

Orientation session Summer 2023

**Department of Chemical and
Materials Engineering –
Academic and Community
Conduct**



Academic and community conduct

- My advice:
 - Be honest at all times
 - Plagiarism is not tolerated
 - Don't cheat on exams
 - Don't copy from others
 - Always cite every source you use
 - Be respectful at all times
 - Rudeness or bullying is not tolerated
 - Concordia encourages and celebrates diversity
 - Be responsible at all times
 - Inform yourself of the rules and follow them
 - Read your admission letter – in its entirety
 - Read your course outlines – in their entirety
 - Safety: Part of Chemical Engineering culture

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CME Thesis-based Graduate Programs

Dr. Zhibin Ye

**Department of Chemical and Materials Engineering
Concordia University, Montreal, Canada**

CME Thesis Graduate Program Staff

- **Dr. Zhibin Ye, Graduate Program Director (GPD)**
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- **Erica Howse, Department Administrator**
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- **Antonios Daskalakis, Programs Coordinator**
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- **Kerri Warbanski, Chemical Laboratory Technician**
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- **Dr. Alex De Visscher, Chair of the Department**
alex.devisscher@concordia.ca

CME thesis-based programs

➤ MASC

45 credit program: courses + thesis; typically, 2 years

➤ PhD

90 credit program: courses + thesis; typically, 4 years

Get familiar with the CME Graduate Student Handbook. You will find detailed information on all programs offered by the Department and the guidelines you need to follow.

MASc program requirements

<https://www.concordia.ca/academics/graduate/chemical-engineering-masc.html>

➤ Courses – 16 credits

Mandatory:

- ** CHME 6981 Chemical Engineering Research Protocols and Safety (4 cr.)**
– required prior to lab access; take ASAP

**** minimum 1 course (4 cr.) from**

CME MASc core courses:

- CHME 6011 Advanced Transport Phenomena (4 cr.)
- CHME 6021 Advanced Chem. Eng. Thermodynamics (4 cr.)
- CHME 6031 Chemical kinetics and Reaction Engineering (4 cr.)
- CHME 6041 Chemical Process Dynamics and Control (4 cr.)
- CHME 6051 Chemical Process Engineering and Design (4 cr.)
- CHME 6071 Materials Science and Engineering (4 cr.)
- CHME 6081 Advanced Separation Processes (4 cr.)
- CHME 6121 Nanomaterials Science and Engineering (4 cr.)
- ENCS 6021 Engineering Analysis (4 cr.)

Discuss with your supervisor on course selection!!!

MASc program requirements

<https://www.concordia.ca/academics/graduate/chemical-engineering-masc.html>

➤ Courses – 16 credits

Other 8 credits:

**** any courses from CME MASc core course list and electives list;**

**MASc electives:
(> 24; expanding)**

CHME 6061 Advanced Biochemical Engineering (4 cr.)
CHME 6091 Statistics for Chem. Eng. (4 cr.)
CHME 6101 Advanced Battery Materials and Technologies (4 cr.)
CHME 6111 Polymer Chemistry and Engineering (4 cr.)
CHME 6131 Advanced Colloid and Interface Science and Engineering (4 cr.)
CHME 6911 Topics in Chemical Engineering I (4 cr.)
ENCS 6111 Numerical Methods (4 cr.)
ENGR 6201 Fluid Mechanics (4 cr.)
MECH 6131 Conduction and Radiation Heat Transfer (4 cr.)
MECH 6141 Heat Exchanger Design (4 cr.)
....

**** possible to take 1 course outside the Electives list (get permission of GPD); courses at other departments at Concordia or other universities;**

Note: If you take a 3-cr. course, you must take 1-cr. CHME 6001 – Project in CME to obtain the missing credit.

MASc program requirements

<https://www.concordia.ca/academics/graduate/chemical-engineering-masc.html>

➤ Research and thesis

ENGR 8901 MASc Research and Thesis (29 cr.)

Discuss with your supervisor on your thesis research (topic, objectives, methodology, timeline) !!!

Department seminars by invited speakers: mandatory to attend 80%.

PhD program requirements

<https://www.concordia.ca/academics/graduate/chemical-engineering-phd.html>

➤ Courses – 12 credits

Mandatory:

Discuss with your supervisor on course selection!!!

Choose courses that best align with your research areas and interest you most.

