

Engineering Student Handbook



DALHOUSIE
UNIVERSITY

FACULTY OF
ENGINEERING





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A Message from the Dean

Welcome to Dalhousie University's Faculty of Engineering! We're thrilled to have you join our community.

For the next several years, this Faculty will be your home, and we want to make sure that you feel supported throughout your degree. Your first year of university is exciting, but it can also be challenging. To help guide you on this journey, we've put together a student handbook which will provide you with all of the information you'll need to start your engineering degree.

Your journey will start on our Halifax Studley Campus where you'll complete fundamental engineering courses that will give you a strong base for your future studies. You'll also get the opportunity explore our various engineering disciplines and find a path that best aligns with your interests and goals. You'll learn more about these programs in this handbook.

At the end of your first year, you'll apply to one of our specialized engineering programs and transition to our Sexton Campus in downtown Halifax for your second year and beyond. Here, you'll dive deeper into your chosen field and begin taking courses specific to your program.

Remember, your university experience extends beyond the classroom. We encourage you to take advantage of our state-of-the-art facilities and hands-on learning opportunities. Whether it's exploring your entrepreneurial side in our IDEA MakerSpace or joining one student engineering design teams, there are countless ways to enrich your experience. Our students have achieved remarkable feats, such as building Atlantic Canada's first electric vehicle, first solar car, and launching the region's first satellite into space. As a first and second-year student, you'll have the chance to get involved in these exciting projects and more.

Pursuing an engineering degree can be challenging, but it'll be worth the effort. You'll work hard, but you'll accomplish more than you thought possible. We wish you a successful and fulfilling first year in engineering. Welcome to Dalhousie, and we look forward to seeing all that you will accomplish!

Dr. John Newhook, P. Eng., FCAE
Dean, Faculty of Engineering

Your **Dalhousie** **Engineering Team**

Dalhousie Engineering is dedicated to providing you with the tools, resources and support you need to transition into University. Our team of experts is located on Dalhousie's Studley Campus and Sexton Campus.

DR. JOHN NEWHOOK

Dean of Engineering

DR. DARREL DOMAN

Associate Dean of Engineering

JASON LECOURE

Undergraduate Coordinator

KARYN HEMSWORTH

Student Engagement Coordinator

ANGIE LYNCH

Acting Manager, Melda Murray Centre

CONNECT WITH US

902.494.2963

engineering@dal.ca

 [@dalfacultyofeng](https://www.instagram.com/dalfacultyofeng)

 [@DalEngineering](https://twitter.com/DalEngineering)

 [FacultyofEngineering](https://www.linkedin.com/company/facultyofengineering)



Overview of the Faculty of Engineering

Dalhousie's Faculty of Engineering is **Atlantic Canada's number one engineering school**. We offer some of the best experiential learning programs in the country and we are located in one of the most vibrant and beautiful places in Canada.

At Dal Engineering you can customize your degree with hands-on-learning opportunities and simultaneous certificate programs tailored to your interests.

ENGINEERING DEPARTMENTS

Civil and Resource Engineering
Electrical Engineering
Engineering Mathematics and Internetworking
Industrial Engineering
Mechanical Engineering
Process Engineering and Applied Science (PEAS)
School of Biomedical Engineering

UNDERGRADUATE ENGINEERING PROGRAMS

Chemical Engineering
Civil Engineering
Electrical Engineering
Environmental Engineering
Industrial Engineering
Mechanical Engineering

GRADUATE ENGINEERING PROGRAMS

Biomedical Engineering
Chemical Engineering
Civil Engineering
Electrical Engineering
Engineering Mathematics
Environmental Engineering
Graduate Studies (PEAS)
Industrial Engineering
Internetworking Engineering
Mechanical Engineering

ENGINEERING UNDERGRADUATE DEGREE OPTIONS

BACHELOR OF ENGINEERING (CO-OP OPTION)

Chemical • Civil • Electrical (Computer Engineering Option) • Environmental • Industrial • Mechanical

CERTIFICATE IN BIOMEDICAL

Available in Electrical, Mechanical, Chemical, or Industrial Engineering

DALHOUSIE CAMPUSES

Dalhousie University has three campuses in Halifax, and one campus in Truro, Nova Scotia.

HALIFAX CAMPUSES

Sexton Campus

Sexton Campus is home to the Faculty of Engineering. It's situated in the heart of downtown Halifax and is exclusively dedicated to students enrolled in upper year engineering courses and in the Architecture and Planning programs. Once you complete your first year of Engineering, you will take most of your courses on Sexton campus.

Studley Campus

Studley campus is Dalhousie's central campus and is situated only a short walk away from Sexton campus. Here you'll find many of Dalhousie's main facilities such as the Dal Bookstore, the Registrar's Office and Dalhousie's Student Union Building.

Most of the programs offered at Dal are on Studley Campus. If you've decided to start your engineering degree in Halifax, this is where you'll be for the first portion of your engineering program.

Carlton Campus

Carlton Campus is home to our School of Biomedical Engineering. It's situated in between Studley Campus and Sexton Campus. The campus runs along University Avenue and is where many of the University's medical programs are offered. It's also where you'll find many of the hospitals in Halifax.

TRURO CAMPUS

Agricultural Campus

Located just outside Truro in Bible Hill, Nova Scotia, the Agricultural Campus is home to a working farm, almost 1,000 acres of research fields, gardens and greenhouses, and is built on a proud history of industry-leading education and research since 1905.

STATS AT A GLANCE

Our students

1,868 UNDERGRADUATE STUDENTS

602 GRADUATE STUDENTS

2,470 TOTAL STUDENTS

23% FEMALE UNDERGRADUATES

77% MALE UNDERGRADUATES

72% CANADIAN STUDENTS

28% INTERNATIONAL STUDENTS

49% NOVA SCOTIAN STUDENTS

The program

107 FACULTY MEMBERS

19,300 ALUMNI

94% CO-OP PLACEMENTS

471 SEXTON SCHOLARS

25 SEXTON LEADERS

625 UNDERGRADUATE AWARDS

25+ STUDENT GROUPS

High School Bridging Program

The Bridging Program is designed to support your transition from high school to university. It includes a series of peer-led videos on Brightspace that will help you strengthen your skills in calculus, trigonometry, polynomials, and functions. You'll also find valuable advice on time management, note-taking, academic integrity, and how to access student support services.

We encourage you to engage with the content by working through the practice problems and submitting your answers for a chance to win prizes. These helpful videos will be released on Brightspace at noon on September 4th, 5th, 6th, and 7th, and will remain available for review throughout the term.

SESSIONS INCLUDE:

- Introductory Calculus & Note Taking
- Trigonometry & Academic Integrity
- Polynomials & Time Management
- Functions & Student Supports



Getting Started

BASIC ESSENTIALS

BANNER NUMBER: Your Dal ID begins with “B00” and appears in the top right hand corner of your acceptance letter. It is the primary way we identify you as a student.

NETID: Once you receive your Dal ID, you will use it to activate your NetID. Your NetID is the unique username you will use to log into Dalhousie systems. Here is how you [Activate your NetID](#).

- You will be prompted to set up your initial password during the NetID activation process. You can also reset or change your password at any time. [Manage your password](#)

EMAIL: Your Dal email (username@dal.ca) is where all official university information is sent including details about orientation, residence, tuition fees, health plan, faculty events and more. It is very important that you check your email regularly.

You can [set up your email](#) after you pay your admissions deposit.

DAL ONLINE: [Dal Online](#) allows you to manage all of your academic, personal and financial information. This is where you can perform tasks such as:

- View your schedule
- Search the Academic Timetable
- Add or drop courses
- View final grades
- Request an official or unofficial transcript
- Apply to graduate
- Access your tax forms
- Apply for student aid
- Update your personal information

BRIGHTSPACE : [Brightspace](#) is the main platform used for online and blended courses, and to support in-person classes. Most courses you take will show up on Brightspace as a module that is locked until the term begins. Instructors will upload files to these modules such as the syllabus, readings, and assignment instructions. Your instructor may also upload recorded lectures or class slides.

Here are some tools to help you get started:

- [Brightspace Student Guide](#)
- [Intro to Brightspace Video Tutorial](#)

MYDAL: [myDal](#) gives you access to the entire Microsoft 365 suite of tools, including your email, Word, PowerPoint, and Excel. You can download these programs to your computer or use them in your web browser. Through myDal, you are also able to save documents to the OneDrive and Microsoft 365's cloud system. This means that if your computer dies, your files will still be safe.

