



GINA CODY
SCHOOL OF ENGINEERING
AND COMPUTER SCIENCE

Department of Chemical and
Materials Engineering

Orientation session Fall 2024

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

CONCORDIA.CA





CME Thesis-based Graduate Programs

Dr. Zhibin Ye

Department of Chemical and Materials Engineering

Concordia University, Montreal, Canada

CME thesis-based programs

➤ MASC

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

➤ PhD

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

Read 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**

**Discuss with your supervisor on course selection!!!
Choose courses that best align with your research areas and interest you most.**

Mandatory:

**** 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.)

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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>

CME Thesis Graduate Program Staff

- **Antonios Daskalakis, Graduate Programs Coordinator**
cme-grad@concordia.ca
- **Erica Howse, Department Administrator**
Erica.Howse@concordia.ca
- **Harriet Laryea, Technical Supervisor**
harriet.laryea@concordia.ca
- **Kerri Warbanski, Chemical Laboratory Technician**
kerri.warbanski@concordia.ca
- **Zhibin Ye, Graduate Program Director (GPD) – Thesis programs**
Zhibin.ye@concordia.ca
- **Department chairs**

Help available at CME department

➤ Administrative questions

Programs Coordinator, Antonios Daskalakis
Department Administrator, Erica Howse

➤ Academic questions

GPD, Department Chair

➤ Lab safety questions

Technical supervisor, Harriet Laryea, and Chemical Laboratory Technician, 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
Fall 2024

Deniz Erol, Graduate Program Director, Non-thesis Programs

Graduate Certificate in Chemical Engineering

General requirements:

- 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 Fall:

Fall 2024:

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

Winter 2025:

- CHME 6011 – Advanced Transport Phenomena (4 credits)
- Technical elective

If you are an international student and need to maintain full-time status, you can take a 1 credit course, offered by the SGS or GCS, each semester.

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:

- 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 electives:
 - At least one materials course
 - At least one complementary course
 - One elective of your choice

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 Fall:

Fall 2024:

- CHME 6021 – Advanced Chemical Engineering Thermodynamics (4 credits)
- ENCS 6021 – Engineering Analysis (4 credits)
- CHME 6051 – Chemical Process Engineering and Design

Winter 2025:

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

Summer 2025:

- Technical elective
- Complementary course

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:

- **Good academic standing: Minimum GPA of 2.70**
- **Most courses are offered once a year.**
- **Minimum pass grade is B-.**
- **One C rule. F is NOT allowed. If you think you will fail, DISC the course. DISC deadline: Dec 2, 2024**
- **To have a full-time student status in any semester, you should be taking 9 or more credits of course work.**

Graduate Professional Development

Kristy Clarke

concordia.ca/gradproskills



Our OFFERINGS



WORKSHOPS

Hundreds of free
workshops per year



EVENTS

3MT/MTI80, Thesis Boost,
PhD Career Connect &
more



CERTIFICATES

Record of participation
and certificates



OPPORTUNITIES

Doctoral Internship
Program, Work
opportunities



Professional Skills (GradProSkills)



Career
development

Program: PhD Career Connect

Workshops: Job search and interview skills, CV & cover letter



Communication

Program: Strategic Public Communications

Workshops: Presenting, language training, pitching ideas



Leadership &
collaboration

Program: Graduate Leadership Development Certificate

Workshops: Project management, negotiating



Teaching

Program: Graduate Seminar in University Teaching

Workshops: TA orientation, grading and feedback

Research and Thesis Support



Conducting
research

Program: Python & R programming

Workshops: Reading skills, literature review, time management



Graduate funding
applications

Program: Grant and application support

Workshops: Funding information, application preparation



Research
communication

Program: Public Scholars, 3MT & MT180

Workshops: Academic writing and editing, publishing, presenting



Thesis support

Program: Thesis Boost Writing Retreat

Workshops: Thesis writing and submission, student-supervisor relationship


Visit our webpages!


- Our programs and workshops are found in two pages:


Professional skills


concordia.ca/gradproskills

Training and resources by skill

 **Career development**
Recognize your skills, identify job opportunities that align to your values and communicate effectively with employers.


