

Course Syllabus

 Edit

Welcome to CSC111! Please read through this course syllabus carefully to familiarize yourself with the content, logistics, and policies of this course. All questions should be directed to csc111-2023-01@cs.toronto.edu (<mailto:csc111-2023-01@cs.toronto.edu>).

Course description and learning outcomes

A continuation of CSC110Y1 to extend principles of programming and mathematical analysis to further topics in computer science. Topics include: object-oriented programming (design principles, encapsulation, composition and inheritance); binary representation of numbers; recursion and mathematical induction; abstract data types and data structures (stacks, queues, linked lists, trees, graphs); the limitations of computation.

This course is restricted to students in the first year Computer Science admission stream, and is only offered in the Winter term. Other students planning to pursue studies in computer science should enroll in CSC108H1, CSC148H1, and CSC165H1/CSC240H1.

In this course, you will learn to:

1. Analyze a problem domain written in English; represent key definitions and properties using mathematical logic; and design, implement, and evaluate computational solutions to solve a problem.
2. Understand and write programs using standard features of the Python programming language.
3. Understand and use a variety of professional software development skills, including: programming using an Integrated Development Environment (IDE); writing clear documentation; debugging and testing programs; reading technical documentation and source code to learn how to use an external program or library.
4. Analyze the running time of a program.
5. Define and implement common abstract data types and algorithms.
6. Create a mathematical proof or disproof of a given statement in new and familiar domains, choosing from among different proof techniques to use. Apply proofs of mathematical statements to justify the correctness of algorithms.

Lectures

The first lecture is Tuesday, January 10. All lectures start at 10 minutes past the hour and end on the hour. This allows for 10 minutes of travel/break time if you have back-to-back classes.

Lecture schedule.

Lectures	LEC0101	LEC0201
Meeting Time and Location	Tue 9:10 am - 11:00 am Thu 10:10 am - 11:00 am (Location: SF 1105 <u>(https://map.utoronto.ca/?id=1809#!m/494481?s/)</u>)	Tue 3:10 pm - 5:00 pm Thu 3:10 pm - 4:00 pm (Location: MB 128 <u>(https://map.utoronto.ca/?id=1809#!m/494466?s/)</u>)
Instructor	Mario Badr	David Liu (course coordinator)

Our lectures will alternate between instructors presenting new concepts and you actively engaging with course material through problem-solving exercises. Attendance in lecture is not graded, but is considered a mandatory part of the course.

Lecture recordings

We are participating in the University of Toronto's *Opencast Content Capture Pilot*, which will automatically record lectures and post them on the [OCCS Student App](#). However, because of the amount of active learning that will take place during lecture, please note that simply watching these videos is *not* a substitute for attending class! Our recommendation is to use these recordings for review purposes only, or if you miss a lecture due to extenuating circumstances. If you did miss the lecture, we strongly recommend working through the in-class exercises (which are posted separately on Quercus) when we reach those points in the lecture, so that your experience is as close to the live classroom experience as possible. These recordings are meant for your personal learning, and you may *not* distribute these recordings or make your own (please see the [Copyright notice](#) below).

Tutorials

The first tutorial is **Friday, January 13**. Like lectures, all tutorials start at 10 minutes past the hour.

Tutorial Section	Meeting Time	Meeting Location	Teaching Assistant
TUT0101	Fridays 9:10-11:00am	BF 323 <u>(https://map.utoronto.ca/?id=1809#!m/494497)</u>	Sophie
TUT0102	Fridays 9:10-11:00am	BA 2159 <u>(https://map.utoronto.ca/?id=1809#!m/494470)</u>	Ali