You can log into myDal using your NetID and password.

DALSAFE: [DalSAFE](#) is Dalhousie's integrated safety messaging system—a common platform for safety and security information. The university will send out emails and text messages to issue campus alerts such as university storm closures, campus hazards and other urgent events.

Make sure you [download the app](#) to your phone, or regularly check your Dal email for campus communications.

DAL CARD: Your [DalCard](#) is your all-access pass to campus life. You'll need your card to access campus shops and services such as:

- Dalhousie Athletic Facilities
- Academic buildings and Residences
- On campus printing and photocopying

PARKING ON CAMPUS: Dalhousie requires all students with vehicles on campus to have a parking permit. To [order your parking pass](#), you will need to have your NetID, password, and vehicle information.

CLASSROOM ESSENTIALS

ALL ENGINEERING STUDENTS REQUIRE ACCESS TO A LAPTOP COMPUTER.

We recommend a **Windows PC** for compatibility with the software used in Engineering courses. The university provides needed software*, including Microsoft Office, when you are enrolled as a student.



If you need a new computer and your budget allows, consider investing in something with more memory and storage to prolong the lifespan of your computer. Also make sure to check if the store offers a student discount!

If you already own a computer that meets the minimum specifications, you may hold off on purchasing a new one right this moment.

Remember, technology evolves fast, so you might be able to get a better price or spec tomorrow.

CALCULATORS: Students are required to purchase a non-programmable Scientific Calculator. These models include the CASIO fx-991ES Plus Calculator or an equivalent such as the CASIO fx-991ES Plus 2 and the CASIO fx-991ES Plus C 2nd edition.

ENGINEERING PC LAPTOP SPECS

	MINIMUM REQUIRED SPECS	RECOMMENDED SPECS <i>(where budget permits)</i>
Processor (CPU):	Intel Core i5 (12th gen) or AMD Ryzen 5 (5000 series) [4 cores]	Intel Core i5 (14th gen) or AMD Ryzen 5/7 (7000 series) [6 or 8 cores]
Memory (RAM):	16GB	24GB
Storage disk:	256GB SSD	512GB SSD
Operating system:	Windows 10	Windows 11

Note about Macs: Apple computers have limited to no support for Windows and/or software used in our engineering programs. The university does not provide virtualization software for your personal macOS computer.

Month-by-Month Checklist

To get you through your first year of Engineering

JUNE

❑ Register for your courses

If you need support with your course registration, [Academic Advisors](#) are available to help.

Registration must be completed using [Block Registration](#). This means that all of your required courses will be grouped together into separate blocks.

JULY

❑ Apply for your academic accommodations. If you had academic accommodations in high school, we encourage you to apply for accommodations in university as well, even if you feel they may not be required. It's better to have them even if you don't need them.

❑ Become familiar with [Dalhousie's Academic Calendar](#).

Dalhousie's Academic Calendar is a comprehensive reference to study at Dal. The calendar lists all of the courses and programs offered at Dal, as well as information on admission requirements, university regulations, degree requirements and more.

In Engineering, we encourage you to take a close look at Dalhousie's [Academic Regulations](#).

Specifically: Sections 1, 2, 3, 4, 5, 9, 16, 17, 18, 19, 20

❑ Check your email for information on our High School Bridging Program. The program helps incoming engineering students improve their skills in math, physics, writing and more.

AUGUST

❑ Finalize any necessary travel plans. Remember that classes begin in early September. Arriving late will impact your coursework.

❑ Check your email for information on Dal Orientation events and Dal Engineering Orientation events.

SEPTEMBER

❑ Log into [Brightspace](#)

Brightspace is the main platform used for online and blended courses, and to support in-person classes. Many of your instructors will post course information and the course syllabus on Brightspace. Some instructors will not activate these sites until their first lecture. A few instructors will also choose not to use Brightspace for their course.

❑ If you arrive at Dalhousie before the start of classes, familiarize yourself with your campus.

If you are taking courses in Halifax, they will be held on [Studley Campus](#). Most of these courses will be held in the McCain Building, Dunn Building, Chemistry Building and Life Science Centre.

❑ Your first day of university will begin in early September.

If you're taking courses on our Halifax campus, you'll participate in our Engineering Orientation and Welcome on your first day of class. Here you'll meet your classmates, hear more about our program and disciplines, and learn about our co-op program and student services.

❑ Your first day at Dalhousie is also a great opportunity to pay your tuition and fees. You can pay your Fall tuition and fees by logging into your [Dal Online](#) account.

❑ If you're in Halifax, your first full day of courses begin on your second day of university. Make sure that you've already logged into [Brightspace](#) so that you have access to your course syllabus. Here are a few things to remember:

- On your syllabus, take a look at the course policy for information on absences and missed coursework.
- Take note of important deliverables, due dates and test dates.
- Read through all of your course materials to make sure you understand your responsibilities in each course.
- Check your course syllabus regularly to stay on top of upcoming assignments, quizzes, labs, tests and projects.

❑ Your last day to pay Fall tuition and fees is in mid-September. You can pay your fees by logging into your [Dal Online](#) account.

It's also the last opportunity to add/drop courses, or change sections of your course. If you drop a class, you will receive a full refund. If you drop a course between mid-September and the beginning of October, you will only receive a [partial refund](#).

You can add or drop courses by logging into your [Dal Online](#) account.

❑ Towards the end of September the pace of your courses will increase and you can expect your first major tests. If you are having a hard time with your schedule, studying or organization, [Academic Advisors](#) are available.

OCTOBER

❑ Around October 1, the [December Exam Schedule](#) is posted. Many of your courses will have a final exam scheduled sometime in mid-December. Make sure your Christmas travel plans do not conflict with your exam schedule.

❑ The beginning of October is the last opportunity to drop a course without receiving a "W" on your transcript. This means "Withdrawal".

"W" grades are Grade Point Average Neutral (GPA), so unlike an "F" for fail, a "W" does not cause your GPA to go down.

If you are not doing well in one of your courses, consider speaking with an Academic Advisor before the beginning of November to determine if you should withdraw from that course.

The beginning of October is also the last opportunity to drop a course if you'd like to receive a [partial refund](#).

You can drop your courses by logging into your [Dal Online](#) account.

❑ From the end of October until mid-November, many of your mid-terms will take place. If you are struggling in one of your courses, consider speaking with an Academic Advisor.

NOVEMBER

❑ The beginning of November is the last opportunity to drop a course with a "W" on your transcript. This means "Withdrawal".

"W" grades are Grade Point Average Neutral (GPA), so unlike an "F" for fail, a "W" does not cause your GPA to go down.

You can drop your courses by logging into your [Dal Online](#) account.

❑ In early to mid-November, you will have your Fall Study Break.

DECEMBER

❑ December is the formal exam period for the Fall term. Many of your courses will have final exams scheduled during this time. Do not schedule your Holiday travel plans until after your exams are complete. If you miss an exam due to travel, your absence will not be excused.

❑ Holiday Break begins a few days before December 25, and run until the second week of January.

You should receive all of your Fall term final grades by the end of the first week of January. This is an excellent opportunity to self-evaluate your fall performance. If you think you may need some support, reach out to an Academic Advisor about any changes that you could make to your winter schedule. Remember, you can always reduce the number of courses you take in the Winter term.

In Halifax If you received an "FM" grade in a fall course, you may be eligible to write a supplementary exam. "FM" stands for Marginal Fail and allows a student to [apply to write a supplementary exam](#) in January.

JANUARY

- ❑ Winter term classes begin the second week of January. Make sure that you've already logged into [Brightspace](#) so that you have access to your course syllabus. Here are a few things to remember:
 - On your syllabus, take a look at the course policy for information on absences and missed coursework.
 - Take note of important deliverables, due dates and test dates.
 - Read through all of your course materials to make sure you understand your responsibilities in each course.
 - Purchase any required textbooks.
 - Check your course syllabus regularly to stay on top of upcoming assignments, quizzes, labs, tests and projects.
- ❑ In mid-January, supplementary exams will be held in the B Building on Sexton Campus.
- ❑ Your last day to pay Winter tuition and fees is in mid-January. You can pay your fees by logging into your [Dal Online](#) account.

