

CSC263H1 F 20229 (All Sections): Data Structures and Analysis

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get started

Welcome to CSC263H!

Please read the entire syllabus (this page) and then check the course Modules (use the link on the left). All material posted on Quercus is required reading. You are also responsible for all announcements made in lecture and on Quercus.

Please use Piazza for general course-related questions. Send email from your U of T email address (including your full name and utoid) to csc263-2022-09@cs.toronto.edu (<mailto:csc263-2022-09@cs.toronto.edu>) for personal issues related to CSC263, for example administrative issues, missed work, problems with this web site. Do **not** use Quercus messaging for anything related to CSC263.

contact and communication

CSC263 is scheduled as in in-person course with three contact hours per week. When you signed up on ACORN, you enrolled in a lecture section LEC and a tutorial section TUT. Although I may try to record some lectures, I can't guarantee this, so plan on attending lectures and tutorials.

Section	LEC0101 & L2001	LEC0201 & 2101	TUT0101	TUT0102	TUT0201
Time	MW 3--4	MW 4--5	Friday 3--4	Friday 3--4	Friday 4--5

Instructor	Danny Heap	Danny Heap	TBA	TBA	TBA	
Room	<u>EM 001</u> (https://map.utoronto.ca/?id=1809#!m/494601)	<u>EM 001</u> (https://map.utoronto.ca/?id=1809#!m/494601)	<u>BA 1210</u> (https://map.utoronto.ca/?id=1809#!m/494470)	<u>BA 1200</u> (https://map.utoronto.ca/?id=1809#!m/494470)	<u>BA 1220</u> (https://map.utoronto.ca/?id=1809#!m/494470)	(https://map.utoronto.ca/?id=1809#!m/494470)

As a University of Toronto student, you have access to a free Zoom account, register here: <https://utoronto.zoom.us>
(<https://utoronto.zoom.us>) We will make use of Zoom for office hour.

learning outcomes

By the end of this course, students will be familiar with a variety of standard, complex data structures and abstract data types (graphs, dictionaries, balanced search trees, hash tables, heaps, disjoint sets), and with standard complexity measures (worst-case, average-case, amortized). More specifically, students will be able to:

- recognize algorithms that employ each data structure,
- write algorithms that employ each data structure,
- recognize when each complexity measure is most appropriate,
- analyze the efficiency of algorithms using each complexity measure
- choose and/or modify data structures appropriately to solve various problems.

marking scheme

Weekly Quercus Modules (12)	12%	Each worth 1%.
Problem Sets (3)	30%	best work weighted 14%, worst work weighted 6%, the rest weighted 10%
Term Tests (2)	24%	best work weighted 15%, worst work weighted 9%
Final Exam	34%	Students must earn at last 40% on the final exam to pass the course.

weekly quercus modules

You will complete a weekly Quercus Module worth 1%, due by noon every Monday (the first week survey is a "freebie" --- any response gets the full 1%). These modules must be completed **individually** (without partners), and will have components marked for correctness. You may submit answers as many times as you wish (up to the deadline), but **only your last on-time submission will be marked**. Each Module will consist of some combination of the following elements.

- **Demonstrate:** Quiz questions that give the opportunity to demonstrate and exercise the main concepts from the previous week's lectures and tutorial.
- **Discover:** Readings or links to a video or simulation where new material is introduced. CSC263H1 is not completely "flipped", unlike courses like CSC108H1 and CSC209H1. However, some of the easier concepts will be taught through Discover components. This allows the lectures to go further by building on the content of the Discover modules, instead of having to spend lecture time going over the easiest concepts. Each Discover component will usually be paired with a Describe component.
- **Describe:** Short quiz questions about new material from an associated Discover component. If you find that you cannot answer these questions, you should go back and redo the Discover activity more carefully, before trying the Describe quiz again. You may also find it helpful to consult the relevant chapters in the course textbook, for additional explanations and examples.

- **Review:** Short quizzes that mostly test prerequisite material (concepts that you are expected to know from previous courses). If you are not confident about your answers to a review quiz, please take the time to review the corresponding material from your prerequisite courses and then retake the quiz (before its deadline, of course).

Please aim to complete the Quercus Modules **well before** their submission deadline (noon on Mondays): **late submissions will NOT be accepted under any circumstance**. Each module will be available well before it is due, so you have plenty of time to attempt it before Monday and to work around any technical difficulties you may encounter. If you face an unexpected personal emergency that makes you incapable of doing any coursework *for multiple days before the due date*, please request special consideration.

problem sets

Problem sets will be due at midnight. They will be submitted electronically, using MarkUs. Your submission must be fully typed and we will accept only PDF files. You may use any software you wish to typeset your problem sets, but you will get **no credit for handwritten and scanned submissions**. Problem set due dates:

- PS1 Tuesday October 11 (delayed a day due to Thanksgiving...)
- PS2 Sunday November 6
- PS3 Sunday December 7

Students will have the opportunity to complete each problem set as an individual or to work with one partner. If you are working in a group for a problem set, it is your responsibility to declare this group on MarkUs well before the due date. If you are creating a group for the first time or you have not used MarkUs before, please consult the following [Documentation for Students \(https://github.com/MarkUsProject/Markus/wiki/Student-Guide#how-to-form-group\)](https://github.com/MarkUsProject/Markus/wiki/Student-Guide#how-to-form-group) on MarkUs. Note that only one partner should create the group, and invite the other partner by using their UTORid. You can also ask questions on Piazza.