 **Communication**
Be a better communicator in school and beyond by improving your oral, written and interpersonal communication.

 **Leadership and collaboration**
Build your emotional intelligence, capacity to work in teams and ability to lead projects.

 **Teaching**
As a TA or aspiring teacher, learn best practices in training design and delivery to fuel your passion for teaching.

Professional development for credit


Do you need an elective credit to complete your academic program? Consider enrolling in a 1-credit professional development course (graduate calendar course code GSPD). Tuition





Thesis-based students


concordia.ca/thesis

Graduate research and thesis support

 **Graduate funding**
Discover the wide range of funding sources for research-based students, and get support preparing a strong scholarship application.


 **Conducting research**
Our workshops and resources help you hone important research skills such as doing literature reviews and analyzing data sets.

 **Research communication**
Learn how to communicate your research to discipline-specific and general audiences through participation in conferences, publishing articles and more.

 **Thesis preparation**
From planning to writing and submission, the School of Graduate Studies supports you in preparing your thesis.

Thesis submission process

Our thesis submission guide walks you through the structured process of preparing your initial submission, defending, formatting and making a final



Stay up-to-date!



Website

concordia.ca/gradproskills



Newsletter

Out every other Thursday!



E-mail

gradproskills@concordia.ca



Scan to visit our website!

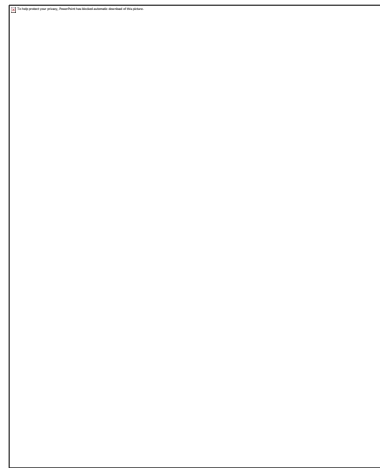
Welcome to Your Library!

Chemical and Materials Engineering Graduate Orientation

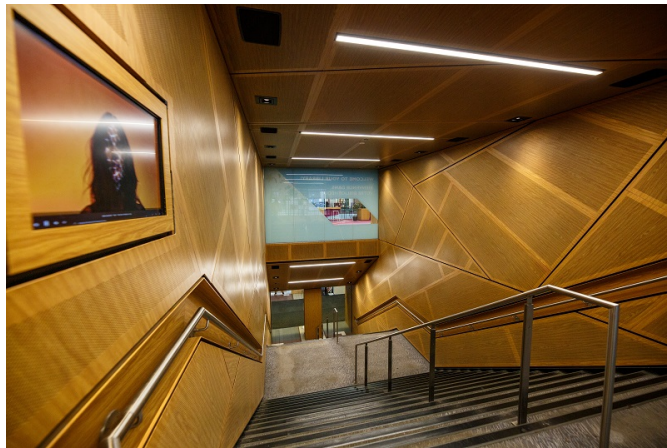
Chloe Lei

Teaching & Research Librarian, Engineering & Computer Science

chloe.lei@concordia.ca



Library Spaces



Webster (SGW)



Grey Nuns Reading Room
(SGW)



