

**Faculty of Science Course Syllabus  
Department of Chemistry  
Introductory Organic Chemistry II  
CHEM2402  
Winter Term 2022  
Online/In-person Format**

*Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq. We are all Treaty people. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support.*

**Instructor(s):** **Professor Frances Cozens**, Virtual Office ([CHEM2400@dal.ca](mailto:CHEM2400@dal.ca)). Principal Instructor for the 2402 online/in-person.  
*Office Hours Via Teams – by appointment.* You are welcome to e-mail Dr. Cozens if you would like to make an appointment for a specific time.

**Dr. Travis Lundrigan**, Virtual Office ([CHEM2400@dal.ca](mailto:CHEM2400@dal.ca)). CHEM2402 synchronous lecture help sessions, tutorial and student lecture support.  
*Office Hours Via Teams – by appointment.* You are welcome to e-mail Dr. Lundrigan if you would like to make an appointment for a specific time.

**Dr. Reinaldo Moya-Barrios** Virtual Office ([ochemlab@dal.ca](mailto:ochemlab@dal.ca)). Laboratory Instructor, day-to-day supervision for the CHEM2402 laboratories and drop in lecture and lab help. *Office Hours Via Teams – by appointment.*

**Ms. Gaia Aish** Virtual Office ([ochemlab@dal.ca](mailto:ochemlab@dal.ca)). Laboratory Instructor, day-to-day supervision for the CHEM2402 laboratories and drop in lecture and lab help. *Office Hours Via Teams – by appointment.*

**Lectures:** Lecture material will be uploaded to Brightspace in an asynchronous format. The class will be formatted with weekly and topic uploads to Brightspace. Asynchronous material will be uploaded to Brightspace each week. The material may include, lecture PowerPoint notes, lecture videos of the PowerPoint notes, practice problems and synthetic design tutorials. The asynchronous lecture material will support the in-person lectures. In-person lectures are tentatively scheduled to resume on Feb. 7, 2022 in accordance to Dalhousie University's COVID policies. The lectures will be held in Kenneth C Rowe Management building Potter Room 1028 at the regular scheduled time, M/W/F 9:35 – 10:35 am. Asynchronous lecture material will be uploaded for the entire term.

**Lectures and tutorials:** Teams synchronous meetings will be scheduled throughout the term for synchronous tutorial help in addition to drop-in sessions. Synchronous activities are optional. Asynchronous Teams discussions will be available to post questions regarding the lecture and lab course material.

**Laboratories:** Labs will be online on Brightspace, and asynchronous, until at least Feb. 3, 2022. Two laboratory modules will be uploaded to Brightspace to be delivered in an asynchronous format during that time. In-person laboratories are tentatively scheduled to resume on Feb. 7, 2022 in accordance to Dalhousie University's COVID policies. In-person labs will be conducted in the Sproull Organic Chemistry Laboratory (Chemistry Building, rooms 121-125P), once per week, for three hours. Details for in-person labs will be posted on Brightspace. Synchronous Teams meetings will be scheduled as drop-in sessions. Synchronous activities are optional.

The following pages constitute the syllabus for this course, CHEM2402. You can consider the syllabus to be a contract, which delineates responsibilities and expectations for both the students and the teaching team. You should review the syllabus, refer to it as necessary throughout the term, and contact the Principal Instructor [CHEM2400@dal.ca](mailto:CHEM2400@dal.ca) with any questions and/or concerns you may have.

**Course Description Credit hours: 3 Format: Lecture and Lab components**

CHEM2402 builds strongly on the information obtained in CHEM2401 and focuses on the properties and reactions of alkenes, alkynes, alcohols, ethers, amines, nitriles, imines, enamines, carbonyl-containing functional groups and aromatic compounds, along with spectroscopy in the laboratory. The reactions learned are also used in synthetic sequences. Detailed and complete reaction mechanisms are investigated. Multi-step synthetic sequences are developed and are an integral part of the course. Organic reactions, organic reaction mechanisms and organic multi-step reactions are the main features of CHEM2402. The concepts of resonance and aromaticity are investigated. NMR spectroscopy is utilized in the laboratories for compound identification.

