Schulich School of Engineering

Fall Orientation for MScs & PhDs

Department of Electrical and Software Engineering

Dr. Colin Dalton, Graduate Program Director
August 29, 2023

The University of Calgary, located in the heart of Southern Alberta, both acknowledges and pays tribute to the traditional territories of the peoples of Treaty 7, which include the Blackfoot Confederacy (comprised of the Siksika, the Piikani, and the Kainai First Nations), the Tsuut'ina First Nation, and the Stoney Nakoda (including Chiniki, Bearspaw, and Goodstoney First Nations). The City of Calgary is also home to the Métis Nation of Alberta Region 3.

9:00 – 9:45	**Welcome, Graduate Students Expectations, Important Information** ESE Graduate Program Director (GPD): Dr. Colin Dalton
9:45 – 10:00	**Social Break**
10:00 – 10:15	**Awards and Scholarships Applications** ESE Graduate Studies Scholarship Committee Chair
10:15 – 10:30	**Introduction to the Graduate Students' Association (GSA)** GSA VP Student Life
10:30 - 10:40	**ESE Graduate Students' Association** ESEG President
10:40 – 10.50	**Questions (Q&A)**
11:00 – 11.30	**Group photo of MEng and Thesis-based students** SSE Atrium/Social Staircase

Dr. Colin Dalton

- Associate Head of Graduate Studies
- cdalton@ucalgary.ca; Office: ICT 440; Phone: (403)-210-8464

Responsibilities

- Leader, and advocate for graduate education in our dept/faculty
- Responsible for budget (internal scholarships/awards, TA funding)
- Member of FGS council (central decisions on the graduate program)
- Manage and provide advice/direction for student concerns

Research

- Brain machine interfaces, micro-nano fabrication, electrokinetic microfluidics
- Microneedles for transdermal drug delivery and biosensing
- Currently supervising/co-supervising 3 PhD students, 4 MSc, 2 Techs and 1 RA

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**Department Head
Dr. Andy Knight**

**Associate Head
Research
Dr. Elise Fear**

**Associate Head
Graduate
Dr. Colin Dalton**

**Associate Head
Undergrad
Dr. Behrouz Far**

**MEng Software
Director
Dr. Yves Pauchard**

**MEng Electrical
Director
Dr. Yani Jazayeri**

- **Advice, program questions within ESE**
  - Please contact: ese.gradstudies@ucalgary.ca
  - Fatima Abdul-Halim: Graduate Program Advisor
  - Ella Lok: Graduate Program Advisor

  ONLY use @ucalgary
  email address!

- **Technical questions**
  - Dr. Colin Dalton (cdalton@ucalgary.ca), Graduate Program Director
  - Tip: good idea to copy the office ese.gradstudies@ucalgary.ca

- **Support through SSE**
  - https://schulich.ucalgary.ca/electrical-computer/programs/graduate
  - https://schulich.ucalgary.ca/current-students/graduate#field_collection_accordion-block-2

- **Support through FGS: grad.advisor@ucalgary.ca**
  - Yan Zhang, Graduate Academic and International Specialist
  - Marisa Norona , Graduate Academic and International Specialist

Faculty of Graduate Studies

Dr. Tara Beattie
Interim Dean and Vice-Provost of Graduate Studies

Dr. Clifton Cunningham
Associate Dean (Students)

Dr. Mary Grantham O'Brien
Associate Dean (Policy)

Dr. Donna-Marie McCafferty
Associate Dean (Scholarships)

Dr. Michelle Drefs
Associate Dean (Student Life)

If you feel you want some advice/help outside of the ESE department, please contact: grad.advisor@ucalgary.ca

  Dr. Yan Zhang or Marisa Norona

  — Graduate Academic and International Specialists

Student Concerns:

Supervisor conflict, funding problems, failed candidacy/exam, intellectual property, academic misconduct, leaves of absence, extension requests, barriers to progress etc.

Check the FGS Website: https://grad.ucalgary.ca/

Dr. Yan Zhang

Marisia Norona

Refer often to the onboarding email you received

— Lots of valuable advice, links, deadlines etc.

