Course Syllabus



Welcome to CSC148! This course, *Introduction to Computer Science*, introduces you to how computer scientists think in a systematic way about computing. Our goal is to provide you with skills for approaching program design in a principled way, using techniques such as encapsulation, modularity, information-hiding, comparing different implementations for efficiency, and building powerful data structures.

The material posted on Quercus is required reading. It contains important information: assignment handouts, the policy on missed work, links to the online discussion forum, the announcements page, and more. You are responsible for all announcements made in lecture and on Quercus.

Please direct all personal questions to csc148-2023-09@cs.toronto.edu (mailto:csc148-2023-09@cs.toronto.edu).

Course team

Professor David Liu is the instructor for both sections of this course. David and Instructional Support staff deal with all administrative issues such as missed work, the course website, and TA issues. Sophia Huynh is Lab Coordinator, which means she deals with all issues related to the weekly preps and labs.

To learn more about our course staff and teaching assistants, check out our <u>Course Team</u> (https://q.utoronto.ca/courses/309680/pages/course-team) page.

Lectures

The first lecture is Monday, September 11. 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.

CSC148 lecture logistics information.

| | LEC0101 | LEC0201 |
|--------|---|--|
| Monday | 10:10am - 11:00am (<u>MP 202</u> (<u>https://map.utoronto.ca/?id=1809#!m</u> /494490)_) | 1:10pm - 2:00pm (<u>PB B250</u> (<u>https://map.utoronto.ca/?id=1809#!m</u> /494476)_) |

Wednesday

9:10am - 11:00am (<u>MP 103</u> (<u>https://map.utoronto.ca/?id=1809#!m</u> /494490)_)

Active learning

During lectures, we will present material and demonstrate problem-solving for part of the time. There will also regularly be exercises that you complete. Be prepared to get your gears turning in class! There is very strong evidence, and our experience also shows, that active learning works better than passively listening to a lecture. We also think it's a lot more fun!

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 (https://q.utoronto.ca/courses/309680/external_tools/11190). 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 (https://q.utoronto.ca/courses/292907/assignments/syllabus?wrap=1#copyright-notice) below).

Labs

After lectures each week, you will participate in an in-person two-hour lab, where you will reinforce and extend your learning from lecture that week. The first lab is **Thursday, September 14**. Like lectures, all tutorials start at 10 minutes past the hour. **You must register for a lab section (TUT____) on ACORN, separate from your lecture section.** You are allowed to pick any lab time independent of your lecture time.

We have designed the labs 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. For more information about the labs, check out Policies and Guidelines: Weekly Labs (https://q.utoronto.ca/courses/309680/pages/policies-and-guidelines-weekly-labs?wrap=1).

CSC148 lab logistics information.

| Tutorial Section | Time | Location | Teaching Assistant |
|------------------|-----------------------------|---|-----------------------|
| TUT0101 | Thursdays 9:10-11:00am | BA 3185 (https://map.utoronto.ca /?id=1809#!ct/45469?m /494470?s/) | ТВА |
| TUT0102 | Thursdays 9:10-11:00am | BA 3195 (https://map.utoronto.ca /?id=1809#!ct/45469?m /494470?s/) | ТВА |
| TUT0201 | Thursdays 11:10am-1:00pm | BA 3175 (https://map.utoronto.ca /?id=1809#!ct/45469?m /494470?s/) | ТВА |
| TUT0202 | Thursdays 11:10am-1:00pm | BA 3185 (https://map.utoronto.ca /?id=1809#!ct/45469?m /494470?s/) | ТВА |
| TUT0203 | Thursdays 11:10am-1:00pm | BA 3195 (https://map.utoronto.ca /?id=1809#!ct/45469?m /494470?s/) | ТВА |
| TUT0301 | Thursdays 1:10-3:00pm | BA 3175 (https://map.utoronto.ca /?id=1809#!ct/45469?m /494470?s/) | ТВА |
| TUT0302 | Thursdays 1:10-3:00pm | BA 3185 (https://map.utoronto.ca /?id=1809#!ct/45469?m /494470?s/) | ТВА |
| TUT0303 | Thursdays 1:10-3:00pm | BA 3195 (https://map.utoronto.ca /?id=1809#!ct/45469?m /494470?s/) | ТВА |

| TUT0401 | Thursdays 3:10-5:00pm | BA 3185 (https://map.utoronto.ca /?id=1809#!ct/45469?m /494470?s/) | ТВА |
|---------|--------------------------|---|-----|
| TUT0402 | Thursdays 3:10-5:00pm | BA 3195 (https://map.utoronto.ca /?id=1809#!ct/45469?m /494470?s/) | ТВА |