**Course Prerequisites**

PREREQUISITES: CHEM2401.03 (**grade of C+ or better**). CHEM2401 is the prerequisite for CHEM2402. Students who have not obtained a grade of C+ or better, or an equivalent class from another institution, cannot take CHEM2402 unless permission is granted. This requirement is to ensure students have sufficient understanding of the concepts taught in CHEM2401 to be successful in CHEM2402. As such, it is assumed that students have a reasonable grasp of the material in CHEM2401 and have a good understanding of the specific reactions covered, as these concepts are the foundation for CHEM2402. Please note: *material including but not limited to the reactions from CHEM2401 is required to be successful in CHEM2402 and may be present on any quiz, midterm or the final examination in CHEM2402. This also includes stereochemistry.* Students need to fully grasp the concepts and reactions in CHEM2401 before entering CHEM2402.

**Course Objectives/Learning Outcomes**

Students completing this course, will be able to:

- understand the procedure followed for working in the organic chemistry laboratory to carry out synthetic reactions. This includes virtual set-up and work-up of reactions, recrystallization, thin-layer chromatography, filtration, extraction, reflux and distillation techniques
- interpret fundamental laboratory results related to organic chemistry
- use IUPAC rules to draw and name organic compounds
- draw and interpret proper Lewis structures, including comprehension of contributing resonance structures
- use reactions from CHEM2401 in the development of synthetic schemes
- use curved/curly arrows to depict reactions
- use mechanisms to propose reaction coordinate diagrams
- write out curved arrow-pushing mechanisms for the reactions presented
- understand reactions of alkenes and alkynes and use them in synthetic schemes
- understand reactions of alcohols, ethers and epoxides and use them in synthetic schemes
- understand reactions of carboxylic acids and their derivatives and use them in synthetic schemes
- understand reactions of aldehydes and ketones and use them in synthetic schemes
- understand reactions of imines and enamines and use them in synthetic schemes
- understand reactions of benzene and other aromatics and use them in synthetic schemes
- understand the difference between a kinetic and thermodynamic controlled reaction
- use arrow pushing mechanisms for a wide variety of reactions
- predict and justify reactivity of organic compounds under a variety of experimental conditions
- use reaction coordinate diagrams to show the progress of a reaction
- propose reaction sequences and conditions for the preparation of simple organic compounds
- interpret spectra; propose reasonable structures primarily via  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectra
- apply experimental techniques in a variety of virtual lab situations
- interpret experimental results and write scientific passages

- work safely in the organic chemistry laboratory and carry out synthetic reactions. This includes set-up and work-up, recrystallization, thin-layer chromatography, filtration, extraction, reflux and distillation (if in person labs are possible).

### **Key knowledge or skills expected of students coming into the course**

All aspects of the material contained in CHEM2401, CHEM1011 and CHEM1012 (or equivalents).

### **Required Course Materials**

**Lectures:** Class material will be available from Brightspace in weekly uploads. NOTE: Lectures notes are subject to change. The most up-to-date set of lecture notes will be available on Brightspace.

**Textbook:** The official textbook is: "Organic Chemistry" **8th Edition**, by Paula Y. Bruice. This book is available at the University Bookstore as an ebook. In CHEM2402, "Organic Chemistry" by Bruice will be followed closely and lecture notes will be based on the material from this book. The material that will be on the midterm tests and the final examination will be covered in the PowerPoint slides that will be available on Brightspace.

Other textbooks are sometimes helpful as different books explain certain concepts better than others but assigned material for this course will be defined in terms of the official textbook.

**Brightspace:** All class material including, class communication via announcements, lecture notes and videos, practice problems and virtual labs, will be posted to Brightspace <https://dal.brightspace.com>.

**Teams:** Dalhousie-supported Microsoft product for synchronous lecture tutorials and drop-in sessions, virtual lab drop-in sessions and help along with class appointments: accessible via the "waffle" on MyDal, login via your Dalhousie email address

**Evaluations:** Quizzes will be available for each lecture topic and scheduled during the term. There will be **six (6)** lecture quizzes available through Brightspace. In addition to the online quizzes the class will have two midterm evaluations both scheduled to run in the evening, one midterm will be given through Brightspace as a Brightspace quiz, and one midterm will be a hand-written test currently scheduled to be synchronous and in-person. In addition, there will be a three-hour synchronous in-person final examination to be scheduled via the registrar during the regular exam period. The in-person evaluations are subject to change in accordance with Dalhousie University's COVID policies. There will also be **at least six (6)** laboratory reports to complete during the term (subject to change).

All work must be completed in the class unless approval from the principal instructor is granted. If you are experiencing illness, please submit a student declaration of absence for the missed assessment. Only one grading scheme will be utilized for the final grade calculation.