Cannot stress how important this email is!

Dear New Graduate Student,

Welcome to the Department of Electrical and Software Engineering!! We are very pleased that you have decided to join our department to pursue your Graduate studies.

Please note the following **requirements and information** to successfully launch your Graduate Program. **Please ignore the steps, which you have already completed**:

Launching your Graduate Program:
1. Setup your IT Account and get your **UCalgary email address**.
2. Initialize your grad program registration **ASAP**.
3. Send your signed Funding Admission Offer document to our office at ese.gradstudies@ucalgary.ca **before** the start of your program.
4. Arrange to **secure** **as soon as possible** the outstanding Admission's documents, which is listed on your conditional admission letter, so that the account "Hold Status" can be removed once documents are received.
5. **Confirm** to our office at ese.gradstudies@ucalgary.ca if you have arrived to campus, and if not yet, your travel date/plans. *(International Students)*
6. **Send** **as soon as possible** to our office at ese.gradstudies@ucalgary.ca a copy of your **study permit**, which you've receive(d) at the Canadian Customs. *(International Students)*.
7. At arrival **Apply** for a **Canadian Bank Account** and the **Social Insurance Number (SIN)**. **Enter** their information into your **MyUCalgary-Student Center** (as per attached instructions), so that the department funding can be deposited directly to your bank account **every 25th** of the terms' months.
8. **Arrange to pay** your outstanding Tuition Fees amount for the term, which is showing in your Student Portal by the Tuition and Fee Payment Deadline. Payment Plan options are available if you wish to apply for.
9. **Complete Online** Occupational Health & Safety Orientation and the Hazard Assessment Training **within the first two months in your graduate program**. Once completed, please **send** copy of the completion certificate to our office at ese.gradstudies@ucalgary.ca, so that it can be noted to your records.
10. **Review** the ESE Department New Graduate Students Orientation of Fall 2022 for more details about your Graduate Program (Regulations/Program Requirements/Funding policy, etc...). Please note that next orientation will take place in September 2023. Please contact our office at ese.gradstudies@ucalgary.ca if you wish to attend.
11. **Contact** our office at ese.gradstudies@ucalgry.ca if you have any inquiries/concerns regarding your graduate program.

With your supervisor:
1) **Complete and sign** the following Student Supervisor Expectations Checklist, Intellectual Property Awareness Checklist, and the attached **Academic Conduct Agreement for Graduate Students in the SSE**. Please **submit** back to our office at ese.gradstudies@ucalgary.ca the signed documents by **July 25, 2023 the latest**.
2) **Discuss** with your supervisor your graduate program requirements, and course selection, then register courses online via your Student Center.
3) **Enroll** to the Thesis-based **mandatory courses** ENGG 601 (Fall term) & ENGG 603 (Winter term). Contact our office, once ready to deliver the mandatory (2) presentations related to these courses.

Check the following important resources:
a. Newly Admitted Students Guide.
a. Graduate Calendar especially the Academic Schedule, Academic Regulations and ESE Program Description.

- You are expected to behave as a **Professional Engineer**
  - Be pro-active, contribute to your department, University, and society
  - Solve complex problems, and stand behind your work

- Engineers require a combination of skills
  - Theoretical work, experimental work, computational work, course work, etc.
  - Don't forget communication and other 'soft' skills

- Each student is different
  - Funding, publication record, work schedule, etc.

- Challenging but rewarding
  - Strive to become excellent at public speaking, writing, overcoming your weaknesses, refining your strengths.

- Behave and represent the university and the department **professionally**

- Full time work
  - You are expected to work ~40 hours or more per week on your research project
  - Graduate students do not get the University reading breaks/summer terms off.
  - If you need time off – please talk to your supervisor

- Present and discuss your work
  - Paper publications, presentations, your parents, your cat etc.

- Earn the support you are receiving
  - Supervisors work hard to get the grants that support your work
  - Continued financial support is dependent upon your satisfactory performance in both research and course work
  - All MSc & PhD students are expected to complete the annual progress report in May

- Be the best
  - Try and become the best in your field!

