COMP 2402A - Summer 2025

Abstract Data Types and Algorithms

Course Description

This course builds upon the principles introduced in COMP 1405 and COMP 1406 and provides a general background for further study in Computer Science. The course will cover object-oriented programming concepts; the design and implementation of data structures (linked lists, stacks, queues, trees, heaps, hash tables, and graphs) and related algorithmic techniques (searching, sorting, recursion); and algorithm analysis. Students will be expected to complete a number of programming projects using the concepts presented. Precludes additional credit for COMP 2002 (no longer offered), SYSC 2002 (no longer offered), SYSC 2100. Prerequisites: one of COMP 1406, COMP 1006, SYSC 2004, with a minimum grade of C-.
For all course prerequisites, see the course calendar here: calendar.carleton.ca/undergrad/

People

Instructor	Darryl Hill	HP5167	Office Hours: TBD
Coordinator	Lars Doyle	TBD	Office Hours: TBD
TA's	https://brightspace.carleton.ca	TBD	TBD

Course Information

Class Time	Tuesday, Thursday 11:35 - 14:25
Class Location	Please check your course calendar
Virtual Class[1]	Zoom link will be posted on Brightspace
Course Website	https://brightspace.carleton.ca

The delivery of material will consist of the following:

- **Lectures** will be given **live** and **in class**, but also recorded over Zoom and posted to Brightspace.
- **TA and Instructor office hours** will posted.
- In addition to office hours, questions pertaining to lectures, quizzes, and general course material can be asked / answered on **Brightspace**.
- **Assignments** will be **programmed using Java** and uploaded to the submission server by the date indicated.
- **Labs** will be small, open book mini-quizzes hosted on **Brightspace**.
- There will be 1 **midterm** held **in person** during class.
- The **final exam** will an **in-person exam** scheduled by registrar.

Reference Textbook

Pat Morin's Open Data Structures. Free PDF and HTML versions of the book are available at opendatastructures.org. You'll want the Java version. If you prefer a physical copy they are available on Amazon.ca.

SCS Laptop Requirement

Every student that has been enrolled in a 1000-level (i.e., first year) course offered by the School of Computer Science after the 2020/2021 school year is required to have a laptop. This includes COMP1001, COMP1005, and COMP1006. For more information, please visit
https://carleton.ca/scs/scs-laptop-requirement/
and then review the requirements at
https://carleton.ca/scs/scs-laptop-requirement/laptop-specs/.

Evaluation

Your performance in this course is assessed using several components. These include four (4) assignments, five (5) labs, one (1) midterm, and one (1) final examination (scheduled by the registrar). Final grades will be determined using the scheme described below, and no extra credit assignments will be provided under any circumstances.

Assignments (4)	(10% each)	40%
Labs (5)	(2% each)	10%
Assignments Total		50%

Midterm (1)	15%
Final Examination (1)	35%
Tests Total	50%

Grades: Marks will be posted on Brightspace, or available on the assignment submission server.

The midterm will be held **in person during class time**. If a student misses the midtern, the weight (15%) will be transferred to the final exam.

The labs are **mandatory** and should be completed on Brightspace.

Assignments are **mandatory**. You will be given instructions on how to submit them. The assignment and lab component of your final grade is computed from the score you receive on each assignment; the lowest assignment or lab grade will not be "dropped". You are expected to work on your labs and assignments consistently once they are released (uploading your progress at least daily). As a result, you will never be granted an exemption from an assignment, even for a legitimate medical reason.
Late assignments or labs are never accepted.

It is **your responsibility** to ensure that your midterm, lab, and assignment marks posted to Brightspace or the submission server are correct within one week of the date the marks were released. Concerns or complaints about grading must be communicated (first to the teaching assistant, then, if the result is unsatisfactory, to the instructor) within that time. After one week, all marks are considered final and will not be changed under any circumstances.

Please note that because assignment specifications are posted well in advance of their due dates, illness does not excuse a student from completing an assignment. No provision is made for missed assignments, and no extra credit assignments will be available.

Collaboration Policy

★ There is absolutely no collaborating allowed for the tests.