TUT0202	Fridays 11:10-1:00pm	WB 119 (https://map.utoronto.ca/?id=1809#!m/494460)	Hana
TUT0203	Fridays 11:10-1:00pm	BF 323 (https://map.utoronto.ca/?id=1809#!m/494497)	Sophie
TUT0204	Fridays 11:10-1:00pm	KP 113 (https://map.utoronto.ca/?id=1809#!m/494488)	Joonho
TUT0205	Fridays 11:10-1:00pm	AB 114 (https://map.utoronto.ca/?id=1809#!m/494489)	Jimmy
TUT0301	Fridays 1:10-3:00pm	BA 2135 (https://map.utoronto.ca/?id=1809#!m/494470)	Jonathan
TUT0302	Fridays 1:10-3:00pm	AB 107 (https://map.utoronto.ca/?id=1809#!m/494489)	Sarah
TUT0303	Fridays 1:10-3:00pm	BF 323 (https://map.utoronto.ca/?id=1809#!m/494497)	Michael
TUT0401	Fridays 3:10-5:00pm	BF 323 (https://map.utoronto.ca/?id=1809#!m/494497)	Zichuan
TUT0402	Fridays 3:10-5:00pm	KP 113 (https://map.utoronto.ca/?id=1809#!m/494488)	Wei-Cheng

At the end of each week, you will participate in a two-hour tutorial, which are an opportunity to reinforce and extend your learning from lecture that week. We have designed the tutorials to not simply be a repeat of work you did in lecture, but to give you different kinds of opportunities to problem-solve and practice what you've learned.

We have three main goals for our tutorials:

1. Help you practice and review material covered in lectures and course readings.
2. Give you opportunities to *apply* and *extend* your computer science knowledge and skills to new domains and problems.
3. Foster a sense of community and build individual relationships among every one of you.

In each tutorial, your TA will start with a brief introduction, and then get you started working independently or in small groups on the tutorial exercises. You'll be able to work with each other and ask your TA questions as you go through the exercises, and your TA will also occasionally bring everyone back together to discuss how the exercises are going, address common questions/difficulties, and ask for your feedback about how the tutorial is going.

While attendance in tutorials is not graded, all of the material covered in tutorials is mandatory, and **attendance is strongly recommended**. Tutorials are a way for you to meet and work with other students in the course, and to receive individual attention from a member of the course staff in a more intimate setting than lecture. Like all synchronous components of the course, attending tutorials regularly is a way to make sure you keep on top of your learning in this course.

Note: we often try to give extra problems that we expect to take longer than the full tutorial time. Don't feel discouraged if you don't finish every part of every tutorial, as we give additional work to give you more practice to review and learn the material.

Office hours

Each week, your instructors will hold drop-in office hours that provide an informal setting for students to drop in and ask questions or just chat about the course material. You are welcome to attend any of the scheduled office hours.

Our office hours are *student-driven*, meaning teaching team members won't have any material prepared. Instead, the discussion will be based on whatever questions you'd like to ask. Office hours are also *group-based*, meaning we generally stick to questions that aren't specific to any particular student, but rather to course concepts and answers that every student can benefit from.

If you have a personal matter to discuss, please read about how to book an individual appointment with an instructor in the [Contact section](#) below.

Instructor	David Liu	Mario Badr
Office Hours	Mon 11:10am - 1:00pm Fri 12:10pm - 2:00pm	Tue 1:30pm - 3:00pm Thu 1:30pm - 3:00pm

Note: all office hours will be held in-person in [BA 4290 \(https://map.utoronto.ca/?id=1809#!m/494470\)](https://map.utoronto.ca/?id=1809#!m/494470). Office hours begin Monday, January 9.

Assessments

You will complete four major kinds of assessments in this course: weekly preparation exercises,

assignments, a course project, and tests/exams. **Note:** all assessments except the midterm test and final exam can be completed fully online. *The test and exam will be held in-person on campus, with no exceptions.*

You will also complete two short modules on *Embedded Ethics in computing*. The following table summarizes the course assessments:

CSC111 assessment summary.