Office hours

David will hold regular office hours throughout the semester, and we will schedule additional TA office hours in the weeks before assignment deadlines. You are welcome to attend any of the scheduled office hours, and do not need to book an appointment.

David's office hours are *student-driven*, meaning he 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'll generally prioritize questions that aren't specific to any particular student, but rather to course concepts and answers that every student can benefit from. However, there will be opportunity to ask individual questions during David's office hours. All TA office hours (for assignment help) will be one-on-one, but please note that individual help will be limited when office hours get busy before an assignment is due. This is a major reason why you should start your assignments early!

If you have a personal matter to discuss, please read about how to book an individual appointment with David in the <u>Contact section (https://q.utoronto.ca/courses/292907/assignments/syllabus#contact-website-email-discussion-board-contact-)</u> below.

Office hours information.

| Who? | David (instructor) | TAs |
|--------|---|---|
| When? | Wednesdays 4:10pm - 6:00pm Fridays 1:10pm - 3:00pm | To be scheduled on a per- assignment basis |
| Where? | BA 4290 (near the spiral staircase, just left of the washrooms) | BA 2270 (near the spiral staircase, just <i>right</i> of the washrooms) |

CSC148 Community Code of Conduct

[This section is based in part on the Contributor Covenant (https://www.contributor-covenant.org/) .]

All members of the course staff and all students are part of the same CSC148 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 CSC148 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 CSC148 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 csc148-2023-09@cs.toronto.edu (mailto:csc148-2023-09@cs.toronto.edu). We will respond to you in a timely manner and everything you say will be confidential.

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 <u>Piazza (https://q.utoronto.ca/courses/309680/external_tools/18207?wrap=1)</u> as our online discussion forum. Please post all of your questions about the course material and assignments on Piazza so that everyone can benefit from your questions. We will monitor the discussion board regularly, but it may take longer near assignment due dates, so try to start assignments early in case you have questions. Also, please answer questions from other students—helping someone else learn is one of the most effective ways of truly mastering a subject.

For personal matters such as missing course work due to illness, please use the course email account, csc148-2023-09@cs.toronto.edu, and do not email your instructor directly. Send your email from your U of T address (@mail.utoronto.ca), and include your full name, UTORid, and student number in the body of the email. You may request an appointment with your instructor to seek advice on personal matters, but please note that questions about course content should be asked either through the online discussion board or during office hours.

Please do not use Quercus messaging, as course staff will *not* be monitoring their Quercus inboxes.

Prerequisites

CSC108 or equivalent programming experience is assumed. We'll be using Python in the course, but comfort with other imperative programming languages like Java or C should be fine. There will be a **ramp-up session** during the first weekend of term for students whose background is not in Python or who feel they need a refresher. Find out more on our <u>Ramp-Up Session (https://q.utoronto.ca/courses/309680/pages/ramp-up-session?wrap=1) page.</u>

Here are some links to CSC108 materials and general advice:

- Coursera course 1 ⇒ (https://www.coursera.org/course/programming1) and Coursera course 2
 ⇒ (https://www.coursera.org/course/programming2) (based on CSC108 materials)

- Advice on choosing your first-year courses
 — (https://web.cs.toronto.edu/undergraduate/first-year-courses) (skip down to "Which introductory course is right for you?")

Dropping down to CSC108

Students may request to drop down to CSC108 until Monday October 2, provided there is space available in CSC108. To make this request, please contact your College Registrar
<a href="(https://www.artsci.utoronto.ca/current/academic-advising-and-support/college-registrars-offices).