NB: If one partner receives special consideration, this does **not** transfer to the other partner. In such cases you must dissolve your group and submit work as individuals.

late problem sets...

We recognize that unexpected problems sometimes make it difficult to submit assignments on time. For this reason, we will accept

limited late problem sets with a penalty. There is a one hour grace period after the problem set is due in which no late penalty is applied. For the next twenty hours after the deadline, the deduction will be 5% (of the total possible mark) per hour, until the work receives credit of 0%

Refer to the Special Consideration section below for what to do in case of serious emergencies.

tests and final exam

Term tests will take place on Friday October 14 and Friday November 18 **during your tutorial slot**. We will provide more details closer to the test date.

reporting a marking error

If you believe there was an error in the marking of a problem set, you may report that error in MarkUs. Only error reports submitted within the time frame indicated on MarkUs will be accepted - this is typically within a weeks of when feedback for the assessment was returned. Please note that when we receive an error report, we regrade the entire submission, not just a specific question. Your mark may go up or down as a result.

If you believe there was an error in marking a term test, send mail to csc263-2022-09@cs.toronto.edu (<mailto:csc263-2022-09@cs.toronto.edu>) with either "term test #1 re-mark request" or "term test #2 re-mark request" in the subject line, as appropriate. Remember to include the "-" in "re-mark." You will need to provide us with details of what you believe was graded incorrectly, you'll have about a week after you test is returned to request a re-mark, and we regrade the entire test.

academic integrity

All of the work you submit for credit must be done by you (or your problem-set partner), and your work must not be submitted by someone else. Plagiarism is academic fraud and is taken very seriously. Investigations into possible academic offences are very lengthy, and unpleasant for all concerned (including the investigators).

Please read the Rules and Regulations from the U of T Governing Council (especially the Code of Behaviour on Academic Matters): <http://www.governingcouncil.utoronto.ca/policies/behaveac.htm> (<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>)

Please also see the information for students from the Office of Student Academic Integrity: <https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity> (<https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity>)

accessibility needs

The University of Toronto is committed to accessibility. If you require accommodations or have any accessibility concerns, please visit <http://www.accessibility.utoronto.ca> (<http://www.accessibility.utoronto.ca/>) as soon as possible.

Students who require accommodations for online tests need to register with Test & Exam Services **early**. We will only be providing test accommodations sent to us through that official channel.

special consideration

Students experiencing illness or other emergencies that prevent them from being able to complete homework on time, or write tests, can apply to the instructors for special consideration. You will be required to affirm that you are abiding by the [Code of Behaviour on Academic Matters](http://www.governingcouncil.utoronto.ca/policies/behaveac.htm) (<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>), in particular that it is an offence

to engage in any form of cheating, academic dishonesty or misconduct, fraud or misrepresentation not herein otherwise described, in order to obtain academic credit or other academic advantage of any kind

That is, that you are truly experiencing an emergency, and acknowledge that to falsely claim so is an academic offence. Applying does not guarantee that you will be granted special consideration.

To apply for special consideration in CSC263, complete the [Request for Special Consideration Form](#) and email it to the course account (csc263-2022-09@cs.toronto.edu (<mailto:csc263-2022-09@cs.toronto.edu>)) from your UofT email address. **NB:** Your special consideration applies only to you, and not your partner. In the case of a group submission, you must dissolve the group and submit separate work.

In this course, special considerations typically consist of moving the weight of the work to a future piece of work of the same sort, for example a missed term test #1 may have its weight moved to term test #2, a missed term test #2 may have its weight moved to the final exam. Extensions are granted **only** when mandated by Accessibility Services.

IMPORTANT: *Submit your request soon as possible if you find yourself in such a situation. It is easier to resolve situations earlier rather than later.* If your emergency will affect your ability to complete coursework for more than a few days, or in multiple courses, we recommend you also talk to your registrar. You should also complete the absence declaration form on ACORN.

video recording and sharing

Parts of this course, including your participation, may be recorded on video and will be available to students in the course for viewing remotely and after each session. Course videos and materials belong to your instructor, the University, and/or other source depending on the specific facts of each situation, and are protected by copyright. In this course, you are permitted to download session videos and materials for your own academic use, but you should not copy, share, or use them for any other purpose without the explicit permission of the instructor. For questions about recording and use of videos in which you appear please contact your instructor.

textbook

The textbook, [Cormen, Lieserson, Rivest & Stein: Introduction to Algorithms, 3rd edition](https://mitpress.mit.edu/books/introduction-algorithms-third-edition) (<https://mitpress.mit.edu/books/introduction-algorithms-third-edition>) is available online from the [University of Toronto library](https://search.library.utoronto.ca/details?8858586) (<https://search.library.utoronto.ca/details?8858586>).