Assessment	Due Date/Date Held (Eastern Time)	Weight
Weekly Preparation Exercises (Best 8 of 9)	Tuesdays before 9am	4%
Assignment 1	Wednesday February 1 before 12pm noon	10%
Midterm	Tuesday February 14 (during class)	12%
Assignment 2	Wednesday March 1 before 12pm noon	10%
Project Phase 1: Proposal	Wednesday March 8 before 12pm noon	2%
Assignment 3	Wednesday March 22 before 12pm noon	10%
Embedded Ethics Modules	<ul style="list-style-type: none"> • Pre-module survey due Thursday March 9 before 9am • Module 1 written exercise due Tuesday March 14 before 9am • Module 2 written exercise due Tuesday April 4 before 9am • Post-module survey due Tuesday April 4 before 9am 	Total: 2% <ul style="list-style-type: none"> • Surveys: 0.5% each • Written Exercises: 0.5% each
Project Phase 2: Submission	Monday April 3 before 12pm noon	10%
Final Exam	TBD, held during the April Final Exam Period (https://www.artsci.utoronto.ca/current/faculty-registrar/exams-assessments/exam-assessment-schedule)	40%

Weekly Preparation Exercises (4%)

Weekly preparation exercises ("preps") consist of a few readings and short exercises that you complete before each week of lecture. We have designed these preps to help you stay on track and learn simpler concepts independently so that we can focus on more complex content and skills in lecture and tutorial.

Each prep consists of a short reading from the [CSC110/111 Course Notes](https://www.teach.cs.toronto.edu/~csc110y/fall/notes) (<https://www.teach.cs.toronto.edu/~csc110y/fall/notes>), a series of short-answer comprehension questions hosted in an online **Quercus quiz**, and then some programming exercises that you will download and submit to using the online **MarkUs** application. Please note that:

1. You must submit all prep work individually. However, you may freely discuss all of your answers with your classmates, and with TAs and instructors on the course discussion board and during office hours.
2. The prep deadline is firm, and no late submissions are accepted.
3. For Quercus comprehension quizzes, you can make as many attempts as you wish. Your score is shown after each attempt. If you submit multiple attempts, only your best score is used.
4. For the programming exercises, you may submit the required file(s) as many times as you wish on MarkUs. However, your submission is only graded after the deadline has passed, and only your most recent submission before the deadline will be graded.

Notes:

- The first prep exercise will be due **Tuesday January 17 before 9am**.
- There is *no prep* due the week of the midterm (on Tuesday February 14).
- The final prep exercise will be due at the start of "Week 11" on **Tuesday March 28 before 9am**. There will be *no prep* on Week 12, to give you a bit of a break at the end of the semester!

Assignments (30%)

Assignments are larger pieces of work that span multiple course topics, and require you to apply and synthesize your knowledge and skills from multiple areas in computer science. They are a mixture of written and programming tasks, and will be graded for both correctness and clarity of communication. Assignments will be posted online, and will be submitted to the MarkUs application. Assignments must be completed individually.

Midterm (12%) and Final Exam (40%)

The Midterm and Final Exam are used to evaluate your learning in a focused setting in the middle of the semester (Midterm) and at the end of the course (Final Exam). The Midterm will take place during lecture time on the scheduled date, replacing the regular lecture.

IMPORTANT NOTE: You must receive a grade of at least **40%** on the final exam to pass CSC111. Students who do not meet this threshold (including students who do not write the final exam) will have their course grade lowered to below 50.

Contact: website, email, discussion board

All course announcements will be made on Quercus, and you are responsible for reading all announcements made in this course.

We'll be using [Campuswire \(https://campuswire.com/p/G3C6F74D4\)](https://campuswire.com/p/G3C6F74D4) as our course online discussion forum and chatroom. Please post all of your questions about the course material and assignments on Campuswire so that everyone can benefit from your questions. We will monitor the discussion board regularly, but please answer questions from other students—helping someone else learn is one of the most effective ways of truly mastering a subject. To join Campuswire, please go to <https://campuswire.com/p/G3C6F74D4> (<https://campuswire.com/p/G3C6F74D4>) and use the code **5147**.