**** CHME 6981 Chemical Engineering Research Protocols and Safety (4 cr.)**

– required prior to lab access; take ASAP

**** at least 4 cr. from CME PhD courses (> 30)**

CHME 6011 Advanced Transport Phenomena (4 cr.)
CHME 6021 Advanced Chem. Eng. Thermodynamics (4 cr.)
CHME 6031 Chemical kinetics and Reaction Engineering (4 cr.)
CHME 6041 Chemical Process Dynamics and Control (4 cr.)
CHME 6051 Chemical Process Engineering and Design (4 cr.)
CHME 6061 Advanced Biochemical Engineering (4 cr.)
CHME 6071 Materials Science and Engineering (4 cr.)
CHME 6081 Advanced Separation Processes (4 cr.)
CHME 6121 Nanomaterials Science and Engineering (4 cr.)

....

PhD program requirements

<https://www.concordia.ca/academics/graduate/chemical-engineering-phd.html>

➤ Courses – 12 credits

Optional:

**** You may take 1 course outside the PhD course list (get permission of GPD);**

It can be a course at other departments at Concordia or at other universities

Note: If you take a 3-cr. course, you must take 1-cr. CHME 6001 – Project in CME to obtain the missing credit.

PhD program requirements

<https://www.concordia.ca/academics/graduate/chemical-engineering-phd.html>

➤ Comprehensive and proposal exams, and Seminar - 8 credits

ENCS 8501 Comprehensive Exam (0 cr.) – Critical Literature Review

Generally, within 1st year of PhD program; submit a critical literature review report and defend

ENCS 8511 Doctoral Research Proposal (6 cr.)

Generally, within half a year after passing Comprehensive Exam; submit a research proposal and defend

ENCS 8011 PhD Seminar (2 cr.)

Generally, after passing Doctoral Research Proposal; deliver a seminar and attend other seminars (by other PhD students and invited department seminar speakers)

Discuss with your supervisor on your comprehensive exam!!!

PhD program requirements

<https://www.concordia.ca/academics/graduate/chemical-engineering-phd.html>

➤ Research and thesis

ENGR 8911 Doctoral Research and Thesis (70 cr.)

Discuss with your supervisor to plan on your doctoral thesis!!!

Student resources

- Scholarship and bursary opportunities available

Announced from time to time; will forward once announced

- International Student Office

<https://www.concordia.ca/students/international.html>

- Student Hub

<https://www.concordia.ca/students/services.html>

Help available at CME department

➤ Academic questions

GPD, Department Chair

➤ Administrative questions

**Programs Coordinator, Antonios Daskalakis
Department Administrator, Ms. Erica Howse**

➤ Lab safety questions

Technical supervisor, Ms. Harriet Laryea, and Chemical Laboratory Technician, Ms. Kerri Warbanski, as well as EHS staff



**Wish you best success in
your study at CME !**



CME Non-thesis Graduate Programs

CME Graduate Student Orientation
Summer 2023

Deniz Erol, Graduate Program Director, Non-thesis Programs

Graduate Certificate in Chemical Engineering

General requirements:

- The program must be completed within 9 terms (3 years) from the initial time of registration. Please refer to your Offer of Admission Letter for your time limit.
- Certificate program consists of completing a minimum of **15 credits** of course work.

Course requirements: **4 courses**

- CHME 6011 – Advanced Transport Phenomena (4 credits)
- ENCS 6021 – Engineering Analysis (4 credits)
- One of the following courses:
 - CHME 6021 Advanced Chemical Engineering Thermodynamics (4 credits)
 - CHME 6031 Chemical Kinetics and Reaction Engineering (4 credits)
- One technical elective course (min. 3 credits, max. 4 credits):
 - You can choose courses from the following list, or any course offered in the Diploma or Master of Applied Science (MASc) programs that are not currently included in the core course list of the Certificate program.