It's also the last opportunity to add/drop courses, or change sections of your course. If you drop a class, you will receive a full refund. If you drop a course between mid-January and the beginning of February, you will only receive a **partial refund**. You can add or drop courses by logging into your [Dal Online](#) account.

FEBRUARY

- ❑ The April [Exam Schedule](#) will be posted the beginning of February. Many of your courses will have a final exam scheduled sometime between April 13 – April 25. Make sure your travel plans do not conflict with your exam schedule.
- ❑ The beginning of February is an important day. It's the first call for Round 1 of the [Fall Discipline Placement Applications](#).

The Discipline Placement Application is how you will inform the Faculty of Engineering which engineering program you'd like to take in the third year of your degree. At Dalhousie, we offer six specialized programs (*Chemical Engineering, Civil Engineering, Electrical Engineering,*

Environmental Engineering, Industrial Engineering, Mechanical Engineering. Some of these programs also include the option of completing a Certificate in Biomedical Engineering.)

The first round of Discipline Placement Applications must be submitted before April 30.

- ❑ The beginning of February is the last day to drop a course without receiving a "W" on your transcript. This means "Withdrawal".

"W" grades are Grade Point Average Neutral (GPA), so unlike an "F" for fail, a "W" does not cause your GPA to go down.

If you are not doing well in one of your courses, consider speaking with an Academic Advisor before mid March to determine if you should withdraw from that course.

The beginning of February is also the last day to drop a course if you'd like to receive a **partial refund**.

You can drop your courses by logging into your [Dal Online](#) account.

- ❑ Mid-February is the Winter Study Break.

- ❑ Near the end of February, registration for Summer term courses will open.

The Summer term is an opportunity for you to repeat any of the courses you'd like to improve upon, or take some of your second year courses ahead of schedule. Not all courses are offered in the summer, so make sure you work with an Academic Advisor to select your courses.

MARCH

- ❑ At the beginning of March, more resources and supports will become available to help you decide which of our six engineering programs are the best fit for you.

Students can learn more about the engineering programs in their CPST Technical Communications course. Guest speakers from a variety of engineering backgrounds will share their experiences and talk to you about the various engineering disciplines.

[Discipline Placement Applications](#) must be submitted before April 30.

- ❑ Mid-March is the last opportunity to drop a course with a "W" on your transcript. This means "Withdrawal".

"W" grades are Grade Point Average Neutral (GPA), so unlike an "F" for fail, a "W" does not cause your GPA to go down.

You can drop your courses by logging into your [Dal Online](#) account.

- ❑ Near the end of March, registration will open for next year's Fall and Winter courses.

A [Fall Registration Guide](#) is available prior to the start of registration.

Winter Term Registration Guides will be available after your engineering disciplines have been assigned. Your discipline will influence your Winter registration.

APRIL

- ❑ Your winter courses will end in mid-April.
- ❑ This will be followed by the formal exam period of the Winter term. Many of your courses will have final exams scheduled during this time. Do not schedule your travel plans until after your exams are complete. If you miss an exam due to travel, your absence will not be excused.
- ❑ At the end of April, Round 1 of the Fall Discipline Placement Application process will close at 11:59am (ADT). Late applications will not be accepted.

MAY

- ❑ In early May, Summer term courses will begin.
- ❑ At the beginning of May, all final grades from the Winter term will be available.

Once these grades are assigned, you may receive an Academic Assessment. All students who have attempted 24 or more GPA credit hours are assessed.

If you received an "FM" grade in a Winter course, you may be eligible to write a supplementary exam. "FM" stands for Marginal Fail and allows a student to [apply to write a supplementary exam](#).

- ❑ In early May, supplementary exams will be held at 7:00pm in the B Building on Sexton Campus.

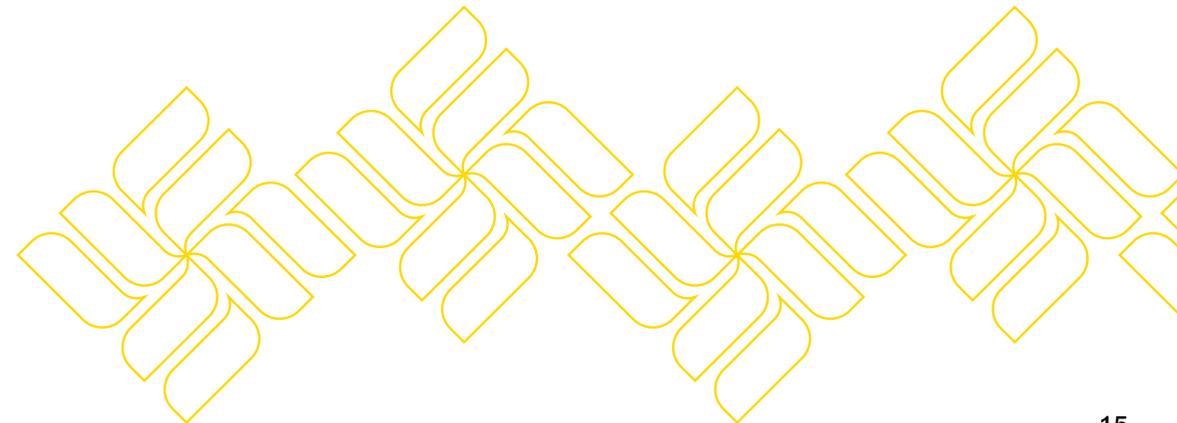
JUNE

- ❑ At the beginning of June, Round 1 of the Discipline Placement results will be announced.

An email notification will be sent out to inform you of your Fall (Year 3) placement.

If you are happy with your placement, you may now register for your Winter courses. Please use our [registration guide](#) to help with the process. To meet the admission requirements of your placement, you need to complete all of the required courses by the start of the Fall term. If you are missing any required courses for your placement, you will not be eligible for the program.

If you are not satisfied with your placement, you can apply for Round 2 of the [Fall Discipline Placement process](#). Round 2 closes on August 15 and the results are announced on September 15.



Important Dates

SEPTEMBER 3	Attend ENGI Engineering Orientation and Welcome
SEPTEMBER 4	First full day of engineering classes
	Fees due for Fall term
	Last day to register
	Last day to add fall courses
SEPTEMBER 17	Last day to drop Fall term courses with no financial implications
	Last day for complete refund
	Last day to opt out of UPass
	Last day to opt out of DSU Health Plan
SEPTEMBER 30	National Day for Truth and Reconciliation, University Closed
OCTOBER 1	December Exam Schedule posted
	Last day to change Fall term course from audit to credit
OCTOBER 2	Last day to drop Fall terms courses without a "W"
OCTOBER 14	Thanksgiving Day, University Closed
OCTOBER TBD	College Royal - Agricultural campus, no afternoon classes
	Last day to drop Multi Term courses without a "W"
OCTOBER 31	Last day to change Multi Term Courses from Audit to credit
	Last day to drop Fall term course with a "W"
NOVEMBER 11-15	Fall Study Break, no classes (University open)
NOVEMBER 11	Remembrance Day, University closed
DECEMBER 1 APPROXIMATELY	Account detail (tuition & fees) Winter term available via Dal Online
DECEMBER 4	Classes end, Fall term
DECEMBER 5	Break before exams
DECEMBER 6-17	Exam Period
DECEMBER TBD	Summer term academics, timetable available via Dal Online
DECEMBER TBD	Residences close at noon

	University closed as of 12pm December 24
DECEMBER 24	Grades due for courses with formal exams
JANUARY 1	University closed in lieu of New Year's Day
JANUARY TBD	Residences open
JANUARY 6	Classes begin, Winter term
JANUARY TBD	Supplemental Exams held at 7:00pm in B Building Sexton Campus
	Fees due for Winter term
	Last day to add Winter term courses
JANUARY 20	Last day for late registration
	Last day to drop Winter terms courses with no financial implications
	Last day to opt out of the Upass
FEBRUARY 1	First class for round 1 of the Fall 2024 placement applications
	April exam schedule is posted
	Last day to drop Multi-term course with a "W"
FEBRUARY 3	Last day to change winter courses without a "W"
	Dropping courses between January 20 and February 6 result in a partial refund.
FEBRUARY 7	Munro Day, university closed
	Dalhousie Student Job & Career Fair
FEBRUARY TBD	DalLead! Student Leadership Conference
FEBRUARY 17	Nova Scotia Heritage Day - University closed
FEBRUARY 17-21	Winter Study Break
FEBRUARY TBD	Registration begins for summer courses (all students) at 10am
MARCH 5	Last day to drop Winter term classes with a "W"
END OF MARCH	Registration for Fall 2024/Winter 2025 terms

APRIL 7	Classes end, Winter and Multi Term (Tuesday April 11 - Friday classes will be held)
APRIL 8	Break before exams
APRIL 9-26	Exam period
APRIL 18	Good Friday, University closed
	Residences close at noon
APRIL TBD	Round 1 of Fall 2024 placement applications process closes at 11:59pm

MAY 2	All final grades for Winter term courses are due
MAY 5	Summer term begins
MAY 19	Victoria Day, University closed
MAY TBD	Supplemental Exams will be held at 7:00pm in the B Building, Sexton Campus
JUNE 1	Round 1 discipline placement results announced



Engineering Programs

BACHELOR OF ENGINEERING

The first year of study is the same for all engineering students. At the end of the year, you will select your engineering discipline. Placement into a discipline is dependent on your EGPA (Engineering Grade Point Average). The EGPA is based only on the engineering courses that you take in the first two years of your program. Courses taken in other degree programs will not count toward the EGPA.