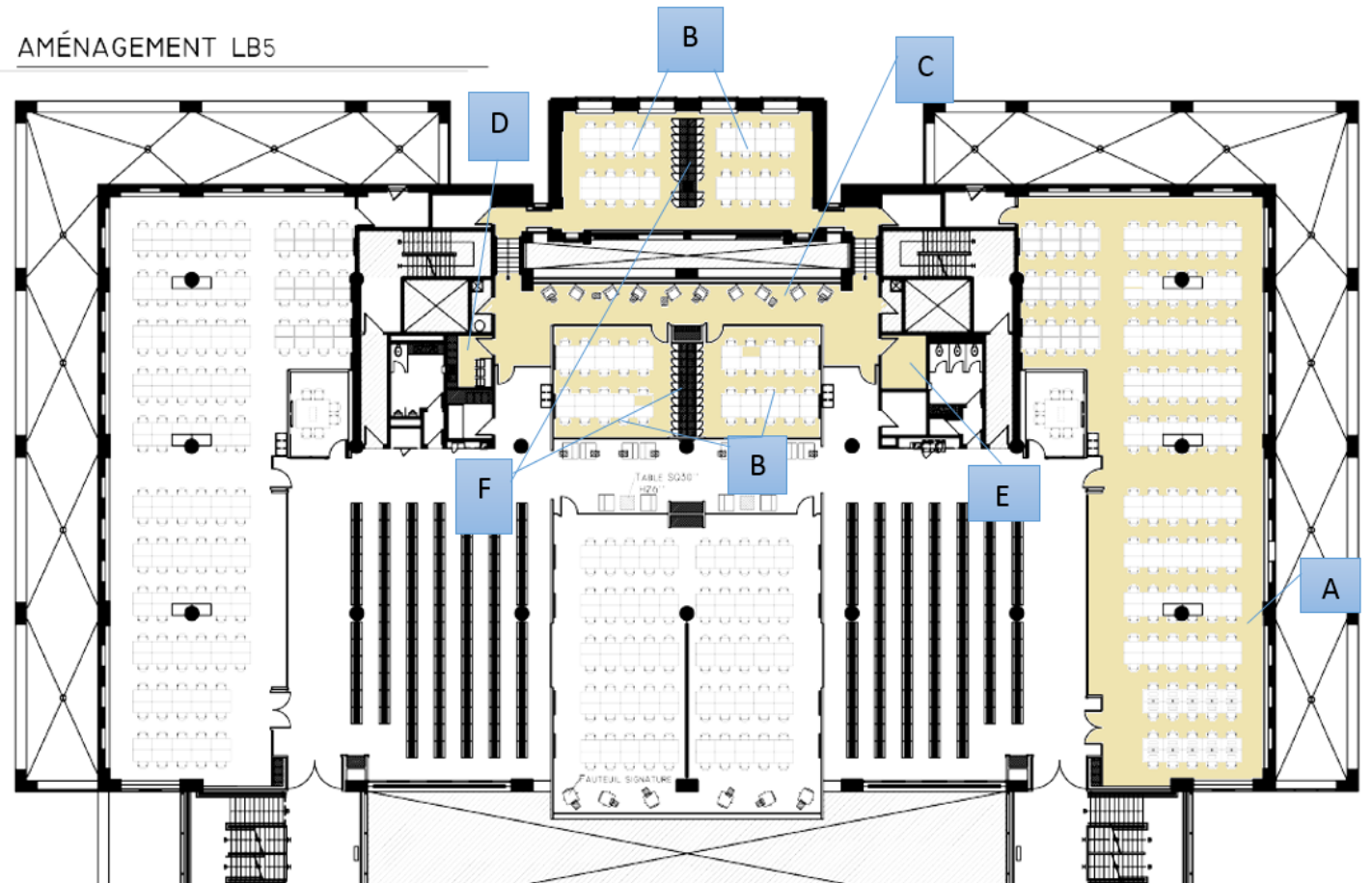
Vanier (LOY)

Webster Library (SGW)



Webster Library, Graduate spaces, 5th floor

- A. Quiet reading room
- B. Four dissertation writing rooms
- C. Lounge
- D. Kitchenette
- E. Dedicated printer/copier/scanner
- F. Lockers & Shelves