Graduate Certificate in Chemical Engineering

A list of elective courses:

- CHME 6061 – Advanced Biochemical Engineering (4 credits)
- CHME 6081 – Advanced Separation Processes (4 credits)
- CHME 6091 – Statistics for Chemical Engineering (4 credits)
- CHME 6101 – Advanced Battery Materials and Technologies (4 credits)
- CHME 6111 – Polymer Chemistry and Engineering (4 credits)
- CHME 6131 – Advanced Colloid and Interface Science and Engineering (4 credits)
- CHME 6911 – Topics in Chemical Engineering I (4 credits)
- ENCS 6111 – Numerical Methods (4 credits)
- ENGR 6201 – Fluid Mechanics (4 credits)
- MECH 6131 – Conduction and Radiation Heat Transfer (4 credits)
- MECH 6141 – Heat Exchanger Design (4 credits)
- MECH 7101 – Convection Heat Transfer (4 credits)

Graduate Certificate in Chemical Engineering

Recommended Course Plan for Students Starting in Winter: Winter 2023:

- CHME 6011 – Advanced Transport Phenomena (4 credits)
- CHME 6031 – Chemical Kinetics and Reaction Engineering (4 credits)

Fall 2023:

- ENCS 6021 – Engineering Analysis (4 credits)
- Technical elective

Graduate Certificate in Chemical Engineering

If you are in need of a 1-credit course to meet the credit requirements of your program, School of Graduate Studies has started offering **1-credit, professional development courses**.

- GSPD 601 – Graduate Academic Fundamentals (1 credit)
- **GSPD 602 – Essential Leadership Skills (1 credit) – Currently being offered.**
- GSPD 603 – Career Exploration (1 credit)
- GSPD 604 – Furthering Your Professional Skills (1 credit)

Additional requirements: Attendance at 80% of the CME departmental seminar series. Attendance is taken with a sign-in sheet. The schedule of the seminars is communicated by email.

Graduate Certificate in Chemical Engineering

Students can transfer up to 15 credits from the Graduate Certificate to Graduate Diploma program.

If you wish to transfer, talk to your GPD and refer to the Graduate Student Handbook for the transfer process.

Graduate Diploma in Chemical Engineering

General requirements:

- The program must be completed within 12 terms (4 years) from the initial registration. Please refer to your Offer of Admission Letter for your time limit.
- Certificate program consists of completing a minimum of **30 credits** of course work.

Course requirements: **8 courses**

- CHME 6011 – Advanced Transport Phenomena (4 credits)
- CHME 6021 – Advanced Chemical Engineering Thermodynamics (4 credits)
- CHME 6031 – Chemical Kinetics and Reaction Engineering (4 credits)
- ENCS 6021 – Engineering Analysis (4 credits)
- One of the following courses:
 - CHME 6041 – Chemical Engineering Process Dynamics and Control (4 credits)
 - CHME 6051 – Chemical Process Engineering and Design (4 credits)

Graduate Diploma in Chemical Engineering

Course requirements (continued):

- 3 technical electives:
 - At least one materials course
 - At least one complementary course

For a list of technical elective and complementary courses, refer to the Graduate Student Handbook.

For advice on course selection, please contact Deniz Erol, deniz.erol@concordia.ca

Additional requirements: Attendance at 80% of the CME departmental seminar series. Attendance is taken with a sign-in sheet. The schedule of the seminars is communicated by email.

Graduate Diploma in Chemical Engineering

Recommended Course Plan for Students Starting in Winter:

Winter 2023:

- CHME 6011 – Advanced Transport Phenomena (4 credits)
- CHME 6031 – Chemical Kinetics and Reaction Engineering (4 credits)
- CHME 6041 – Chemical Engineering Process Dynamics and Control (4 credits)

Summer 2023:

- Technical elective
- Complementary course

Fall 2023:

- ENCS 6021 – Engineering Analysis (4 credits)
- CHME 6021 – Advanced Chemical Engineering Thermodynamics (4 credits)
- Technical elective

Graduate Diploma in Chemical Engineering

Students can transfer up to 12 credits from the Graduate Diploma to the Master of Applied Science (MASc) program.

Please note that securing a supervisor is required for admission to the MASc program. Refer to the Graduate Student Handbook for the transfer process.

Important for all students:

- Most courses are offered once a year.**
- Minimum pass grade is B-.**
- To have a full-time student status in any semester, you should be taking 9 or more credits of course work.**

Welcome to Your Library!