Only students with more than 21 credit hours are eligible for participation in the discipline of choice process.

Beginning on February 1, students in the first year of their engineering degree can submit their top five preferred disciplines in order of preference. To do so, you must complete your **Discipline Placement Application**. If you are not satisfied with your placement, you can apply for Round 2 of the **Fall Discipline Placement process**.

DEADLINE FOR ROUND 1 OF DISCIPLINE PLACEMENT APPLICATIONS:

- Students submit preferred choices by April 30
- Students are notified of results by June 1

DEADLINE FOR ROUND 2 OF DISCIPLINE PLACEMENT APPLICATIONS:

- Students submit preferred choices by August 15
- Students are notified of results by September 1

DEADLINE FOR ROUND 3 OF DISCIPLINE PLACEMENT APPLICATIONS:

- Students submit preferred choices by December 15
- Students are notified of results by January 1

In your second year of study, you will begin taking courses more specific to your discipline placement. Once you've completed all of the required courses in the first and second year of study, you will have the opportunity to apply for a Diploma of Engineering. To apply for a **Diploma of Engineering** students must

meet the minimum requirements of a GPA of 2.00 as well as all required courses with a minimum grade of D. By the end of your second year, if your GPA is **less than 2.00** - you will lose your placement in your discipline of choice.

Upon receiving a Diploma of Engineering, all engineering students at Dalhousie University and at the Associate Universities will transfer to Dalhousie's Sexton Campus where they will be fully immersed in their discipline by their third year of engineering. Students in their third year can choose to combine their degree with **co-operative education**.

CHEMICAL ENGINEERING

From energy to foods to antibiotics, Chemical Engineers transform raw materials into greener, safer and innovative products that we use in our everyday lives. Chemical Engineering combines the world of chemistry, biology, mathematics, physics, design and process engineering.

The Chemical Engineering program at Dalhousie gives students the opportunity to gain hands on learning experience in state-of-the-art facilities designed specifically for students in your program. Core facilities provide advanced analytical capacity for examining new materials for use in clean technologies, including solar energy and biofuels.

AREAS OF STUDY:

Biorefining and Value added Manufacturing
Hydraulics Engineering • Oil and Gas production • Industrial Safety • Fermentation Technology and Brewing • Food Engineering • Biochemical Engineering • Computational Process Design

Students enrolled in the Chemical Engineering Program at Dalhousie can combine their degree with a **Certificate in Biomedical Engineering**.



CIVIL ENGINEERING

Civil Engineers are responsible for the design, construction and maintenance of our ever-changing world. They are dynamic professionals who build infrastructure such as highways, bridges, marine structures, residential and commercial buildings, water treatment solutions, and more.

The Civil Engineering program at Dalhousie covers basics and fundamentals in sub-disciplines of Civil Engineering (environmental, geotechnical, structural, transportation and water resources engineering). The program combines a balance between classroom lectures and active learning. Students will learn how to design buildings, bridges, roads, water and sewerage systems, dams, traffic systems, environmental infrastructure and much more. Students can obtain certificates in Structural, Geotechnical, Water Resources and Environmental Engineering.

AREAS OF STUDY:

Structural Analysis and Design Principles • Transportation Engineering • Geotechnical Engineering and Foundation Design • Design of Concrete Structures • Design of Steel Structures • Design of Timber Structures • Design of Special Structures • Municipal Water Engineering • Hydraulics Engineering • Coastal Hydrogeology • Water and Soil Quality • Water and Wastewater Treatment • Waste Management

ELECTRICAL ENGINEERING

Electrical and Computer engineers dream and invent the technologies of our future. Today's society relies heavily on electrical, electronic and computer technology, creating a strong need for these types of engineers.

Electrical Engineers study how to design, develop and test electrical devices (such as radio waves and signals). It requires a knowledge of mathematics, electricity, electro-magnetism and electronics and it covers the fields of power, control systems, telecommunications and signal processing.

Computer Engineering looks at how to design, develop and test both hardware and software computer systems. It requires knowledge in mathematics, programming and electronics and covers the fields of software, micro-computing, networks and communications.

At Dalhousie, students obtain a bachelor in electrical engineering with either a computer engineering option or an electrical engineering option.

AREAS OF STUDY:

Power Systems • Robotics • Communications • Microelectronics • Photonics • Software Systems • Biomedical Devices • Embedded Systems • Microwave

Students enrolled in the Electrical Engineering Program at Dalhousie can combine their degree with a **Certificate in Biomedical Engineering**.

ENVIRONMENTAL ENGINEERING

Environmental engineers offer sustainable and green solutions that protect our planet from some of the biggest challenges. To ensuring our drinking water is clean to remediation of environmental hazards involving soil and air pollution, environmental engineers develop technical solutions to protect and also improve the quality of the environment and environmental-related quality of human life.

In the Environmental Engineering Program at Dalhousie you'll learn various approaches to environment-based design, coastal protection, waste management, water and soil quality, energy conservation and renewables, and air quality. Core environmental engineering courses will begin in the third year of study.

AREAS OF STUDY:

Environmental Measurements and Analysis • Environmental Microbiology • Water and Soil Quality • Municipal Water Engineering • Water and Wastewater Treatment • Waste Management • Environmental Assessment and Management • Air Quality and Pollution Control • Contaminant Transport and Management • Coastal Hydrogeology

INDUSTRIAL ENGINEERING

Industrial Engineering is at the heart of society's essential systems. They optimize processes and systems by finding ways to save time, money, energy, and materials, while enhancing efficiency, sustainability and safety.

The Industrial Engineering program at Dalhousie provides you with an immersive engineering experience, with high-impact research and the opportunity to collaborate with key industry partners. You'll learn how to review workflows, analyse data, and learn mathematical models to create effective processes of products.

AREAS OF STUDY:

Sustainable Supply Chain Management • Health Systems Optimization • Maritime Risk Management & Logistics • Data Analytics • Acute Stroke Treatment & Emergency Services Logistics • Blood Services Optimization • Optimization • Considering Humans in Systems Design • Operational Excellence

Students enrolled in the Industrial Engineering Program at Dalhousie can combine their degree with a [Certificate in Biomedical Engineering](#).

MECHANICAL ENGINEERING

Mechanical engineers make the world a better place. From building more environmentally friendly cars to designing medical devices and robots, to exploring renewable sources of energy, all designs use mechanical engineering principles.

The Mechanical Engineering program at Dalhousie provides a design-centric, hands-on technical education including: mechanical and machine design, computer modeling and simulations, fluid mechanics and heat transfer with applications to HVAC, renewable energy and aerodynamics, materials engineering with applications to manufacturing, 3D printing and additive manufacturing, controls with applications to robotics, mechatronics and space systems.

AREAS OF STUDY:

Advanced Manufacturing • Applied Mechanics and Dynamics • Controls and Systems • Energy and Heat Transfer • Materials Engineering

Students enrolled in the Mechanical Engineering Program at Dalhousie can combine their degree with a [Certificate in Biomedical Engineering](#).



CERTIFICATE IN BIOMEDICAL ENGINEERING

Many of our engineering programs offer the opportunity for students to combine their degree with a Certificate in Biomedical Engineering.

