

COMP 2402A: Abstract Data Types and Algorithms Fall 2020

Instructor: Alexa Sharp (she/her)

Email: alexasharp3@cunet.carleton.ca

Lectures: Mondays & Wednesdays 11:35AM - 12:55PM (zoom)

Office Hours: Tuesdays 1:00PM - 3:00PM (zoom), or by appointment

Course Website: <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

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. Students are expected to remain up to date with the deadlines and due dates provided by the instructor. These courses require reliable high-speed Internet access and a computer (ideally with a webcam) and a microphone.

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.

If you have concerns about being recorded, please email me directly so we can discuss these.

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. 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 Oct 4 23:55PM

Midterm test - sometime during Oct 12-16

Assignment 2 - due Sunday Oct 18 23:55PM

Assignment 3 - due Sunday Nov 15 23:55PM

Assignment 4 - due Friday Dec 11 23:55PM

Final TBA

Grading Scheme

Assignments 75%

Mid-Term Exam 10%

Final Exam 15%

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
- 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 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](#).

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.