The three-hour final examination will cover the entire course and will be delivered in a synchronous in-person format in accordance with Dalhousie University's COVID policies. A student may write a make-up final examination if the final examination was missed with a justifiable reason. The date and time of the make-up examination will be decided a few days after the CHEM2402 final examination has been written and will be at the end or close to the end of the regular examination period. The University policy is that final examinations are not returned to students. All material in CHEM2402 is strictly copyright and not for distribution, this includes all components of the class including the final examination. There will only be one make-up final examination offered in CHEM2402. There are no supplementary final examination or extra course work offered.

**Lecture Synchronous tutorials** and lecture help sessions will be given by via the Teams platform. Lecture help will start on Wednesday, January 12, 2022, during the regular scheduled class time between 9:30-10:30 am. Additional drop-in question and answer sessions will be added throughout the term.

**Independent work.** All graded work in CHEM2402 (class and laboratory material) must be done independently by each student enrolled in the class. Online resources can be used for all online assessments, except 'cheating' websites such as CHEGG.COM. In-person assessments will be 'closed book' with no aids allowed.

**Copyright @.** All material posted online for CHEM2402 is strictly copyrighted. No class material can be distributed in any way to a third party. Upon investigation via University protocols if a student is found to have participated in the **uploading of any material to a third party such as CHEGG.COM** or sharing with anyone not enrolled in the class this will lead to a **mark of 'F' for CHEM2402**. Please do not upload any portion of CHEM2402 to CHEGG.COM or any other online class distribution website.

All work must be the student's independent and individually prepared work. Student work that is not independently done will receive a **mark of 0 on the submitted material**. Utilizing online resources is allowed.

### **How to do well in CHEM2402**

**There is no doubt that CHEM2402 includes a lot of material and is a significant step-up from CHEM2401.** All of the information necessary to be successful in CHEM2402 will be uploaded to Brightspace. CHEM2402 is a course that requires discipline and considerable studying to do well. Studying and keeping up with the material is key for a successful outcome. It is recommended that the practice problems are thoroughly worked through prior to viewing the answers.

Here are some additional tips for success:

**Review ALL lecture material posted to Brightspace.** There is a clear and direct correlation between skipped lectures and poor results in this course. This cannot be stressed enough!

**Take your own notes.** Taking your own notes from the asynchronous and synchronous material presented will help you to learn. Even though class notes and lectures are provided the more you write your own notes the better you will do.

**Study.** Keep up with the material. It is critical to stay up with the material. The material in CHEM2402 cannot be learned the day before the final examination.

**Practice.** Complete the online quizzes in a dedicated manner. Do the practice problem before attempting the topic quiz to help you learn the topic material. Attend the scheduled lecture tutorials!

### **Laboratory**

Laboratory work is an integral part of this class. Laboratory activities will be online and in-person. The virtual lab work will help you to learn and appreciate practical techniques and will help you to understand lecture topics. In the in-person labs, students will learn or expand their laboratory skill set through the preparation, purification and characterization of organic compounds using organic reactions learned in the lecture component. Although they are strongly related, the lectures and the laboratories have a different emphasis in what they teach. Nevertheless, material in the laboratories will complement the information from the lectures, and *vice-versa*. The midterm tests and final examination may include questions from the laboratory part of the course.

The detailed running of the laboratories will be handled by Ms. Gaia Aish and Dr. Reinaldo Moya Barrios and they will be assisted by Teaching Assistants (TAs) ([ochemlab@dal.ca](mailto:ochemlab@dal.ca)). Virtual lab material will begin on Monday, January 17th, 2022: the lab material will be available on Brightspace. Laboratory help sessions will start the week of January 17, 2022, times TBA.

Presentation of the lab material will be asynchronous for the first two labs, and then synchronous in-person delivery of the labs are scheduled in accordance with Dalhousie University's COVID policies. If the COVID situation continues, the remainder of the labs will be carried out in an asynchronous fashion.

**Online Laboratory:**

- All laboratory activities will be online **until at least Feb. 3<sup>rd</sup> 2022**.
- All work must be independent.
- Presentation of the lab material during this time will be asynchronous.
- The modules will follow the class topics and will be related to the reactions that are being studied in the lecture component of CHEM2402.
- Each week there will synchronous lab drop-in to discuss the material being presented in the lab modules, lab report questions and questions related to data analysis in general.
- For the online labs, all the necessary laboratory information will be available in the CHEM2402 Brightspace site.
- All data needed for the online laboratory modules will be provided via Brightspace. Each module will have a lab report that will be uploaded to Brightspace for grading. More details on the labs and lab reports can be found in Brightspace.
- During the first month of classes the laboratory work will consist of two (2) modules. The first one of these modules will be posted on Brightspace on January 19<sup>th</sup>, 2022 and the second on January 26<sup>th</sup>, 2022.
- No lab exemption will be given for these virtual labs in future years.