Chemical and Materials Engineering Graduate Orientation

Chloe Lei

Teaching & Research Librarian, Engineering & Computer Science

chloe.lei@concordia.ca

The Libraries



Webster (SGW)



Grey Nuns
Reading Room
(SGW)



Vanier (Loyola)

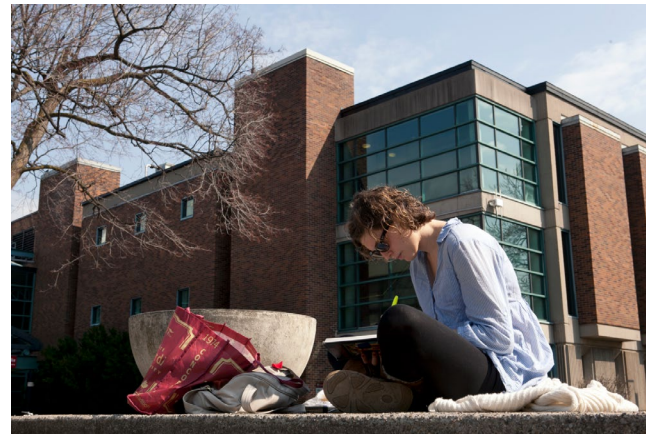
Webster Library (downtown)



Graduate study space (5th floor)



Vanier Library (Loyola)



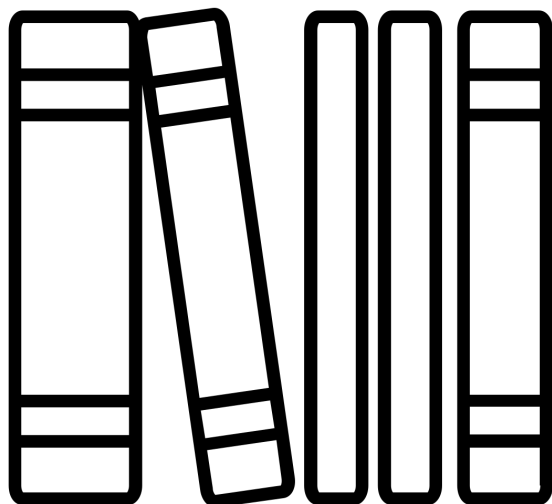
Your Concordia ID card is your Library card

Use it to borrow books
and equipment from the
Loans & Returns desk



How many items can you borrow?

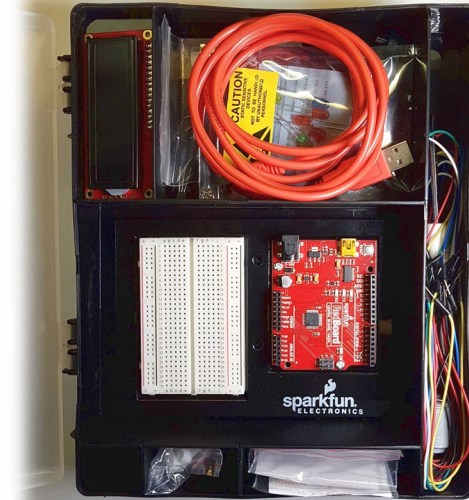
Maximum items to borrow	Maximum number of holds
100	50



Item type	Loan duration
General items	30 days (+ renewals)
Daily course reserves	1 day
3-hour course reserves	3 hours
Accessories	1 day
Equipment	1 day
Library laptops	1 day
Library tablets	3 days
Technology Sandbox items	7 days

Technology & Equipment

Laptops
Tablets
Headsets
Printers
Scanners
3D printers
...



Off-campus access

Use your Concordia
netname and password

The image shows a login page for Concordia University. At the top, the university's logo is displayed, featuring a shield with a book and the text "UNIVERSITÉ Concordia UNIVERSITY". Below the logo, the text "Sign in" is centered. Underneath, there are two input fields: the first is labeled "Netname" and the second is labeled "Password". At the bottom of the form is a large, dark red button with the text "SIGN IN" in white capital letters. The background of the page is a light gray with a faint, abstract pattern.

Best place to start searching



The screenshot shows the library website with a dark navigation bar at the top containing links: FIND, HELP & HOW-TO, RESEARCH SUPPORT, TECHNOLOGY, LOCATIONS & HOURS, and ABOUT THE LIBRARY. A magnifying glass icon is on the right. A large blue box highlights the URL <https://library.concordia.ca>. Below this, the text "Sofia Discovery tool" is followed by a yellow arrow pointing left. A search bar contains the placeholder text "Books, ebooks, articles, and more" and a "Search" button. Below the search bar are links for "User guide" and "Advanced search". At the bottom, a blue footer bar contains six icons and their corresponding labels: DATABASES BY SUBJECT, E-JOURNALS, COURSE RESERVES & TEXTBOOKS, CITATION GUIDES & ZOTERO, LOANS & RETURNS, and BOOK A GROUP STUDY ROOM. Two yellow arrows point from the footer bar to the search area: one from "COURSE RESERVES & TEXTBOOKS" to the search bar, and another from "BOOK A GROUP STUDY ROOM" to the "Advanced search" link.