Collaboration on assignments is acceptable but only at the level of discussion. When coding your solutions, please work on your own. If you need help, please contact a TA or your instructor. Posting assignment solutions or partial solutions on discussion boards before the due date and time is also prohibited.

Academic Integrity

If you are unsure of the expectations regarding academic integrity (how to use and cite references, if unauthorized collaboration with lab- or classmates is permitted), then you must ASK your instructor. Sharing assignment or quiz specifications or posting them online (to sites like Chegg, CourseHero, OneClass, etc.) is ALWAYS considered academic misconduct. You are NEVER permitted to post, share, or upload course materials without explicit permission from your instructor. Academic integrity offences are reported to the office of the Dean of Science. Information, process and penalties for such offences can be found on the ODS webpage: https://science.carleton.ca/students/academic-integrity/

Artificial Intelligence (Copilot, ChatGPT)

The exact manner, limit and expectations of AI use will be explicitly stated. Any use of AI outside of what is explicitly stated is considered academic misconduct. This includes, but is not limited to, chatbots (e.g., ChatGPT, Google Bard, Bing Chart), code generators (e.g., CoPilot, Code Llama) research assistants (e.g., Elicit), and image generators (e.g., Stable Diffusion, Dall-E), etc.

It would be wise to keep in mind the combined weight of the quizzes and final. Quizzes and the final exam will be pencil and paper, and you **will** be tested on your understanding of these data structures. Those who rely too much on AI are likely to fail.

Important Considerations

Late assignments and labs are not accepted. Submissions are handled electronically (i.e., through a submission server) and there is no "grace period" with respect to a deadline. Once the submission server is taken down at the designated time, the assignment is considered late and will **receive a mark of zero**.

Because assignments and labs are posted well in advance of their due dates, **illness does not excuse a student from completing an assignment**. No provision is made for missed assignments, and no extra credit assignments will be available.

Additional Notes

In addition to the time spent attending lectures, students can expect to spend **at least nine (9) hours per week** on this course. Students are responsible for all course materials, including lecture notes, and all materials discussed in class and on any of the official discussion boards.

Students are asked to pose all questions related to course content using **the official discussion boards on Brightspace**; students should not email the instructor directly unless the question contains **confidential information** or is of a personal nature.

The instructor will attempt to answer every student email received **within three business days** of the time the message was received, unless the email requests information already posted on Brightspace or in the course outline. To ensure that all announcements are received, students are expected to check their email on a daily basis.

All materials created for this course (including, but not limited to, lecture notes, in-class examples, assignments, examinations, and posted solutions) **remain the intellectual property of the instructor**. These materials are intended for the personal and non-transferable use of students registered in the current offering of the course. **Reposting, reproducing, or redistributing any course materials**, in part or in whole, without the written consent of the instructor, **is strictly prohibited**.

SCS Computer Laboratory

SCS students can access one of the designated labs for your course. The lab schedule can be found at: https://carleton.ca/scs/tech-support/computer-laboratories. All SCS computer lab and technical support information can be found at: https://carleton.ca/scs/technical-support. Technical support is available in room HP5161 Monday to Friday from 9:00 until 17:00 or by emailing SCS.Tech.Support@cunet.carleton.ca.

Undergraduate Academic Advisor

The Undergraduate Advisor for the School of Computer Science is available in Room 5302C HP, by telephone at 520-2600, ext. 4364 or by email at **scs.ug.advisor@carleton.ca**.

The undergraduate advisor can assist with information about prerequisites and preclusions, course substitutions/equivalencies, understanding your academic audit and the remaining requirements for graduation. The undergraduate advisor will also refer students to appropriate resources such as the Science Student Success Centre, Learning Support Services and the Writing Tutorial Services.

University Policies

Full academic regulations are found in the University's calendar (`http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/` Some excerpts are below.

Requests for Academic Accommodation
You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Academic Accommodations for Students with Disabilities
If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. Visit the PMC website: http://carleton.ca/pmc

Religious Obligations
Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit https://carleton.ca/equity/focus/discrimination-harassment/religious-spiritual-observances/
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Pregnancy Obligation
Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: http://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Survivors of Sexual Violence
As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and is survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: http://carleton.ca/sexual-violence-support

For more information on academic accommodation, please contact the departmental administrator or visit: http://students.carleton.ca/course-outline

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