For *personal questions*, please email csc111-2023-01@cs.toronto.edu (<mailto:csc111-2023-01@cs.toronto.edu>) from your University of Toronto email address. (**Do not email your instructor directly**—we are using a separate email account to ensure that every email is properly recorded and answered as smoothly as possible.) Please include CSC111 in the subject line, your full name, UTORid, and student number in the body of the email. We will try to respond to email by the end of the next business day. However, it may take longer, especially near due dates. If you do not hear back after a few days, please do not hesitate to send a follow-up email.

Tip: sometimes students may be nervous about emailing a professor for the first time. We've prepared a [an advice page on emailing your professors](#) that you might want to check out!

Depending on your circumstances and preferences, you may also wish to book an appointment (typically 20-30 minutes) with David or Mario. To do so, email the course email address and describe why you are requesting an appointment, and your time availability for the next five business days. Please try to be as flexible as possible to make it easier for us to schedule a time to meet with you.

CSC111 Community Code of Conduct

[This section is based in part on the [Community Covenant \(https://community-covenant.net/\)](https://community-covenant.net/).]

All members of the course staff and all students are part of the same CSC111 community, and we share the common goal of creating a safe and positive learning environment for every student. Each of us is responsible for creating this environment, and must follow the guidelines below when participating in this course.

1. *Use welcoming and inclusive language. Show empathy towards other community members.*

Call people by their preferred names and pronouns. Do not make offensive comments about an individual or group (e.g., gender, sexual orientation, disability and mental illness, or race). Avoid humour or sarcastic remarks based on such comments or stereotypes.

2. *Be respectful of differing viewpoints and experiences. Gracefully give and accept constructive criticism.*

Look for (and reflect on) ideas and perspectives that are different than your own. Make a genuine effort to thank those who share them. It is natural to disagree with something a member of our community has written, and you are permitted to voice your disagreement. However, when doing so take the following into consideration: try to understand where the other person might be coming from; do not assume the other person's motives or draw inferences from their identity; be polite in your response and state where you agree.

3. *Be professional in your conversations.*

While conversations about topics unrelated to CSC111 or even the University of Toronto are certainly permitted (and encouraged), keep these conversations professional as you would in the workplace. Do not share sexual or violent content and avoid profanity.

4. *Respect the personal boundaries of each community member.*

While we encourage you to make use of this course's online platforms to meet each other to form academic and social connections, no one is obligated to do so. Everyone will have different boundaries and comfort levels that may change over time and depending on the situation. When in doubt, ask. If someone has asked you to respect one of their boundaries (e.g., not to contact them), with or without a reason, please respect their wishes. Do not reveal any person's personal information or private communications to a third person (or publicly) without receiving their explicit consent.

If you experience a violation of this code of conduct in a CSC111 space, or witness such a violation (even if it is not directed at you), or have any other concerns, please contact the course staff at csc111-2023-01@cs.toronto.edu. We will respond to you in a timely manner and everything you say will be confidential.

Accommodations and accessibility services

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability or health consideration that may require accommodations, please feel free to approach your instructor and/or the Accessibility Services Office as soon as possible. The Accessibility Services staff are available by appointment to assess specific needs, provide referrals, and arrange

appropriate accommodations. The sooner you let them and us know your needs, the quicker we can assist you in achieving your learning goals in this course. For more information on services and resources available to students, including registering for accommodations, please see the U of T Accessibility Services website: <https://www.studentlife.utoronto.ca/as> (<https://www.studentlife.utoronto.ca/as>).