- **Meet with your Supervisor!**
  - Complete the FGS Checklist of Expectations form
  - Complete the FGS Intellectual Property Awareness form
  - Complete the *Academic Conduct Agreement for Graduate Students* in the SSE
  - Review the Department *Graduate Student Research Professional Development Guide*

  - FGS forms available at:

  - https://grad.ucalgary.ca/sites/default/files/teams/3/Student_SV_Checklist_Revised_June%202023.pdf

  - https://grad.ucalgary.ca/sites/default/files/teams/3/su_ip_checklist_June%202022.pdf

  - Submit forms to ese.gradstudies@ucalgary.ca by October 13th 2023

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- **Teaching Assistant Positions**
  — An important obligation (a contract with the department and the course instructor)
  — Use this opportunity to improve your teaching, communication, and mentorship skills
  — You must complete the teaching assistant workshop

- **Scholarships**
  — Apply for scholarships to support your funding

- **Publications**
  — Ask your supervisor about opportunities to publish and present your research to the international community
  — Critical for scholarships
  — Supporting evidence for your thesis/defence

- **Absences**
  - Discuss with your supervisor and course instructor before going to a conference or vacation. Easier to plan in the summer semester.

- **Internships**
  - Encouraged but optional – internship currently is NOT an MSc or PhD degree requirement

- **Working on/off campus**
  - There are opportunities
  - Obtain your Supervisor's approval
  - Check with International Student Services (ISS)

- Complete 2 online safety courses
  - Occupational Health and Safety orientation
  - Hazard Assessment training
  - Other courses are required if you are working in a laboratory, talk to your supervisor

- To take the courses, do the following:
  - Go to https://my.ucalgary.ca and sign in
  - From the top bar click **My work**
  - Under Direct access click **PS Enterprise Learning** Click **My Learning**
  - Find the course and click on the detail page
  - If the presentation does not start, check to see if it is being blocked by your browser as a pop-up
  - Deadline to complete the courses: October 13th, 2023
  - Send a copy of Completion Certificate to ese.gradstudies@ucalgary.ca

Milestone	Fall2023	Winter 2024
Last Date to drop courses without financial penalty	Sept 14 2023	Jan 18 2024
Last date to add or swap courses	Sept 15 2023	Jan 19 2024
Last date to withdraw from a course	Dec 6 2023	April 9 2024
Tuition Fee/payment deadline	Sept 22 2023	Jan 26 2024

Implications of course withdrawal date (Fall 2023 illustrated below):
Withdraw on or before Sep. 14
    - No record of course on transcript and tuition is refunded
Withdraw any time between Sep. 15 and Dec. 6
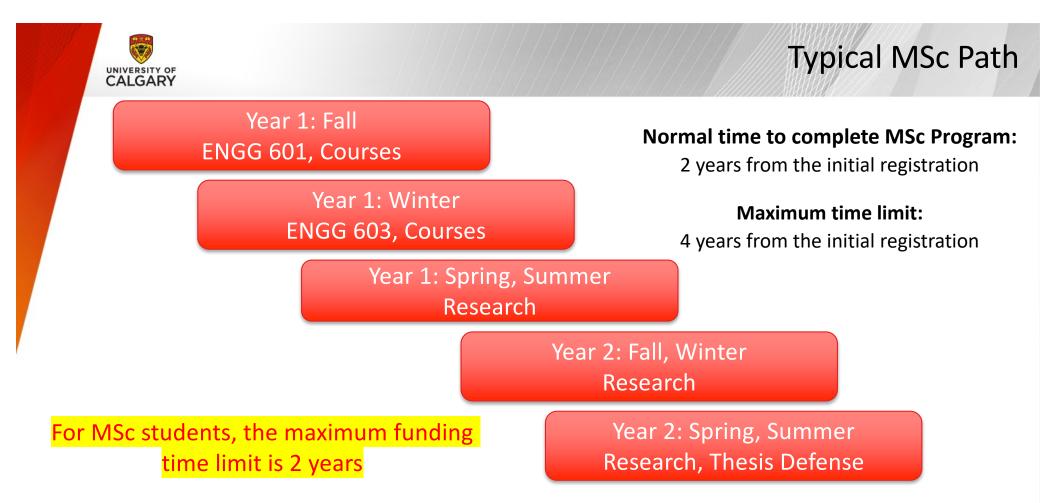   - "W" is recorded on transcript and tuition forfeited