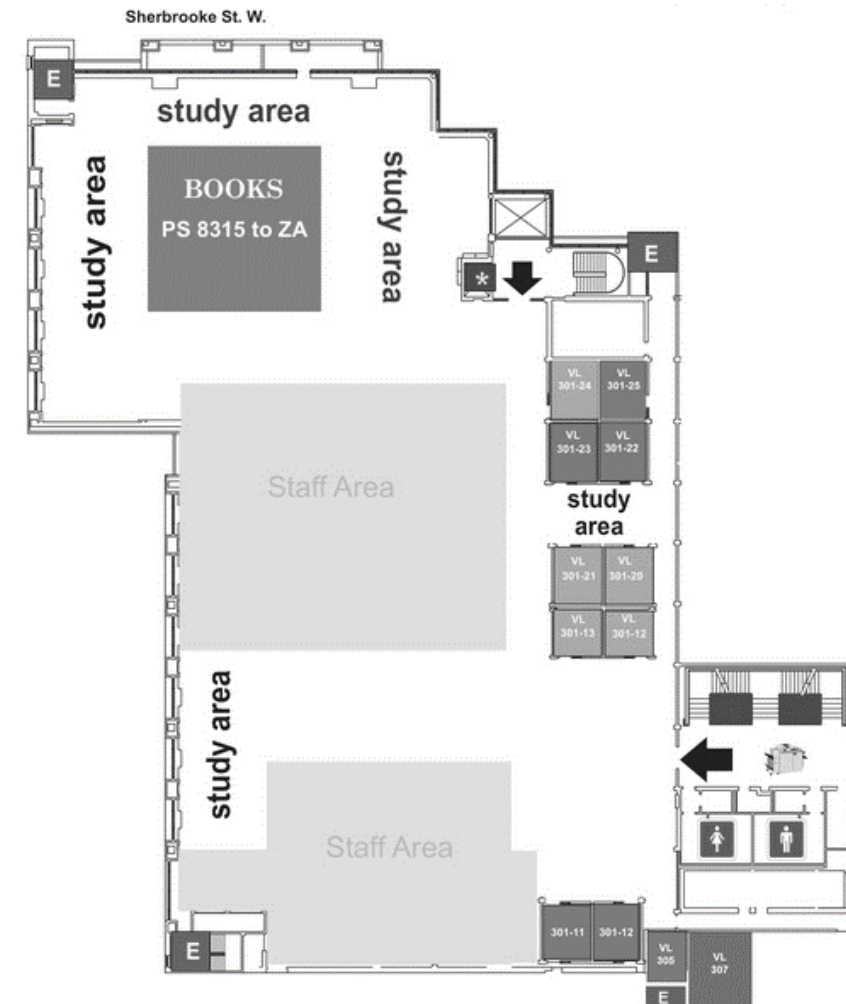
Vanier Library (LOY)



Vanier Library, Graduate spaces, 3rd floor

Obtain access codes when you arrive

- A. Graduate study room (VL-307)
 - Assigned shelves
- B. Graduate group study room (VL-305)

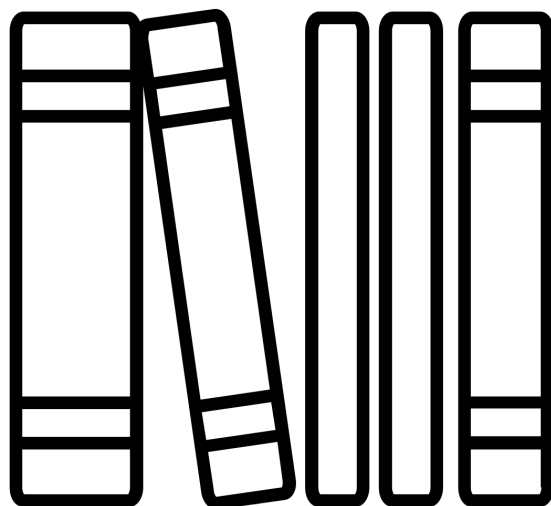


Your Concordia ID card
is your Library card

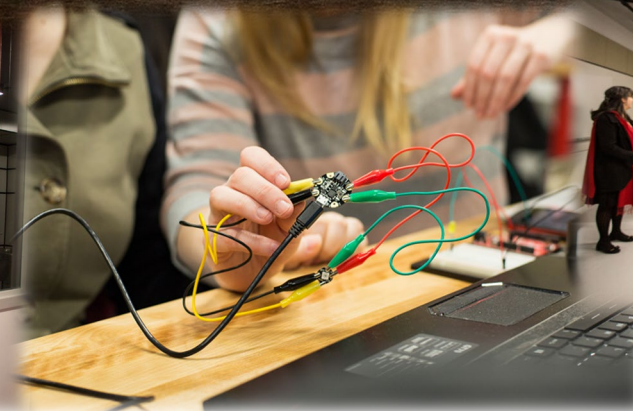


How many items can you borrow?