Biomedical Engineering is an engineering subdiscipline focused on applying engineering methods to problems of human health and the delivery of healthcare. Biomedical engineers design medical devices used to diagnose and treat disease, build prostheses to help patients recover from injury, design, test and manufacture new drugs and design efficient and effective systems for health delivery.

In the undergraduate engineering program at Dalhousie, students interested in pursuing a career in Biomedical Engineering in related disciplines may enroll in the Certificate in Biomedical Engineering starting in their third year and complete it concurrently with their undergraduate engineering degree.

The Certificate in Biomedical Engineering is open to engineering students in Electrical Engineering, Mechanical Engineering, Industrial Engineering and Chemical Engineering. Students enrolled in the certificate will:

- Take core and technical elective courses related to Biomedical Engineering in their discipline while meeting the requirements for their degree program.
- Take a selective introductory course in anatomy or physiology in addition to their degree requirements.
- Complete a capstone project on a biomedical topic.

The Certificate in Biomedical Engineering will be given at convocation to students who successfully complete the program requirements and will appear on the student's transcript.

First Year **Courses & Schedule**

The first year of Engineering is the same for all engineering students at Dalhousie University. The program provides students with core courses in math, science, engineering science and design, and a broader understanding of the engineering discipline. It's also an opportunity for you to learn more about our engineering programs and to decide which program is best for you.

FIRST YEAR ENGINEERING COURSES

YEAR 1 – FALL TERM:

ENGI 1103 - Engineering Design & Graphics I

CPST 1103 - Technical Communications I

MATH 1280 - Engineering Mathematics I

CHEM 1021 - Engineering Chemistry I

ENGM 1081 - Computer Programming

PHYC 1190 - Introduction to Physics I

YEAR 1 – WINTER TERM:

ENGI 1203 - Mechanics I: Statics

CPST 1203 - Technical Communications II

MATH 1290 - Engineering Mathematics II

ENGM 1041 - Applied Linear Algebra

CHEM 1022 - Engineering Chemistry II

PHYC 1290 - Introduction to Physics II

When planning your first year course schedule, it's important to know that course registration for engineering students must be completed using **Block Registration**. This means that all of your required courses will be grouped together into separate blocks.

There are 8-predetermined scheduling blocks to choose from. Each block contains the same courses and provides you with a complete and conflict-free schedule that meets all first-year program requirements.

Once you have registered for one block in the fall and one for the winter, your first-year registration is done!

Here is an example of how your schedule may appear if you are taking a full course load in the first year of engineering. It is possible to take a reduced course load and take an additional year to complete your Year 1 and 2 engineering requirements.



Academics

GRADING SYSTEM

Students receive their grades and academic standings at the end of each term. All final grades are available through [Dal Online](#). Grades are used to determine your status in your degree program. Letter grades have a grade point assigned that is used to calculate your **GPA (Grade Point Average)**. The following table explains and defines Dalhousie's grading system and shows the GPA value that corresponds with each letter grade.

LETTER GRADE	CONVERSION RANGE PERCENTAGE SCALE TO LETTER GRADE	DALHOUSIE ENGINEERING GRADE POINT AVERAGE (GPA)	DEFINITION
A+	90-100	4.30	Excellent
A	85-89	4.00	Excellent
A-	80-84	3.70	Excellent
B+	77-79	3.30	Good
B	73-76	3.00	Good
B-	70-72	2.70	Good
C+	65-69	2.30	Satisfactory
C	60-64	2.00	Satisfactory
C-	55-59	1.70	Satisfactory
D	50-54	1.00	Marginal Pass
FM	-	0.00	Marginal Failure: Available only for Engineering students on Studley and Sexton Campus
F	0-49	0.00	Fail



NON-GRADED DESIGNATIONS

LETTER GRADE	DALHOUSIE ENGINEERING GRADE POINT AVERAGE (GPA)	DEFINITION
INC	0.00	Incomplete
W	Neutral and no credit obtained	Withdrew after deadline
ILL	Neutral and no credit obtained	Compassionate reasons, illness
P	Neutral	Pass
TR	Neutral	Transfer credit on admission
Pending	Neutral	Grade not reported
MT	Neutral	Not Graded: Part of Multi-Term Course: The grade assigned temporarily within a single academic year until all requirements of the multi-term course are complete. The final grade obtained in the multi-term course will replace the MT grade in each term.
CR	Neutral	GPA neutral grading option due to extenuating circumstances Credit obtained (requires a minimum passing grade in the course)
NCR	Neutral	GPA neutral grading option due to extenuating circumstances No credit obtained

REVIEW OF GRADES

Students who have questions about final grades are encouraged to first discuss them with their course instructor, the head of their department or an Academic Advisor. If their concerns cannot be resolved, you can begin a formal reassessment process by filling out a [Request for a Reassessment of a Final Grade](#).

GRADE POINT AVERAGE

Letter grades have a numerical value called a Grade Point Value. This is used to calculate your Grade Point Average (GPA).

To calculate your GPA, you will need to be familiar with the terms below.

TERM GRADE POINT AVERAGE (GPA):

The grade point average for only those courses which are attempted in a single term.

CUMULATIVE GRADE POINT AVERAGE (CGPA):

The grade point average of all courses attempted after admission to Dalhousie. Changing degrees may impact how your CGPA is calculated. If you have questions, contact an [advisor](#).

ENGINEERING GRADE POINT AVERAGE (EGPA):

The EPAG is the Cumulative GPA for the collection of common engineering courses making up the first two years of the engineering program. Courses that students may have taken in other degree programs will not count toward the EGPA.

Credit hours: The number of hours a course is worth. A one-term (half-credit) course is typically worth 3 credit hours. A full-year (full-credit) course is typically worth 6 credit hours. If you withdraw from a course with a W or receive a grade of ILL, the course is worth 0 credit hours. Make sure you do not include these courses when you calculate how many credit hours you've attempted so far.

GPA CALCULATOR

Dalhousie University provides a [GPA calculator](#) that is designed to help you estimate your grade point average. Your official cumulative and term grade point averages are located on your [Academic Record](#).

- 1 Multiply Grade Point Value by Course Credit Hours to calculate total points earned for each course

COURSE	LETTER GRADE	GRADE POINT VALUE		COURSE CREDIT HOURS	TOTAL GRADE POINTS
CPST 1103	B	3.0	X	1.5	4.5
MATH 1280	A-	3.7	X	3.0	11.1
CHEM 1021	D	1.0	X	3.0	3.00
PHYC 1190	B	3.0	X	3.0	9
ENGI 1103	C+	2.3	X	3.0	6.9
ENGM 1081	F	0	X	3.0	0
				16.5	34.5

- 2 Then **add up the totals** for Course Credit Hours and Total Grade Points

- 3 Calculate GPA for the semester as follows:

$$\text{GPA} = \frac{\text{Total Grade Points Earned}}{\text{Total Course Credit Hours}}$$

$$\text{Example} \quad \frac{34.5}{16.5} = 2.09$$

$$\text{Grade Point Average (GPA)} = \mathbf{2.09}$$

ACADEMIC STANDINGS

Academic Standings are a reflection of your GPA and determine whether you can continue your studies at Dalhousie and whether you can graduate.

Academic standing is normally assessed at the end of each term. There are three types of academic standing:

GOOD STANDING

Students who meet the required GPA are considered to be in good academic standing. In the Faculty of Engineering a cumulative GPA of 2.00 is required. You need to be in good standing in order to graduate.

PROBATION

This is a warning to students whose academic performance is unsatisfactory. If you are placed on academic probation, you will be dismissed from your program unless your performance improves by the end of the next term. Probation is a cumulative GPA of less than 2.00 and greater than or equal to 1.70.

ACADEMIC DISMISSAL

Students with a cumulative GPA of less than 1.70 who have completed at least 24 credit hours at the undergraduate level will be academically dismissed. In the Faculty of Engineering, the duration of academic dismissal is 8 months. BEng and DipEng students who fail the same course more than once will be dismissed.

For more specific information on the regulations surrounding academic standing, please see Sections 17-20 of the Academic Regulations in the [Undergraduate Calendar](#).