CHECK
Onboarding email
Academic schedule

These are HARD deadlines!
https://www.ucalgary.ca/pubs/calendar/grad/current/academic-schedule.html

- Course requirements: 12-21 units of 600-level ESE 3-unit courses
  - At least three of the courses must be in the area of specialization/research
  - *At most* two 500-level courses may be taken, but will not count towards MSc course requirements
  - Up to two courses may be taken outside of the Department or Faculty (requires supervisor & Department approval)
  - *In addition to the above,* pass ENGG 601 (Fall) and ENGG 603 (Winter)

- Be under the guidance of a supervisor
  - Discuss course selection with Supervisor
  - Successful completion of MSc thesis research
    - write and defend the MSc thesis

- Normal time to complete MSc Program: 2 years from the initial registration
  - Note: For MSc students, the maximum funding time limit is 2 years

- Maximum time limit: 4 years from the initial registration

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Year 1: Fall
ENGG 601, Courses

Year 1: Winter
ENGG 603, Courses

Year 1: Spring, Summer
Research

Year 2: Fall, Winter
Research

Year 2: Spring, Summer
Research, Thesis Defense

Normal time to complete MSc Program:
2 years from the initial registration

Maximum time limit:
4 years from the initial registration

For MSc students, the maximum funding time limit is 2 years

- **Courses:** Two to five 600-level Courses beyond Master's degree
  - Six to nine 600-level courses beyond Bachelor's degree
  - At most one 500-level course may be taken <u>but will not count</u> towards PhD course requirements
  - No more than one course may be taken outside of the Department or Faculty (requires supervisor & Department approval)
  - ***In addition to the above,*** pass ENGG 601 and ENGG 603
  - ENGG 601/603 waived for students who obtained their MSc from the Dept.

- Be under the guidance of a supervisor
  - Discuss course selection with supervisor
  - Successful completion of PhD Candidacy (FOS and proposal) and thesis research
    - write and defend the PhD thesis

- Must have a Supervisory Committee in place within ***<u>3 months</u>*** of initial registration

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- Candidacy Requirements
  - Field of Study written examination (February and June)
  - Thesis proposal – written and oral examination components
  - <u>NOTE</u>: Please read the Candidacy policy, available online

- Complete all Candidacy requirements within ***28 months*** of first registration

- Successful completion of thesis research and oral thesis defense

- Normal Program Completion Time: 4 years from the initial registration

- Maximum Time Limit: 6 years from the initial registration

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Year 1: Fall
ENGG 601, Courses, Research

Normal time to complete PhD Program:
4 years from the initial registration

Year 1: Winter
ENGG 603, Courses, Research, FOS

Maximum time limit:
6 years from the initial registration

Year 1: Spring, Summer
Research, FOS exam

Year2
Research, Thesis Proposal Exam

Note: The path shown above is for a PhD program with MSc entry.
The corresponding path with BSc entry can be longer by 2 to 3 years, depending on the student.

Year 3-4:
Research, Thesis Defense

For PhD students, the maximum funding time limit is 4 years

Criteria to transfer from MSc to PhD online

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- Courses with a C+ (or lower) grade <u>will NOT count</u> towards the course requirements

- MSc students receiving a C+ (or lower) grade in any course are <u>required to withdraw</u> (RTW) from the Graduate program, regardless of overall GPA

- For PhD students, it is a B (or lower) grade

- MSc students must maintain a GPA of at least 3.0 to remain in program

- For PhD students, it is a GPA of at least 3.3

KNOW your course deliverables and grading scheme!
Pay attention to the course outline

- Academic misconduct is plagiarism or misrepresentation of data in:
  — Course work, Presentations, Thesis proposal, Publications, Thesis

- Academic Integrity: act ethically, honestly and with integrity
  — Submitted academic work are yours and were determined by you alone
  — Submitted academic work are in your own words, even when sharing notes with other students or using the Instructor lecture notes
  — Do NOT submit in verbatim materials pulled from the Internet!