| Loan item limit | Hold item limit |
|-----------------|-----------------|
| 100 | 50 |



| Item type | Loan duration |
|---|----------------------|
| Regular items | 30 days (+ renewals) |
| Daily course reserves | 1 day |
| 3-hour course reserves | 3 hours |
| Accessories (e.g. mobile chargers, headsets...) | 1 day |
| Equipment (e.g. calculators, white board markers...) | 1 day |
| Laptops | 3 day |
| Tablets | 3 days |
| Technology Sandbox items | 7 - 14 days |



Technology & Equipment

211.00

TECHNOLOGY SANDBOX

BAC À SABLE DES
TECHNOLOGIES



d'ouverture/Open Hours
Fri 10:00 - 18:00



Technology
Sandbox

Off-campus access



UNIVERSITÉ
Concordia
UNIVERSITY

Sign in

Netname

Password

SIGN IN

Best place to start searching



The screenshot displays the library website's search interface. At the top, a navigation bar includes links for FIND, HELP & HOW-TO, RESEARCH SUPPORT, TECHNOLOGY, LOCATIONS & HOURS, and ABOUT THE LIBRARY, with a search icon on the right. A large blue box highlights the URL <https://library.concordia.ca>. Below this, the text "Sofia Discovery tool" is accompanied by a yellow arrow pointing to the search bar. The search bar contains the placeholder text "Books, ebooks, articles, and more" and a "Search" button. Below the search bar, there are links for "User guide" and "Advanced search". At the bottom, a blue navigation bar features 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 search bar area to the "COURSE RESERVES & TEXTBOOKS" and "BOOK A GROUP STUDY ROOM" icons.

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

<https://library.concordia.ca>

Sofia Discovery tool

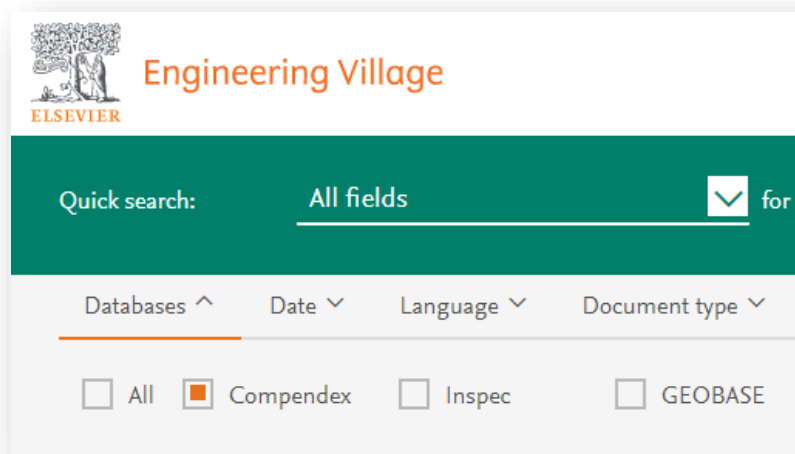
Books, ebooks, articles, and more Search

