\* Employee \\* Health, Safety & Well-Being \\* Our Safety \\* Health & Safety Training](#)

# Before You Ask

Familiarize yourself with these resources:

- [ECE Website](#)
- [Graduate Resources – ECE Handbook](#)
  - Use the graduate book that is assigned on the start of our admission
- [Academic Calendar](#)
- [School of Graduate Studies - SGS website](#)



Everything is searchable!

Put key words in any search engine:

- graduate
- McMaster
- ECE

[All](#) [Images](#) [News](#) [Maps](#) [Shopping](#) [More](#) [Tools](#)

About 691,000 results (0.59 seconds)

<https://gs.mcmaster.ca> > [dates-and-deadlines](#) > [adding-d...](#) ▾

[Adding / dropping courses – School of Graduate Studies](#)

Final dates to add **courses**. Fall term. Winter term. Summer term. Multi-term **courses**, September 24. Single-term or 1HF **courses**, September 24, January 21 ...

# Get Involved

Students are encouraged to get involved:

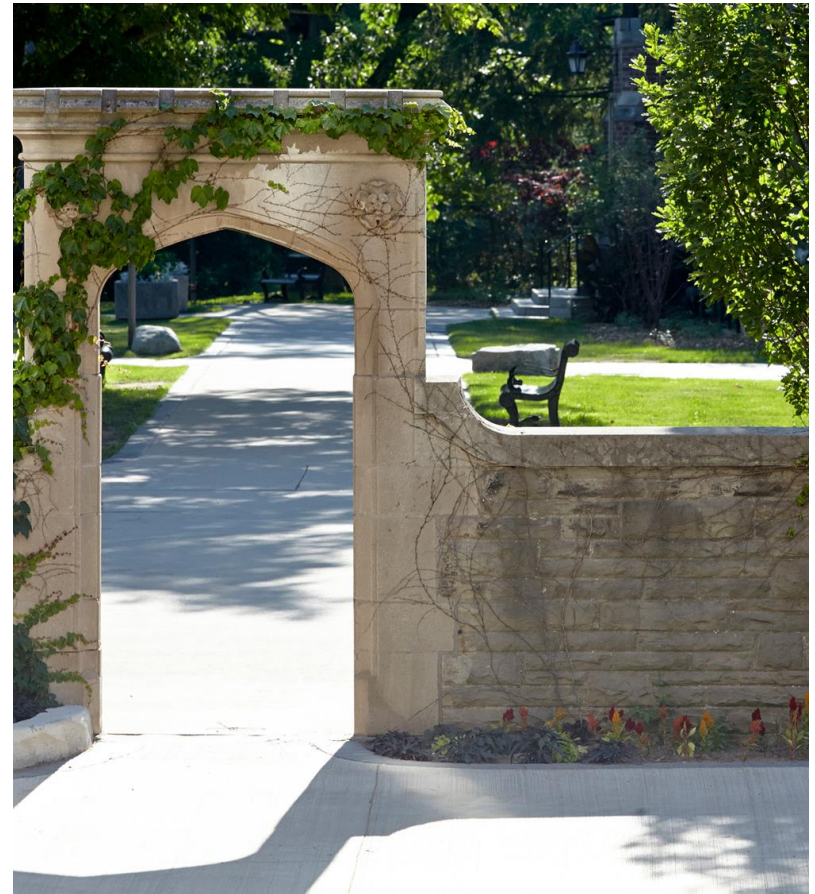
- ❖ ECE Fiesta
  - Graduate student group meets bi-weekly for coffee and conversation
- ❖ Engineering Graduate Society
  - a student run organization dedicated to supporting engineering graduate
- ❖ School of Graduate Studies Events
  - Hosts a variety of events and workshops for new, current and international students
- ❖ Graduate Student Association
  - Supports a variety of graduate clubs and events



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# Introduction to Fiesta: ECE Graduate Students' Club

Ali Abassi, ECE Fiesta President

September 2024



# Introduction to ECE Fiesta

Who we are!

- A student-oriented club
- Events we hold:
- Coffee house
- Board game nights
- Halloween parties, etc.



# Current Members



President:  
Ali Abbaei



Vice President:  
Mohamed Elsayed



Vice President:  
Roxana Nikoukar



Event Organizer:  
Abu Illus Faisal



Administrative  
Assistant:  
Zahra Sadeghi



Administrative  
Assistant:  
Rihad Arfin



Treasurer:  
Yasaman Nilazi



Event Organizer:  
Sadra Tavakolian






Communication Chair:  
Lucas Nahid-  
Mobarakeh

# Social Accounts

You will receive event notifications over email and via our channels.

You will receive a series of slides from us about the *“things that help you settle down here”*!

 <p>Teams</p>	 <p>Instagram</p>
	<p><u><a href="#">ecefiesta_mcmaster</a></u></p>

Interested in joining the club?  
Just reach out to us!





**Questions?**