ACADEMIC POLICIES

ACADEMIC INTEGRITY

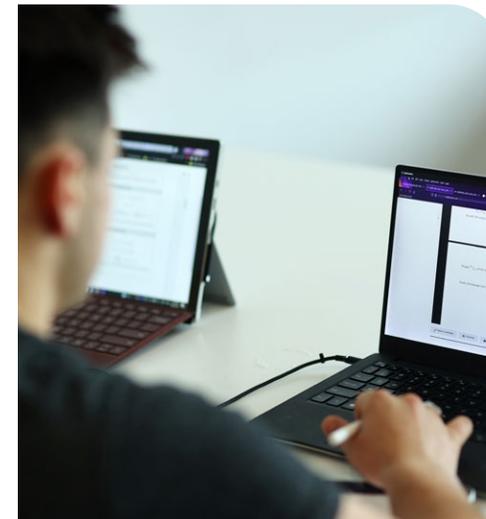
Dalhousie University expects all its students to be responsible learners. We are guided by our values of **academic integrity**: honesty, trust, fairness, responsibility and respect. As a student, you are required to demonstrate these values in all of the work you do.

The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity. The following are some ways that you can achieve academic integrity.

- Make sure you understand Dalhousie's [policies on academic integrity](#).
- Do not cheat in examinations or write an exam or test for someone else.
- Do not falsify data or lab results.
- Be sure not to plagiarize, intentionally or unintentionally.
 - Clearly indicate the sources used in your written or oral work.
 - Do not use the work of another from the Internet or any other source and submit it as your own.
 - When you use the ideas of other people (paraphrasing), make sure to acknowledge the source.
- Do not submit work that has been completed through collaboration or previously submitted for another assignment without permission from your instructor (These examples should be considered only as a guide and not an exhaustive list.)

USE OF PLAGIARISM DETECTION SOFTWARE

All assignments may be submitted to Dalhousie's current plagiarism detection software, a program that compares documents to online sources. If you do not wish to have your assignments submitted to this software, you must notify your instructor within the first week of class, and they will arrange other methods to verify that the work is yours.



Resources and Student Supports

ACADEMIC ADVISING

Academic advisors provide academic support and coaching to students at Dal.

Students entering their first year of engineering can see an advisor at the **Bissett Student Success Centre**, or contact engineering@dal.ca

ADVISORS CAN ASSIST YOU WITH:

- The transition to university life at Dalhousie
- Understanding your program requirements and academic regulations
- Mapping out a strategy to achieve your educational and career goals
- Learning how to use your strengths to reach your educational, career and life goals
- Developing an action plan to deal with academic challenge
- Finding research opportunities in your Faculty

You can contact the **Faculty of Engineering** for all other inquiries and additional support.

ACADEMIC CALENDAR

Dalhousie's **Academic Calendar** lists all of the courses and programs offered at Dal, information on admission requirements, university regulations, degree requirements and much more.

The calendar published the year you began your degree at Dalhousie contains the regulations that apply to you.

SOME OF THE INFORMATION YOU'LL FIND IN THE CALENDAR INCLUDE:

- Subject Areas: Details about program requirements and courses offered at Dal
- Academic Regulations: Important information on grades, academic standing, exams and more
- Degree Requirements: A list of all faculty requirements you'll need to satisfy your degree program
- Dates to add and drop courses without penalty.
- University Dates: Applications deadlines, Holidays and more
- Definition of common university terms.
- Resources and services

ACCESSIBILITY

The Student **Accessibility** Centre is Dalhousie's centre of expertise on student access, inclusion, and accommodation support. The Centre works with students, faculty and staff to create an inclusive environment for everyone at Dal.

SUPPORT INCLUDE:

- Facilitating access to academic courses and programs, facilities, services, and activities.
- Identifying classroom, exam and other accommodations (e.g. co-op) to reduce barriers to your learning
- Advocating to ensure reasonable accommodations are available and implemented
- Assisting you in accessing funding for students with disabilities
- Connecting you with on- and off-campus resources to enhance your success



ATHLETICS AND RECREATION

Dalhousie University has three large **athletic facilities** on its campuses in Halifax and Truro. All Dalhousie students have access to all three facilities.

DALPLEX: Dalplex is the largest athletic facility at Dal and is located on Studley campus in Halifax. The facility includes an indoor pool, a large fitness hall with strength and cardio equipment, squash and racquetball courts and a fieldhouse.

SEXTON GYM: Sexton Gym is located on the engineering campus in downtown Halifax. The facility includes a revamped weight and cardio room, a new studio space and a gymnasium.

LANGILLE ATHLETIC CENTRE: Located on the Agricultural Campus in Truro, the Langille Athletic Centre includes a weight room, a cardio room, gymnasium and squash courts.

BLACK ADVISING CENTRE

The **Black Student Advising Centre** is a cultural hub of resources, engagements and opportunities for students of African descent. Here, students can connect, collaborate and build a community with other students at Dalhousie University. The Centre provides services and programs that offer personal and educational support and acts as a link between Dal and African Nova Scotia communities.

FACULTY OF ENGINEERING, UNDERGRADUATE STUDIES OFFICE

Located on the 3rd Floor of O'Brien Hall on the Sexton Campus, the **Undergraduate Studies Office** is available to assist all undergraduate engineering students. You can visit the Undergraduate Studies Office if you need academic advising, have questions about rules and regulations, have questions about administrative forms or processing, or even if you are just unsure where to turn and need someone to give you a hand. Our staff are prepared to help you navigate any issues that arise during your studies at Dalhousie. The Undergraduate Studies Office can be reached at engineering@dal.ca or you are welcome to drop in and see them 9:00 am to 4:00 pm Monday through Friday.

HEALTH PLAN & INSURANCE

All students at Dalhousie University are automatically enrolled into one or both of the **University's health plans**:

1. The DSU Health & Dental Plan is a student-oriented benefits plan that covers prescriptions, dental travel, accident, vision and other services.
2. The DSU International Health Plan is for international students who don't have MSI coverage. It covers general doctor visits and emergency medical services.

HUMAN RIGHTS & EQUITY SERVICES

Dalhousie's Department of [Human Rights & Equity Services](#) provides confidential advisory support and services to members of the Dalhousie community related to:

- Human Rights
- Discrimination
- Personal Harassment & Conflict
- Sexualized Violence
- Equity & Inclusion
- Accommodation & Accessibility

INDIGENOUS STUDENT CENTRE

Dalhousie's [Indigenous Student Centre](#) offers a welcoming and supportive environment for students to gather and access supports and services. The Centre offers outstanding engagement opportunities and the chance to connect with other students. Indigenous Student Advisors provide support and advocacy for all Dal Indigenous students, providing career and educational resources to enhance your university experience.

INTERNATIONAL CENTRE

Dalhousie's [International Centre](#) provides a broad range of supports and services to both international and domestic students.

The Centre assists students in being globally active by supporting the international student community. They offer services and programs designed to ease your transition to life in Canada, succeed academically and prepare you for graduation and future careers.

SOME OF THEIR SERVICES AND PROGRAMS INCLUDE:

- Immigration information
- Assistance in finding on or off campus living
- Support in planning your arrival to Canada and Dal
- Health insurance and services
- Working and finances
- Peer Programs to connect international students with domestic students
- Information on exchange and study abroad programs
- English language support

IT SERVICES

Dalhousie's [IT Services](#) support students with technology needs during their time at Dal. A lot of information can be found on [myDal](#), an internal website system where you can access valuable links and resources for Dalhousie services.

AS A NEW STUDENTS, IT SERVICES CAN HELP YOU:

- Access and activate your NetID
- Change your password
- Set up your Dal Email
- Download Dal software
- Connect to Dal's wifi

LGBTQ2SIA+ COLLABORATIVE

The LGBTQ2SIA+ Collaborative (Collaborative+) is a partnership between campus stakeholder groups engaged in efforts to foster a climate of respect and inclusion for LGBTQ2SIA+ students, staff and faculty. The groups increase awareness of support services for LGBTQ2SIA+ students, faculty and staff, and strengthen educational programming for all campus community members.

MELDA MURRAY STUDENT CENTRE

The [Melda Murray Student Centre](#) is dedicated to supporting undergraduate and graduate engineering students with tailored and accessible programming, appointments and services designed to meet their needs, enhance their student experience, and contribute to improving their academic wellbeing. The Centre is located on the Sexton Campus and offers:

- Information / direct referral
- Student support hours
- Career advising and workshops
- Study skills / semester check-ins
- Same day counselling

MONEY MATTERS

There's a lot to consider when preparing for university and finances are a major factor that can impact your decision. Expenses vary depending on the lifestyle you choose and your level of enrolment. Explore Dalhousie's [Money Matters website](#) for information and support on managing your tuition fees, applying for scholarships and accessing tax information.