- Consequences of Academic Misconduct
  — Failing Grade, Probation, Suspension
  — Expulsion from the Faculty
  — Expulsion from the University

- Be familiar with FGS academic misconduct regulations
  — https://grad.ucalgary.ca/current-students/thesis-based-students/thesis/academic-integrity

- Graduate Orientation (GradO) is tomorrow (Aug 30th 1-4.30pm)
  - FGS will talk more on this
  - In-person capacity has been reached - only online registration available

- D2L Courses
  - Graduate Student Orientation (GradO)
  - Academic Integrity Orientation

- If you have any questions, please email GradO@ucalgary.ca

- **My Grad Skills**
  - Web Address: http://ucalgary.ca/mygradskills/workshops
  - Free!
  - Most are 1 hour
  - Improve your skills/help your research progress/become a better TA/find a job after your program
  - Example workshops:
    - Information Interviewing: A Strategic Tool for Job Hiring
    - Starting a business: Entrepreneurial training
    - Versatile PhD: Discover career paths outside of academia

- **Other Resources**
  - Career Services (workshops, coaching, fairs), Professional Societies (IEEE), Graduate Student Societies, Three Minute Thesis competition.

- **Eligibility**
  - At least one year into program
  - Internship duration: between 6 and 52 weeks
  - Approval by Supervisor and Department
  - International students can participate in an internship, however must adhere to the rules & regulations stipulated in their study permit

- **Funding support from FGS (scholarship)**

- **For more information visit:**

  https://www.ucalgary.ca/mygradskills/internships

- **Encouraged but optional**
  - internship currently is NOT an MSc or PhD degree requirement

Thank you for your Attention

Questions?

If you work in...	You need to get ...
A university	Research Funding
A start-up	Venture Capital, Government Grants
A company	Approval for time and money

- Good for your professional development and career

- Demonstrate ability to clearly formulate and present ideas

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- Different purposes
  - Tuition and stipend
  - Travel awards

- Several opportunities– federal, provincial, from the University and from the department

- Know your funding agencies mandates and requirements NSERC, CIHR, SSHRC, AI....

- Details and a database search located at https://grad.ucalgary.ca/awards

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- Make sure you are eligible for the award:
  - Immigration status
  - Program of study (MSc,PhD)
  - Research area
  - Year of study
- Be aware of all the requirements
  - Formatting and page lengths
  - Documents to include
    - Recommendation letters (ask early!)
    - Research proposal
    - CV, transcripts etc.

Start Early!

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- **Structure your application**
  - Title
  - Specific aims
  - Background and preliminary work
  - Impact / significance
  - Methods
  - Resources and feasibility

**Start Early!
I mean it!**

- **Be balanced in the technical content**
  - Reviewers may or may not be experts in your area

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- Read and re-read your application for languages and content

- Get feedback
  — Colleagues and supervisors
  — People not in your specific area of research

- If need be get help from a native English speaker
  https://www.ucalgary.ca/student-services/student-success/writing-support

- Attend scholarship workshops
  https://grad.ucalgary.ca/my-gradskills/workshops-and-resources

- Keep track of updated notifications sent out by email

- Academic performance
  - Grades, prior scholarships/awards
- Research potential
  - Prior research experience, publications
- Communication and leadership skills

The Candidate

- Significance & Innovation
- Feasibility
- Clarity and conciseness
- Completeness

The Research

GAC Selection Criteria and Indicators

https://grad.ucalgary.ca/awards/award-opportunities/selection-criteria-and-indicators

- Department is assigned quota for some awards

- Graduate Scholarship Committee does an internal review and top applications are forwarded

- Keep track of emails from Dept regarding important notifications

Thank you for your Attention

Questions?