**In-Person Laboratory:**

- Depending on the epidemiological situation, labs will move to an in-person format in February, with the first in-person labs starting the week of February 7<sup>th</sup>, 2022.
- Laboratory experiments and reports will relate to the lecture material during the Winter 2022 term.
- In-person labs will be conducted in the Sproull Organic Chemistry Laboratory (Chemistry Building, rooms 121-125P), once per week, for three hours.
- Students will do these in-person labs in the lab sections they registered for. A detailed schedule for these in-person labs will be posted on Brightspace.
- If there are no further disruptions caused by COVID-19, the in-person work will be divided in six (6) laboratories.
- Each lab will have a lab report. More details on the in-person lab reports will be posted in Brightspace.

**Materials Required for In-Person Labs (when applicable, you will be notified in advance *via* Brightspace):**

- Chem 2402 Laboratory Manual from academic year 2021-2022.
- Hard-covered laboratory notebook
- Safety glasses (prescription glasses that are not safety glasses are not sufficient)
- Approved lab coat

**2015 Workplace Hazardous Materials Information System (WHMIS) training:** in the eventuality of return to in-person labs, all students must complete the 2015 WHMIS training (provided through the Dalhousie College of Continuing Education) and upload proof of completion. Students who completed the module in the 2021 Fall term or within the last three (3) years do not need to redo it this term, they simply will upload proof of completion. The deadline for this requirement will be posted in Brightspace.

**Chemistry Safety Module:** all student taking in-person labs in Department of Chemistry at Dalhousie are required to complete this online module on LON-CAPA. Successful completion of the Safety Module includes reading the General Safety Statement presented below and obtaining a perfect mark on five online safety quizzes (25/25). After the completion of these requirements, you should feel comfortable working in a chemistry laboratory and have the tools you need to promote a safe laboratory environment. The General Safety Statement can be found in this section of the lab manual and on Brightspace, the information contained should be used to complete your Safety Module Quiz found at: [capa.conceptsinchemistry.ca](http://capa.conceptsinchemistry.ca). The deadline for completion of the Chemistry Safety Module will be posted on Brightspace. If you are taking multiple chemistry laboratory classes, then you only need to successfully complete the quizzes once per academic year. If you completed this module during this academic year, you don't need to do it again.

### Course Assessment

A minimum mark of 40% must be obtained on the final examination in CHEM2402 to pass the class. Any mark less than 40% on the final examination in CHEM2402 will automatically result in a grade of "F" in CHEM2402.

**A minimum grade of 7.5/15 is required in the laboratory portion** of CHEM2402 to pass the class.

**A minimum grade of 40/100 marks for the final examination is required in** CHEM2402 to pass the class.

**A minimum total grade of 50/100 marks for the combined class material is required in** CHEM2402 to pass the class.

<b>Course Assessment:</b>	total
Online Quizzes	20%
Midterm 1 Online	15%
Midterm 2 In-person	15%
Final examination In-person	35%
Laboratory	15%
<b>Total</b>	<b>100%</b>

### Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale

<b>A+</b> (90-100)	<b>B+</b> (77-79)	<b>C+</b> (65-69)	<b>D</b> (50-54)
<b>A</b> (85-89)	<b>B</b> (73-76)	<b>C</b> (60-64)	<b>F</b> (<50)
<b>A-</b> (80-84)	<b>B-</b> (70-72)	<b>C-</b> (55-59)	

**Dates of online quizzes:** Six online quizzes will be assigned throughout the term. Each topic will have an associated quiz that must be done within the time allowed for the quiz. Each quiz will be independently graded. The total grade component for the online quizzes will be 20% of the final grade. **All quizzes must be completed. Release and Due dates will be posted to Brightspace throughout the term.**

There will be two 2-hour evening scheduled midterm tests in CHEM2402. The first is scheduled for **Thursday, February 17 between 6 – 9 pm**. This will be a synchronous online midterm test delivered through Brightspace. The second term test is scheduled to be in-person on **Monday, March 14 between 6 – 9 pm** to be held in the McCain Arts and SS Building Auditorium 1 and Auditorium 2 in accordance to Dalhousie University's COVID policies. If online learning continues the second midterm test will be delivered in Brightspace in a synchronous fashion. This midterm will be handwritten. Each midterm test is worth 15% of the total grade for CHEM2402.