FIND HELP & HOW-TO RESEARCH SUPPORT TECHNOLOGY LOCATIONS & HOURS ABOUT THE LIBRARY

<https://library.concordia.ca>

Sofia Discovery tool


Books, ebooks, articles, and more Search

User guide
Searching Sofia

Advanced search

DATABASES BY SUBJECT E-JOURNALS COURSE RESERVES & TEXTBOOKS CITATION GUIDES & ZOTERO LOANS & RETURNS BOOK A GROUP STUDY ROOM

Digital Resources




Engineering Village

Quick search: All fields ☐ for

Databases ^ Date v Language v Document type v

☐ All ☒ Compendex ☐ Inspec ☐ GEOBASE



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IEEE Xplore®
Digital Library

Concordia University
Libraries

Access provided by:
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» Sign Out

Browse v My Settings v Get Help v

Search **4,873,760** items

All v Enter keywords or phrases (Note: Searches metadata only by default. A search for 'smart grid' = 'smart grid')

CAS SciFinder® Alerts

Searching for...

All
Substances
Reactions
References
Suppliers
Biosequences
Retrosynthesis

References

Search by Keyword, Substance Name, CAS RN, Patent Number, PubMed ID, AN, CAN, and/or DOI.

Enter a query...

Author Name Enter last name, first name middle name.

+ Add Advanced Search Field Learn more about S

Launch CAS Lexicon CAS Lexicon enables you to browse the CAS General Thesaurus substances to build a Reference query with up to 1,000 indexed

Library workshops and tutorials

<p>JAN 24 Tue, 9:00am - 11:00am Online 9 SEATS LEFT</p> <p>Using Zotero for Grads</p> <p>This workshop is open to all. Graduate students: please register through GradProSkills. Everyone else can register on this page. ... More</p> <p>Digital scholarship GradProSkills</p>	<p>JAN 25 Wed, 10:00am - 12:00pm In-Person 10 SEATS LEFT</p> <p>Data mining & algorithmic bias</p> <p>This workshop is open to all. Graduate students: please register through GradProSkills. Everyone else can register on this page. ... More</p> <p>Digital scholarship General workshop seri...</p>	<p>JAN 26 Thu, 11:00am - 1:00pm In-Person</p> <p>Library Skills & Resources: Maximize Your Graduate Research Potential</p> <p>For graduate students only. Register through GradProSkills. ... More</p> <p>GradProSkills</p>
<p>JAN 30 Mon, 2:00pm - 4:00pm In-Person 9 SEATS LEFT</p> <p>VR Bootcamp Part 1</p> <p>This workshop is open to all. Graduate students: please register through GradProSkills. Everyone else can register on this page. ... More</p> <p>GradProSkills Technology Sandbox</p>	<p>FEB 2 Thu, 2:00pm - 4:00pm In-Person 9 SEATS LEFT</p> <p>Introduction to Linux</p> <p>This workshop is open to all. Graduate students: please register through GradProSkills. Everyone else can register on this page. ... More</p> <p>GradProSkills Technology Sandbox</p>	<p>FEB 6 Mon, 2:00pm - 4:00pm In-Person 10 SEATS LEFT</p> <p>VR Bootcamp Part 2</p> <p>This workshop is open to all. Graduate students: please register through GradProSkills. Everyone else can register on this page. ... More</p> <p>GradProSkills Technology Sandbox</p>
<p>FEB 14 Tue, 10:00am - 11:30am Online 10 SEATS LEFT</p> <p>Canadian Statistics and Microdata for the Social Sciences</p> <p>This workshop is open to all. Graduate students: please register through GradProSkills. Everyone else can register on this page. ... More</p> <p>General workshop seri... GradProSkills</p>	<p>FEB 15 Wed, 2:00pm - 3:00pm</p> <p>Using Zotero for Grads</p> <p>For Grad Students only. Grad Students register through GradProSkills. ... More</p> <p>Digital scholarship GradProSkills</p>	<p>FEB 16 Thu, 11:00am - 12:30pm</p> <p>Systematic Reviews: The Basics</p> <p>For graduate students only. Register through GradProSkills. ... More</p> <p>GradProSkills</p>

Ways to contact the library

ASK QUESTIONS - GET HELP



<https://library.concordia.ca/help/questions/>

Chloe Lei

Teaching & Research Librarian, Engineering &
Computer Science

chloe.lei@concordia.ca

514-848-2424 ext. 7909

Feel free to contact me for an appointment in-person or online.