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

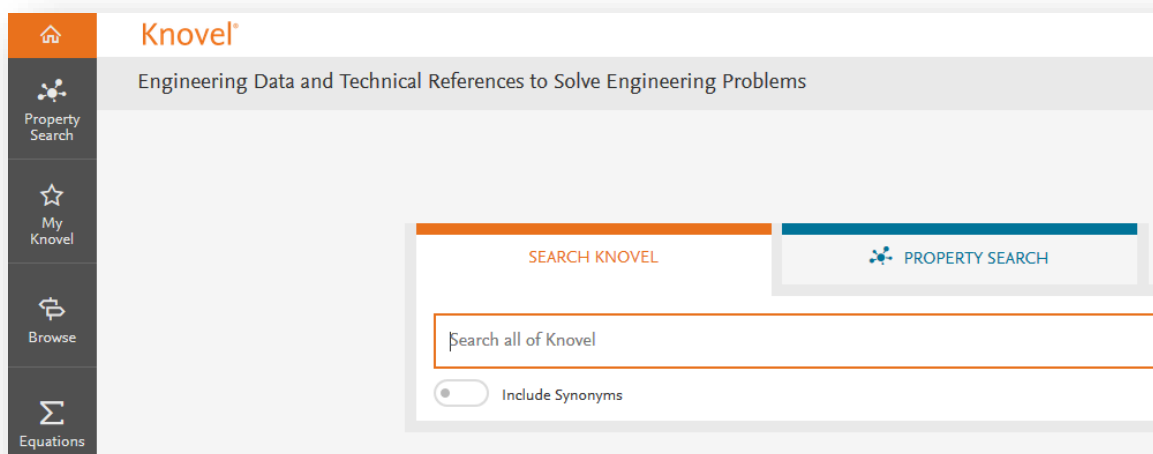


Engineering Village
ELSEVIER

Quick search: All fields for

Databases Date Language Document type

All Compendex Inspec GEOBASE



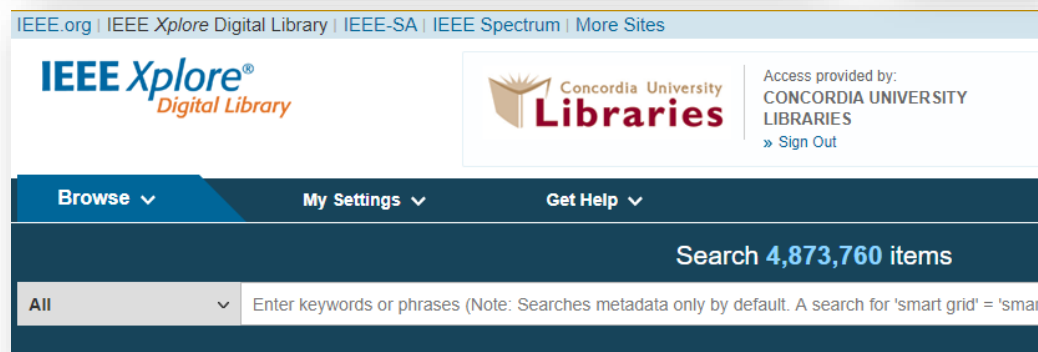
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Engineering Data and Technical References to Solve Engineering Problems