There will be between 6 to 8 laboratories in CHEM2402. The total laboratory grade will make up 15% of the final grade in CHEM2402 and will be spread out over the online/in-person labs.

Final Examination (time and place to be scheduled by the Registrar) will be a three-hour exam and will cover the entire course. The final examination may include some questions from the laboratory portion of the course and may include reactions covered in CHEM2401. A student may write a make-up final examination if the final examination was missed with a justifiable, documented reason. The date and time of the make-up examination will be decided a few days after the CHEM2402 final examination has been written and will be at the end of the regular examination period. **Only one Make-up Final Examination will be offered in CHEM2402 (see the University Regulations, Calendar).** The student is responsible to contact the Principal Instructor at [CHEM2400@dal.ca](mailto:CHEM2400@dal.ca) to arrange the make-up final examination in CHEM2402. **The Principal Instructor will not contact the student.** Failure to contact the Principal Instructor prior to the final examination date or within 24 hours after the final examination and to provide appropriate documentation for the missed final examination will result in a grade of 'INC' for CHEM2402. **CHEM2402 has no supplementary examination.** The University policy is that final examinations are not returned to students.

### Course Policies

**Announcements.** Class notifications and updates will be posted to the announcements on Brightspace.

**Delayed Content.** In the case of a weather-related closure, internet or power interruptions, online content may be delayed.

### **Winter Term 2022**

These are the sections of the 8th EDITION of the textbook that are covered in CHEM 2402. Note: this list is subject to change and additional updates may be posted during the term.

#### **Course Content**

**Lectures.** The following topics are expected to be covered in CHEM2402 and are listed below.

**Nomenclature.** Review the material from CHEM2401. Synopses on drawing organic molecules and nomenclature are now available on the Brightspace site. You should review this material.

**Spectroscopy.** Review the material on nuclear magnetic resonance ( $^1\text{H}$  and  $^{13}\text{C}$  NMR) spectroscopy from CHEM2401. Chapters 13, and 14

A list of Chapter sections will be available on Brightspace and is subject to change.

**Review of Organic fundamentals and  $\text{S}_{\text{N}}1$ ,  $\text{S}_{\text{N}}2$ , E1 and E2 reactions** Chapters 1, 2, 3, 4 and 9.

**Alkenes and alkynes** Chapters 5, 6 and 7

**Alcohols and ethers.** Chapter 10.

**Organocuprates.** Chapter 11.

**Carboxylic Acids and Derivatives.** Chapter 15.

**Aldehydes and Ketones.** Chapter 16.

**Imines and Enamines.** Chapter 16.

**Reactions of Aromatics.** Chapters 8 and 18.

**Developing Organic Synthesis.** Chapter 18.

**Student Health and Wellness**

Taking care of your health is important. As a Dalhousie student, you have access to a wide range of resources to support your health and wellbeing. Students looking to access physical or mental health and wellness services at Dalhousie in Halifax can go to the Student Health & Wellness Centre in the LeMarchant Building. In Truro, physical or mental health and wellness services are available at Health Services in the Dairy Building (Student Success Centre). The teams include: registered nurses, doctors, counsellors and a social worker. Visit [dal.ca/studenthealth](http://dal.ca/studenthealth) to learn more and book an appointment today. Students also have access to a variety of online mental health resources, including telephone/texting counselling and workshops/training programs. Learn more and access these resources at [dal.ca/mentalhealth](http://dal.ca/mentalhealth).

**Teaching Team: Department of Chemistry**

The CHEM2402 teaching team are here to support you and your mental health – please reach out to us. If we can't help directly, we can refer you to Dalhousie's expert resources.

**Diversity and Inclusion – Culture of Respect**

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why Dalhousie's Strategic Direction prioritizes fostering a culture of diversity and inclusiveness.

Statement: <http://www.dal.ca/cultureofrespect.html>

**Student Accessibility & Accommodation**

The Advising and Access Services Centre (AASC) is Dalhousie's hub of expertise for student accessibility and accommodation. The advising team works with students who request accommodation as a result of a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (Canada and Nova Scotia).