SCHEDULE AN APPOINTMENT

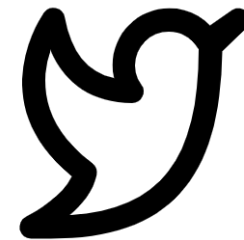
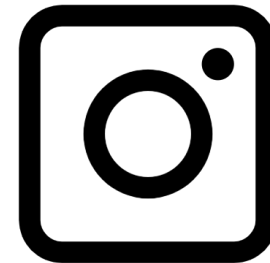
I can help you with library resources and services, including but are not limited to:

- Locate specific items (e.g. books, articles)
- Navigate resources related to engineering and computer science
- Literature searching
- Citations and references
- Recommend new resources



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GradProSkills

Empowering graduate students to achieve their academic and professional goals

Anim Hossain

Administrative
Assistant, GradProSkills

STATEMENT OF PURPOSE

GradProSkills

Empowering

Concordia graduate students and postdoctoral fellows to engage with community resources, optimize their graduate school experience and equip themselves to achieve their professional and academic goals.

GradProSkills OFFERINGS



WORKSHOPS

More than 300 free workshops



CERTIFICATES

Record of participation and certificates



EVENTS

3MT/MTI80, Thesis Boost, Meet & Write



RESOURCES

Online resources: GradProBlog, Udemy, Mitacs, and more!



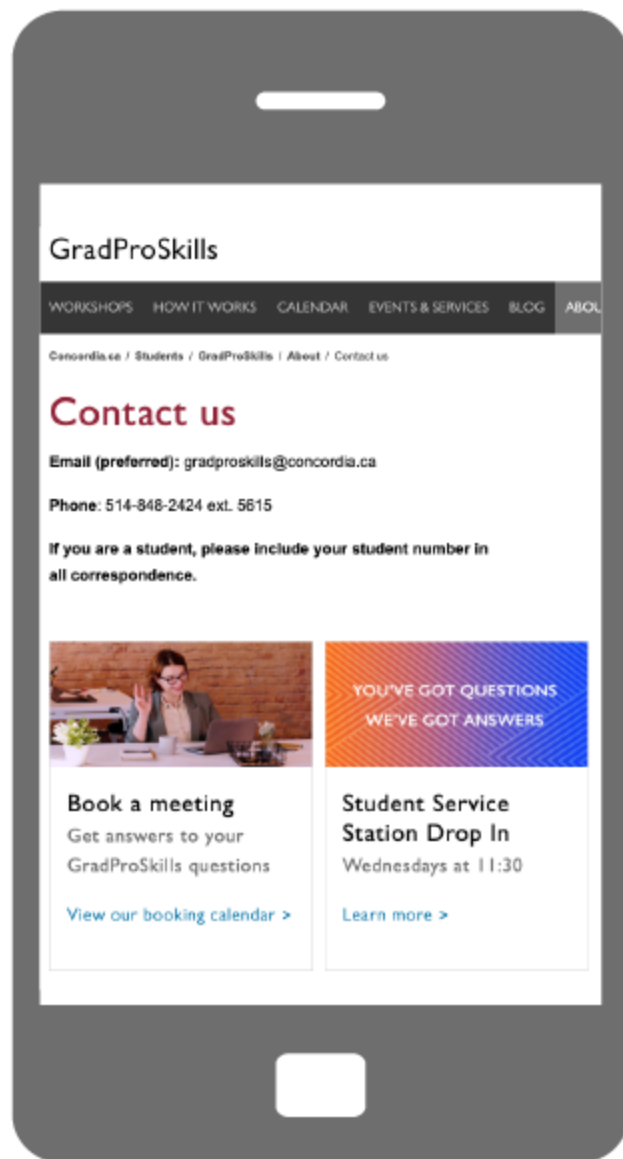
OPPORTUNITIES

Work opportunities

SKILL DOMAINS



- Career Development
- Communication
- Digital, Media and Information
- Graduate Academic Success
- Language Training
- Leadership and Management
- Teaching
- Wellness & Life Balance



#gradproskills

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What is next?

You can find all the information about GradProSkills workshops, events, and resources on our website and social media:



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(Concordia University)



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