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Digital Library

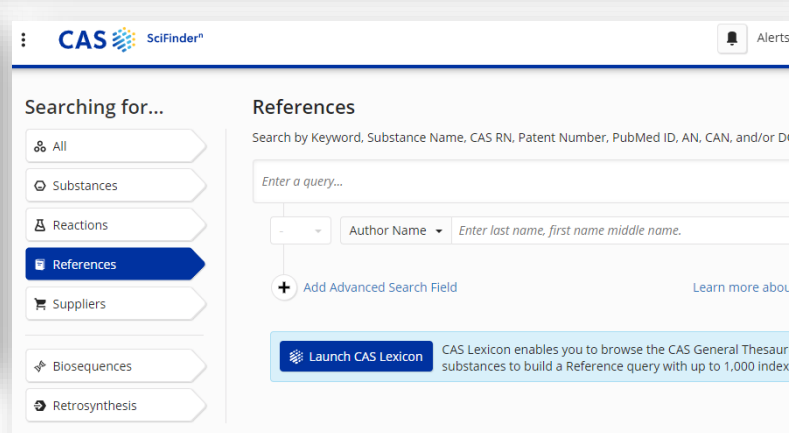
Concordia University
Libraries

Access provided by:
CONCORDIA UNIVERSITY
LIBRARIES
» Sign Out

Browse My Settings Get Help

Search **4,873,760** items

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



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

Online learning modules and workshops

Learning kits



Quick Things for Digital Knowledge

Short introductions to key topics in the digital world



Critical Toolkit for Navigating Information

Quick units on critical information literacy skills



Library Research Skills Tutorial

A guide to the basics of academic research



Library videos

Video tutorials on library services and resources



UdeMy

Self-paced online courses on professional and technical skills



Help & How to guides

Tips on finding resources, writing, and citing

Using Zotero for grads | GRTR243

Description

In this hands-on workshop, you will learn how to use Zotero, a desktop and web-based tool that you can use to organize the references you find in library catalogues and databases, insert citations in your papers, and prepare bibliographies or reference lists quickly and effectively in a wide variety of citation styles (e.g., APA, MLA, Chicago, c.). We will look at integrating Zotero with Microsoft Word, LibreOffice, and Google Docs. We will also cover how to share folders and citations (e.g., for collaborative projects or to disseminate reading lists). No experience with Zotero is necessary.

Please ensure that you set up Zotero in advance of the workshop. You can find instructions on how to set up Zotero on the Library website:

<https://library.concordia.ca/help/workshops/zotero-prerequisites.pdf>

Learning Objectives

In this workshop, participants will learn how to:

- Use Zotero to manage citations and automate the creation of bibliographies.
- Integrate Zotero with Microsoft Word and Google Docs when writing papers.
- Share Zotero folders for collaborative projects or to disseminate course reading lists.

Sign in to register

How it works

Event details

Workshop location

📍 Sir George Williams

Start date

📅 Wednesday, September 25, 2024

End date

📅 Wednesday, September 25, 2024

Workshop days

📅 Wednesday

Time

🕒 From 10:30 to 12:00

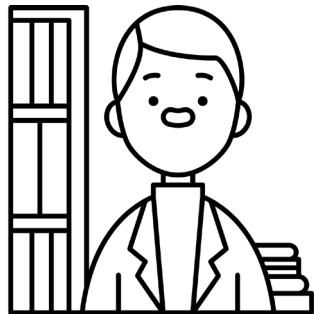
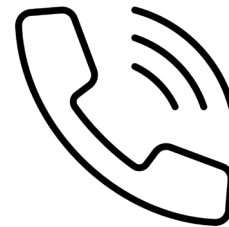
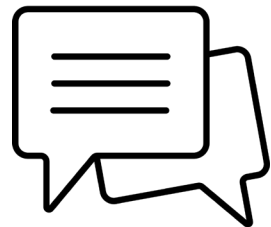
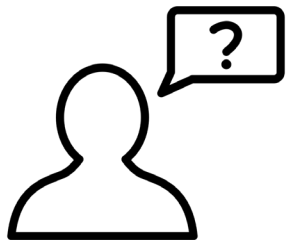
Capacity

👥 6 / 20

Ways to contact the library

1) Ask Us desk, chat, email or phone

FOR QUICK OR GENERAL QUESTIONS

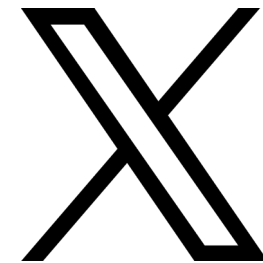
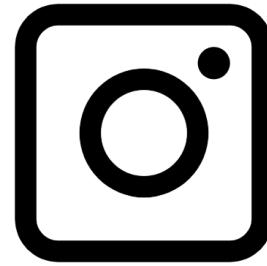


2) Contact your subject librarian

FOR MORE IN-DEPTH CONSULTATIONS



Follow us on





CREW



UNION 

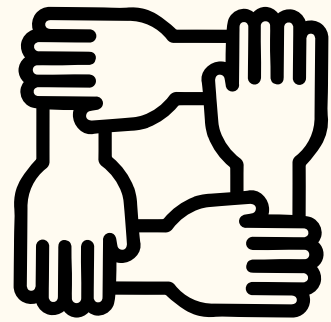
Welcome to your
union!



CONTENT

- 01 WHO ARE WE?
- 02 KNOW YOUR RIGHTS
- 03 ITS A BARGAINING YEAR!
- 04 SIGN YOUR MEMBERSHIP CARD
- 05 GET INVOLVED/ CONTACT US :)

WHO ARE WE?