MULTIFAITH SERVICES

Dalhousie [Multifaith Services](#) is a non-threatening space where Dalhousie students can address their faith and spiritual wellness. They provide private counseling and immediate crisis response; promoting opportunities for inter-faith dialogue and spiritual development. They work cooperatively with partners on and off campus, offering programs and events designed to develop respect and understanding between and among people of diverse spiritual and religious backgrounds.

OFF-CAMPUS LIVING

Dalhousie's [Off-Campus Living](#) office offers a number of resources and online services to help you find a place to live.

HERE YOU'LL FIND:

- Average rental costs
- Apartment listings
- Tenancy information
- Tips to help you move
- Meal plan options

Consider looking for off-campus living as early as possible. Rent prices will vary depending on location. Places closer to campus tend to be more expensive than those a little further away.

TOGETHER@DAL

[Together@Dal](#) is a program for new students that provides a great way for you to meet other students, develop a sense of academic belonging and become connected to the university community before and during your first semester. You will also:

- Be paired with an upper-year mentor who will help answer any questions you may have about student life at Dalhousie

- Learn more about the academic realities of your specific department/major
- Attend fun, social events to help you feel part of the Dalhousie community
- Learn how to navigate the university experience with other new students
- Learn about the supports and resources available to you as a student

REGISTRAR'S OFFICE

Dalhousie's [Registrar's Office](#) supports students on their academic journey from high school through university. They provide students with a variety of supports including:

- Admissions to Dalhousie University
- Course registration or changes
- Student aid and bursaries
- Student loans
- Transfer credits
- Student records
- Degree audits
- Transcripts
- Graduation requirements
- Convocation ceremony

RESIDENCE

Dalhousie University offers a number of accommodation options. Traditional residences include both single and double (roommates) rooms. Non-traditional residences include apartment style accommodations that offer a more private and independent lifestyle.

Dalhousie's [residence website](#) is a great resource to learn everything you need to know about life on-campus. Information includes:

- How to apply for residence
- Important dates and deadlines
- Cost & fees
- Services
- Dining & meal plans
- If you're a new direct-from-high-school student, be sure to apply to residence by **May 15** to be guaranteed a room.



Academic and Curricular Distinctions

STUDENT AFFAIRS COMMITTEE – ENGINEERING CORE

The **Student Affairs Committee** is composed of both faculty and students and focuses on the special needs and circumstances of first- and second-year students. The committee provides a forum for addressing academic concerns of students and for promoting better liaison with faculty members.

STUDENT HEALTH & WELLNESS CENTRE

Dalhousie offers many services to support the health and wellbeing of students. Health centres are located on the Halifax Studley campus and on the Truro campus. Students on the Sexton campus can also access additional counselling services through the Melda Murray Student Centre.

SERVICES OFFERED THROUGH THE STUDENT HEALTH & WELLNESS CENTRE INCLUDE:

- Mental health services
- Learning disability services
- Peer support services
- Sexual health services
- Drug and alcohol aid services
- LGBTQ2SIA+ Services
- International Student Health

STUDENT SUCCESS CENTRE

The **Student Success Centre** at the Agricultural Campus in Truro has many supports and services available to assist you during your time at Dalhousie. This includes:

- Academic Supports
- Career and Leadership
- Health and Wellness
- Community Supports and Resources (*International student support, Indigenous student supports, Black student supports and LGBTQ2SIA+ students support*)

New students on campus can access additional supports and services to help ease their transition to university life. Advisors at the Centre can assist with course planning and academic coaching. The centre also helps students connect with peers, access information and resources about residences and houses and much more.

WRITING CENTRE

Students looking to improve their writing skills can book one-on-one appointments with Dalhousie's **Writing Centre**. The Centre also offers workshops, seminars and other special events to support student writing.

BACHELOR OF ENGINEERING WITH DISTINCTION:

Students who have successfully completed all of the requirements for their degree of Bachelor of Engineering, and have obtained a Cumulative Grade Point Average (GPA) of at least 3.70, will be granted the degree of Bachelor of Engineering with Distinction.

BACHELOR OF ENGINEERING WITH SEXTON DISTINCTION:

Dr. F.H. Sexton was the President of the Nova Scotia Technical College since its establishment in 1909 until his retirement in 1947. To honour his contributions, the Faculty of Engineering awards the designation of Sexton Distinction to each undergraduate student who has taken a full course load and obtained a cumulative Grade Point Average (GPA) of at least 3.85 or higher with no failed marks during their program beginning in Academic Term 5.

CO-OPERATIVE PROGRAM DESIGNATION:

Students who have successfully completed all of the requirements for their degree of Bachelor of Engineering and who, in addition, have successfully completed three four-month work terms, each of a minimum of 14 weeks, with a minimum of 35 hours per week, or equivalent as determined by the Department and the Co-op office, will receive the "Co-operative Education" designation on their degree.

FACULTY OF ENGINEERING DEAN'S LEADERSHIP LIST

The **Dean's Leadership list** recognizes the outstanding co- and extra-curricular leadership of undergraduate students within the Faculty of Engineering. Students who are named to the Dean's Leadership List have, in the eyes of their peers and faculty members, been recognized for their outstanding leadership contributions to the Dalhousie engineering community.

The Dean's Leadership List is recognized on a term-by-term basis and honours achievements beyond the classroom. Recipients will receive a formal distinction from the Faculty of Engineering.

Nominees must be full-time students with good academic standing and need to demonstrate exceptional leadership in one or more of the following activities in the appropriate academic term:

- Acting as representatives of Dalhousie on the regional, provincial, or national scale.
- Showing leadership related to equity and diversity at the Faculty of Engineering and/or in the community.
- Serving as an ambassador to Dalhousie's Faculty of Engineering.
- Encouraging fellow students to become involved in co-curricular and/or extra-curricular activities.
- Dedicating time and effort to initiatives that have potential to improve student life or develop a community for all undergraduate engineering students.
- Demonstrating authentic leadership in the eyes of their peers on one or more engineering societies, be it a faculty-level, or general interest society (including design teams).
- Going above and beyond their role or position on a given society or design team to help others, or to take measures to ensure the success of the society or team as a whole, in addition to maintaining their own responsibilities,
- Acting as exceptional team players with a positive attitude and sound communication skills.



Student Engagement

ENGINEERING STUDENT SOCIETIES

DALHOUSIE UNDERGRADUATE ENGINEERING SOCIETY (DUES): Dalhousie's Undergraduate Engineering Society gives a voice to all undergraduate engineering students at Dalhousie University. The society provides opportunities, academic services and other supports to engineering students, societies, design teams, chapter organizations and interest groups on campus. The society also helps raise awareness for various charitable causes.

DIPLOMA IN ENGINEERING SOCIETY (DES): The Diploma of Engineering Society (DES) represents engineering students in their first and second year of their undergraduate studies. The group promotes a positive experience to students by hosting events and providing access to academic resources and professional development opportunities that enhance the undergraduate experience.

WOMEN IN ENGINEERING SOCIETY (WIE): The Women in Engineering Society (WIE) is one of the most active groups on Dalhousie's Sexton Campus, leading initiatives that facilitate success amongst females across the campus. The society has created a strong peer support system, hosting regular events and initiatives to allow students to meet and inspire one another. They also serve as a strong voice for all female engineering students on campus.

DALHOUSIE GRADUATE ENGINEERING SOCIETY (DEGS): The DEGS is a society which represents those students who are in a graduate degree program in the Faculty of Engineering at Dalhousie through the coordination and promotion of events, activities and programs that suit the needs of those students.

DISCIPLINE SOCIETIES:

Chemical Engineering Society

Civil Engineering Society

Electrical Engineering Society

Environmental Engineering Society

Industrial Engineering Society

Mechanical Engineering Society

ENGINEERING DESIGN TEAMS

FORCE 7 SAILING: Force 7 Sailing is a multidisciplinary engineering team formed through a partnership between Dalhousie University and Memorial University of Newfoundland. The team offers students interested in naval architecture and sailing the chance to develop leadership, design, and manufacturing skills by creating high-performance racing sailboats. They are currently preparing for the 2025 edition of the Foiling SuMoth Challenge.