Information: [https://www.dal.ca/campus\\_life/academic-support/accessibility.html](https://www.dal.ca/campus_life/academic-support/accessibility.html)

**A note-taker may be required as part of a student's accommodation for CHEM2402.** If you are interested in being a notetaker, please contact AASC at 902-494-2836m or [notetaking@dal.ca](mailto:notetaking@dal.ca).

**Student Code of Conduct**

Everyone in the Dalhousie University community is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie University to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

Code: [https://www.dal.ca/dept/university\\_secretariat/policies/student-life/code-of-student-conduct.html](https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html)

**CHEM2402 is governed by the academic rules and regulations set forth in the University Calendar and Senate.**



**Faculty of Science Course Syllabus (Section B)****Winter 2022  
CHEM2402****University Policies and Statements**

**This course is governed by the academic rules and regulations set forth in the University Calendar and by Senate**

**Academic Integrity**

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). 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.

**Information:** [https://www.dal.ca/dept/university\\_secretariat/academic-integrity.html](https://www.dal.ca/dept/university_secretariat/academic-integrity.html)

**Accessibility**

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**Information:** [https://www.dal.ca/campus\\_life/academic-support/accessibility.html](https://www.dal.ca/campus_life/academic-support/accessibility.html)

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**Code:** [https://www.dal.ca/dept/university\\_secretariat/policies/student-life/code-of-student-conduct.html](https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html)

**Diversity and Inclusion – Culture of Respect**

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness

**Statement:** <http://www.dal.ca/cultureofrespect.html>

**Recognition of Mi'kmaq Territory**

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit or e-mail the Indigenous Student Centre (1321 Edward St) ([elders@dal.ca](mailto:elders@dal.ca)).

**Information:** [https://www.dal.ca/campus\\_life/communities/indigenous.html](https://www.dal.ca/campus_life/communities/indigenous.html)

**Important Dates** in the Academic Year (including add/drop dates)

[https://www.dal.ca/academics/important\\_dates.html](https://www.dal.ca/academics/important_dates.html)

**University Grading Practices**

[https://www.dal.ca/dept/university\\_secretariat/policies/academic/grading-practices-policy.html](https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html)

**Faculty of Science Course Syllabus (Section C)****Winter 2022****CHEM2402****Student Resources and Support****Advising****General Advising** [https://www.dal.ca/campus\\_life/academic-support/advising.html](https://www.dal.ca/campus_life/academic-support/advising.html)**Science Program Advisors:** <https://www.dal.ca/faculty/science/current-students/academic-advising.html>**Indigenous Student Centre:** [https://www.dal.ca/campus\\_life/communities/indigenous.html](https://www.dal.ca/campus_life/communities/indigenous.html)**Black Students Advising Centre:** [https://www.dal.ca/campus\\_life/communities/black-student-advising.html](https://www.dal.ca/campus_life/communities/black-student-advising.html)**International Centre:** [https://www.dal.ca/campus\\_life/international-centre/current-students.html](https://www.dal.ca/campus_life/international-centre/current-students.html)**Academic supports****Library:** <https://libraries.dal.ca/>**Writing Centre:** [https://www.dal.ca/campus\\_life/academic-support/writing-and-study-skills.html](https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html)**Studying for Success:** [https://www.dal.ca/campus\\_life/academic-support/study-skills-and-tutoring.html](https://www.dal.ca/campus_life/academic-support/study-skills-and-tutoring.html)**Copyright Office:** <https://libraries.dal.ca/services/copyright-office.html>**Fair Dealing Guidelines** <https://libraries.dal.ca/services/copyright-office/fair-dealing.html>**Other supports and services****Student Health & Wellness Centre:** [https://www.dal.ca/campus\\_life/health-and-wellness/services-support/student-health-and-wellness.html](https://www.dal.ca/campus_life/health-and-wellness/services-support/student-health-and-wellness.html)**Student Advocacy:** <https://dsu.ca/dsas>**Ombudsperson:** [https://www.dal.ca/campus\\_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html](https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html)**Safety****Biosafety:** <https://www.dal.ca/dept/safety/programs-services/biosafety.html>**Chemical Safety:** <https://www.dal.ca/dept/safety/programs-services/chemical-safety.html>**Radiation Safety:** <https://www.dal.ca/dept/safety/programs-services/radiation-safety.html>**Scent-Free Program:** <https://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html>**Dalhousie COVID-19 information and updates:** <https://www.dal.ca/covid-19-information-and-updates.html>