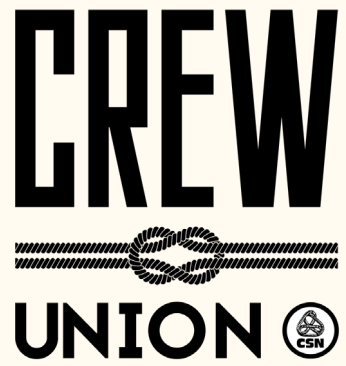


CREW is the labour union representing all TA's and RA's at Concordia. A union is only as strong as the contributions of its members. You are the union!!!



Unionized workplaces are common in Quebec, and most employees at Concordia are represented by a union. Membership and participation in a union is legally protected by the Quebec Labour Code.

KNOW YOUR RIGHTS



1

Every TA and RA at Concordia is protected by CREW's Collective Agreement.

2

TA and RA contracts have start and end dates.

3

We are paid by the hour and not by the task!

4

CREW is here to back you up. No issue is too big or too small.

[hello@crew - csn.com](mailto:hello@crew-csn.com)





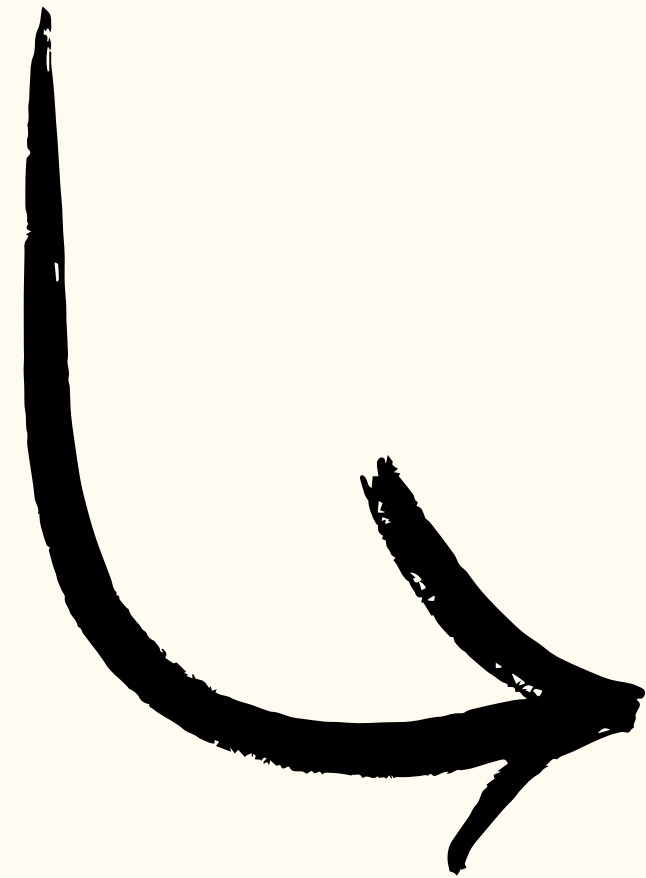
Concordia works because we do which is why we are currently in negotiations with our employer, Concordia, for a better collective agreement!!!

What are CREW's bargaining priorities?

- A huge pay rise to beat inflation now and in the future (TAs and RAs have not received a general raise since 2022!!!)
- Concrete protections against physical, psychological and other forms of harm in the workplace
- So much more!

SIGN YOUR UNION CARD :)

CREW is a democratic organization, but in order to participate fully you must sign a union membership card. You are eligible for union membership for the duration of your contract and for 12 months after it ends, provided you are still enrolled at Concordia.





GET INVOLVED

Don't hesitate to reach out to us for any questions or concerns you have as a TA or RA, we are here for you! You can also get involved by attending many of our upcoming events and committee meetings!

- Inaugural General Assembly - September 25 from 6 - 9pm
- BARG BQ September 11th and 12th at 12pm
- Feminist Workplace Committee meetings on Wednesdays

Follow us on Instagram: [@crew.csn](https://www.instagram.com/crew.csn)