Special consideration and missed work

Students experiencing illness or other emergencies that prevent them from being able to complete homework on time, or write the midterm, can apply to the Course Coordinator 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/Assets/Governing+Council+Digital+Assets/Policies/PDF/ppjun011995.pdf) (<http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/PDF/ppjun011995.pdf>), in particular, to be aware 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, you must be 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, complete [special-consideration-form.pdf](https://q.utoronto.ca/courses/292907/files/23605373/download?download_frd=1) ↓ (https://q.utoronto.ca/courses/292907/files/23605373/download?download_frd=1) and email it to the course account (csc111-2023-01@cs.toronto.edu (<mailto:csc111-2023-01@cs.toronto.edu>)) from your U of T email address. You should also fill out the Absence Declaration Tool on [ACORN](https://acorn.utoronto.ca) (<https://acorn.utoronto.ca>).

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.

Note that **this procedure does NOT apply to the final exam.** Your Registrar handles all matters related to final exams.

Academic integrity

The work you submit must be your own. It is an academic offence to copy the work of someone else. This includes their files, their words, and even their ideas. Whether you copy or let someone else copy, it is an offence. Academic offences are taken very seriously.

At the same time, we want you to benefit from working with other students. Obviously, work done with your partner is a joint effort. You are also welcome to work appropriately with students other than your

partner. It is appropriate to discuss course material and technology related to assignments, and we encourage you to do so. For example, you may work through examples that help you understand course material or a new technology, or help each other configure your system to run a supporting piece of software. You may also discuss assignment requirements.

However, other than between group members, *collaboration on assessment solutions is strictly forbidden*. The most certain way to protect yourself is not to discuss solutions or the ideas behind them with students other than your partner. Certainly, you must not let others see your solutions, even in draft form. Do not post your solutions on public online platforms like GitHub, as these can be searched and used by other students. (See the "Your course work" section below for our advice about using private GitHub repositories.)

Please do not cheat. We want you to succeed and are here to help if you are having difficulty.

Remark requests

Remark requests are only accepted on specific assessments. If you believe there was an error in the marking of an Assignment or Term Test, you may request that it be remarked through MarkUs. Only remark requests submitted within the time frame indicated on MarkUs will be accepted - this is typically within **one week** of when the item was returned.

Please note that when we receive a remark request, we regrade the entire submission, not just a specific question. Your mark may go up or down as a result of the remark.

Copyright notice

Course materials prepared by the instructor are considered by the University to be an instructor's intellectual property covered by the Copyright Act, RSC 1985, c C-42. These materials are made available to you for your personal, and cannot be shared outside of the class or published (made publicly available) in any way. Posting course materials or any recordings you may make to other websites without the express permission of the instructor will constitute copyright infringement.

This notice applies to all course materials, including (but not limited to): course notes, lecture slides, lecture recordings, lecture and tutorial handouts, sample solutions, and assessment handouts, starter code, and solutions.

Lecture and tutorial recordings

You may not make your own recordings of video, audio, or text chat, of lectures or tutorials, whether in person or online. Course staff may upload lecture recordings on the course website for your use (but you may not distribute these).

Your course work

Work that you complete for CSC111 (including exercises, assignments, and tests) may not be shared with other students or published. This policy is to both protect the intellectual property of course staff (including, for example, the design and starter files for assignments), and to protect you from committing acts of academic dishonesty. For more information on this topic, see [the Department of Computer Science website \(https://web.cs.toronto.edu/undergraduate/portfolio-advice\)](https://web.cs.toronto.edu/undergraduate/portfolio-advice).

[GitHub \(https://www.github.com\)](https://www.github.com) is a popular option for computer science students and professionals to both collaborate in teams and publish their work online, including to develop a portfolio for potential employers. As we said in the *Academic Integrity* section, you should not put your work publicly on GitHub. However, you may use GitHub's **private repositories** to store your own work, and work with a group on course assignments. (See [GitHub's instructions for creating a repository \(https://docs.github.com/en/github/getting-started-with-github/create-a-repo\)](https://docs.github.com/en/github/getting-started-with-github/create-a-repo) and select "Private" in Step 4.)