DALHOUSIE MICROTRANSAT AUTONOMOUS SAILBOAT TEAM (MAST): The Dalhousie Microtransat Autonomous Sailboat Team (MAST) is a multidisciplinary engineering group dedicated to designing and building a sustainable, small-scale, autonomous sailboat capable of crossing the Atlantic Ocean. Their vessel competes in the Microtransat Challenge, which tasks teams with launching their sailboats off the Atlantic coast for a transoceanic journey. This project also aims to advance the field of unmanned marine robotics, which are crucial tools in ocean research.

DALHOUSIE FORMULA SAE (DALFSAE): The Dalhousie Formula SAE (DALFSAE) team offers students the chance to translate classroom knowledge into practical engineering skills. A multidisciplinary group, they design, build, test, and race an open-wheeled race cars for international events such as the Formula Student collegiate competition hosted by the Society of Automotive Engineers. In 2023, the team designed and built Atlantic Canada's first electric vehicle.



DALHOUSIE SOLAR CAR TEAM: The Dalhousie Solar Car Team (DalSol) is a multidisciplinary group that designs, builds, and races solar-powered electric vehicles. In 2023, the 80-member team built Atlantic Canada's first solar car, named Nova, which competes in the Formula Sun Grand Prix, an annual closed-track event for student teams across North America.

The project requires a range of engineering skills, both technical and non-technical, allowing students to extend their education beyond traditional classroom learning.

DALHOUSIE'S SPACE SYSTEMS LAB: Dalhousie Space Systems Lab (DSS) is Dalhousie University's first and only lab dedicated to the research and development of spaceflight systems. The team includes students and professionals working to facilitate the growth of spaceflight research and design amongst the Atlantic community.

AUTONOMOUS UNDERWATER VEHICLE TEAM: Dalhousie's Autonomous Underwater Vehicle Team is a multi-disciplinary engineering group who collaboratively develop an Autonomous Underwater Vehicle from concept to completion. They integrate various technologies, such as robotics, acoustic systems, and video scanning, to create a sophisticated vehicle capable of autonomous operation.

ENGINEERING CHAPTERS

JACK.ORG DALHOUSIE ENGINEERING: Jack.OrgDalEng is a mental health advocacy society on Dalhousie's Sexton Campus. The group collaborates with the Dalhousie Health team and Engineering Faculty to advocate for mental health resources for engineering students.

DALHOUSIE ENGIQUEERS: Dalhousie EngiQueers is a student led chapter of a Canadian national wide non-profit who's mission as a chapter is to celebrate, promote and advocate for diversity and inclusivity in engineering at Dal.

DALHOUSIE ENGINEERING GLOBAL BRIGADES: The Engineering Global Brigades Chapter at Dalhousie is a student-led branch of a global non-profit organization dedicated to international sustainable development and community empowerment. Following a year of fundraising efforts, chapter members undertake week-long trips to partner countries (historically Honduras) to collaborate with rural communities on designing new or improved water distribution systems.

GEARHEADS: Gearheads is a group of passionate Dalhousie Engineering students eager to engage in volunteer opportunities year-round! Joining Gearheads offers a flexible approach to involvement, allowing you to participate in as many or as few activities as you desire. Opportunities range from being an orientation leader to selling grilled cheese outside the T-Room on Fridays, and more.

Work Integrated Learning

CO-OPERATIVE EDUCATION

Dalhousie Engineering's co-operative education program integrates academic learning with industry experience. Starting in the third year of your engineering degree, students have the option to combine their degree with co-op. Depending on your discipline, you will complete three to four paid work terms that are distributed around five study terms. Each work term typically lasts four months.

CO-OPERATIVE EDUCATION ALLOWS STUDENTS TO:

- Earn money while completing your degree
- Explore career options
- Develop stronger industry connections and opportunities for employment after graduation
- Gain practice work experience before graduation
- Build and discover new skills, abilities and passions

Dalhousie's Work-Integrated Learning & Co-operative Education can help you decide if co-op is the right choice. Members of their team are available to discuss program fees, entry requirements and how to apply.

THE WIL CO-OP OFFICE OFFERS A WIDE RANGE OF OTHER SERVICES INCLUDING:

- Services for co-op students
- General co-op advising
- Practice interviews
- Resume and cover letter critiques
- Job search advising
- International student advising
- Job development
- Employer relationship management
- Co-op job postings, interviews and offers

CAPSTONE PROGRAM

Dalhousie's Capstone Design Program is another excellent opportunity for students to gain work experience outside of the classroom. All engineering students in their final year of study participate in the year-long course. The program matches student teams with members of industry to solve real-world challenges. Projects are often open-ended problems which companies do not have the time or resources to tackle alone.

Engineering Careers

Getting your Bachelor of Engineering degree is the first step towards becoming a Professional Engineer. Once you graduate, consider submitting an application as an Engineer in Training (EIT) with your Provincial Regulator (Engineers Nova Scotia).

With 4 years of experience (coop included) or a combination of advanced education (Masters/Doctorate) and experience, and successful completion of the National Professional Practice Exam (NPPE) you will be eligible to apply for Professional Engineer (P.Eng.) registration.

DALHOUSIE BISSETT STUDENT SUCCESS CENTRE (BSSC)

The Bissett Student Success Centre can assist you in finding a job and developing your career. Located on Dalhousie's Studley Campus, the Centre offers current students and recent graduates access to career resources, advising and workshops aimed at helping you connect with employers and planning your career path.

Students can book appointments with advisors to explore careers, build your cover letter, resume and LinkedIn profile, practice interview strategies and enhance your professional skills.

The Centre also offers an online portal called mycareer to search and apply for on or off campus jobs, co-op opportunities and volunteer positions. Students can log into the portal using their netID and password.



Student Innovation and Entrepreneurship

DAL INNOVATES is a hub for world leading research, innovation and entrepreneurship and provides opportunities for students and faculty at Dalhousie University and other Atlantic Canadian institutions to explore their design ideas and creativity and to develop knowledge, skills, and attitudes necessary to translate new ideas into innovations.

Programs include:

- Emera IdeaHUB
- Dalhousie Sandboxes
- LaunchDal
- The Bridge
- The Creative Destruction Lab

IDEA MAKERSPACE: Dalhousie's **Idea Makerspace** is the go to place for anyone who wants to develop and explore their innovative spirit and ideas. The sandbox provides all Dalhousie engineering students with a space of their own where they can invent, design and build projects, and access prototyping equipment and on-site training and support from experts.

Located on Dalhousie's Sexton Campus, the space fosters creativity and innovation, allowing students to collaborate with one another in a fun and student-led atmosphere. Here students practice the skills gained from their engineering education and other IDEA programming.

EMERA IDEA HUB: The **Emera ideaHUB** helps engineering students, faculty and startups in tough tech. The HUB focuses on supporting new products emerging from engineering and applied science research in areas such as ocean technology, clean energy and technology, advanced materials, food science, water resources, biomedical engineering, bio-products, deep software, artificial intelligence, the internet-of-things, cyber-security, as well as various other physical and cyber-physical products.

Located on Dalhousie's Sexton Campus, the Emera ideaHUB capitalizes on the resources and strengths of Dal's Faculty of Engineering. It includes top-of-the-line tools resources, expertise and workspaces to help students, faculty and startups bridge the gap between discovery and commercialization and bring new products to market.

Initiatives within the Emera ideaHUB include the **Young Innovators Program**. The program is design to support entrepreneurial youth interested in exploring the potential to commercialize new products. Students in the program have access to co-working spaces with real startups in the HUB and access to the advice and guidance of the HUB team.

The image shows a modern, bright office space with a high ceiling and exposed ductwork. In the foreground, there is a white conference table with several blue office chairs. In the background, a black leather sofa is positioned against a white wall. On the wall, the logo for 'Emera ideaHUB' is displayed in large, bold letters. 'Emera' is in a smaller, black font, 'idea' is in a larger, yellow font, and 'HUB' is in the largest, black font. To the right of the sofa, there are more blue office chairs and a workbench area with various tools and equipment.

Emera
ideaHUB



Where **innovation**
meets **opportunity**

dal.ca/study-engineering



DALHOUSIE
UNIVERSITY

Faculty of Engineering

Dalhousie University
O'Brien Hall, Sexton Campus
5217 Morris St, PO Box 15000
Halifax, NS B3J 1B6

Phone Number: 902.494.4207
Email: engineering@dal.ca

f @DalhousieEngineering
@ @dalfacultyofeng
X @DalEngineering
in FacultyofEngineering