COMP 2402: Abstract Data Types and Algorithms  
Winter 2021

Instructor: Alexa Sharp (she/her)  
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Lectures:  
2402A: Wednesdays & Fridays 14:35AM - 15:55PM (synchronous on zoom)  
2402B: pre-recorded (asynchronous) video lectures

Office Hours: Time TBA (zoom), or by appointment

Course Website: https://piazza.com/class/kit89pov5i55h6 and https://carleton.ca/culearn/

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 illustrating 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-.

Lectures

For Section A, lectures will be synchronous (live) via Zoom, and you are expected to attend if circumstances allow. Recordings of the lecture, with transcript, will be provided at a later time (within 12 hours) on cuLearn. Section B students are welcome to attend these lectures live if timing permits, but otherwise are given the lecture recordings.

Students are expected to remain up to date with the deadlines and due dates provided by the instructor. This course requires reliable high-speed Internet access.

In live lectures, please mute your microphone, but turn on video if your internet connection can handle it. If you have questions, please ask in the chat or virtually "raise your hand".

Lectures are recorded to enable access to students with internet connectivity problems, who are based in different time zone, and/or who have conflicting commitments. If you wish not to be recorded, you need to leave your camera and microphone turned off.
You will be notified at the start of the session when the recording will start, and Zoom will always notify meeting participants that a meeting is being recorded. It is not possible to disable this notification.

Please note that recordings are protected by copyright. The recordings are for your own educational use, but you are not permitted to publish to third party sites, such as social media sites and course materials sites.

**Textbook**

The textbook for the course is Pat Morin's Open Data Structures. Free PDF and HTML versions of the book are available at [opendatastructures.org](http://opendatastructures.org). There are also links there explaining where you can purchase a paperback version.

**Necessary Equipment and Software**

A java compiler and your favourite editor. Something to watch the lectures on.

**Important Dates**

Assignment 1 - due Sunday Jan 24 23:55PM

Assignment 2 - due Sunday Feb 7 23:55PM

Assignment 3 - due Sunday Feb 28 23:55PM

Midterm test - March 3-4 (section A, B, respectively)

Assignment 4 - due Sunday Mar 21 23:55PM

Assignment 5 - due Sunday Apr 11 23:55PM

Final TBA

**Grading Scheme**

Drills 10%

Assignments 60%

Mid-Term Exam 12%

Final Exam 18%
How to Get Help

There are many ways to get help on your work in this course, that do not violate the course's academic integrity policy:

- Office Hours
- Q&A Forum on piazza
- Tutoring

Academic Integrity

Assignments in this course involve coding. Students may collaborate on assignments at the level of discussion, but must write code on their own. Any students caught submitting copied code or overly sharing details of their code will be reported to the Associate Dean (Undergraduate) who will investigate the matter. The standard penalties for an academic integrity violation are as follows:

- First offence: F in the course.
- Second offence: One-year suspension from program.
- Third offence: Expulsion from the University.

These are standard penalties. More-severe penalties will be applied in cases of egregious offences. For more information, please see Carleton University's Academic Integrity Policy.

Respect in the Classroom and Forums

Please remember to treat your peers and the course staff with respect. This includes in the zoom chat and on any course-related forums such as piazza and discord. It is not acceptable to use offensive language nor disparage a person or group, no matter the intent. Treat the course spaces as professional spaces and behave accordingly.

If you feel you have been disrespected or abused either by other students or course staff, please let us know (you can contact us anonymously and privately on piazza, for example.)

Statement of Accommodation

The Carleton University Information on Academic Accommodation applies to this course. Here is information on how to apply for academic accommodation. If there is anything Alexa can do to help you succeed, please let her know as soon as possible so that she can accommodate accordingly.

Late Policy

Late work is not accepted. Please plan accordingly.
University Policy

In addition to anything included here, all the standard Carleton University Policies regarding equity and academic regulations apply to this course.

Copyright

My lectures and course materials (including all slides, programs, handouts, videos, and similar materials) are protected by copyright. I am the exclusive owner of copyright and intellectual property of all course materials. You may take notes and make copies of course materials for your own educational use. You may not allow others to reproduce or distribute lecture notes and course materials publicly for commercial purposes without my express written consent.

Territory Acknowledgement

I would like to acknowledge that the location of the Carleton University campus is on the traditional, unceded territories of the Algonquin nation. In doing so, I acknowledge that I and Carleton University have a responsibility to the Algonquin people and a responsibility to adhere to Algonquin cultural protocols.