Textbook

There is no course textbook. Your required reading will be a set of free online CSC148 Course Notes CSC148 Course Notes CSC148 Course Notes CSC148 Course Notes

Course software

For information about the software we'll use for this course, please see the <u>Software Guide</u> (https://q.utoronto.ca/courses/309680/pages/software-guide) page for instructions on installing the necessary software onto your computer.

Assessments and course grading scheme

You will complete four major kinds of assessments in this course: weekly preparation exercises, labs, assignments, and tests/exams. You will also complete a module on *Embedded Ethics in computing*. All assessments except the labs, midterm test, and final exam can be completed online. **The labs**, **midterm test**, **and final exam will be held in-person**, **with no exceptions**.

Course assessment summary.

| Assessment | Weight | Due Date/Date Held (Eastern Time) |
|--------------------------------|-----------------------------------|---|
| 9 weekly preparation exercises | 8% (1% each, best 8 of 9 counted) | Mondays before 10:00am |
| 9 labs | 8% (1% each, best 8 of 9 counted) | Thursdays during your TUT section. In person . |
| Assignment 0 | 5% | Tuesday, October 3 before 12:00pm (noon). |

| Midterm Test | 16% | Held Wednesday Oct 18, during class time. In person . |
|------------------------|---|---|
| Assignment 1 | 10% | Tuesday, October 31 before 12:00pm (noon). |
| Assignment 2 | 10% | Tuesday, November 28 before 12:00pm (noon). |
| Embedded Ethics Module | 2% total: • 2 surveys: 0.5% each • Written exercise: 1% | Pre-module survey due Monday November 27 before 10:00am Written exercise due Thursday December 7 before 5:00pm Post-module survey Thursday December 7 before 5:00pm |
| Final Exam | 41% | During the <u>final assessment</u> <u>period</u> (<u>https://www.artsci.utoronto.ca</u> /current/faculty-registrar/exams- assessments) In person. |

Weekly Preparation Exercises (8%)

<u>Weekly preparation exercises</u> (https://q.utoronto.ca/courses/309680/pages/policies-and-guidelines-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 <u>CSC148 Lecture Notes</u> (https://www.teach.cs.toronto.edu/~csc148h/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.

Notes:

- There is an *ungraded* prep due Wednesday September 13 before 9am.
- The first graded prep exercise will be due Monday September 18 before 10am.
- There is *no prep* due the week of the midterm (on Wednesday October 18).
- The final prep exercise will be due at the start of "Week 11" on **Monday November 27 before**10am. There will be *no prep* on Week 12, to give you a bit of a break at the end of the semester!
- We will drop the lowest prep grade (including a 0 due to not submitting the prep).

Weekly labs (8%)

Each weekly lab has a participation grade. We expect every student who attends the lab and puts in an honest effort for the whole lab session will receive this grade each week. For more information, check out Policies and Guidelines: Weekly Labs (https://q.utoronto.ca/courses/309680/pages/policies-and-guidelines-weekly-labs?wrap=1). We also allow each student to miss one lab, as we will only count the best 8 of 9 attendance grades towards your final course grade.

Assignments (25%)

Assignments (https://q.utoronto.ca/courses/309680/pages/policies-and-guidelines-assignments) are larger pieces of programming work that span multiple course topics, and require you to apply and synthesize your knowledge and skills from multiple areas in computer science. Assignments will be posted online, and will be submitted to the MarkUs application. Assignment 0 must be completed individually, but Assignments 1 and 2 may be completed with one other student currently enrolled in CSC148H1 (on the St. George campus).

Working with a partner

You may choose your own partner, from any section of this course, and it need not be the same person for each assignment. Once you begin working on an assignment, you may not dissolve your partnership without our permission. Both partners will receive the same mark for joint assignments. If you choose to work with a partner for an assignment, you must <u>form a group on MarkUs</u> (https://github.com/MarkUsProject/Wiki/blob/v2.3.0/Student_Groups.md). You should declare a partnership well before the deadline (there is no downside of doing so).

Working with a partner has the potential to lighten your workload and to increase your learning, or to make things worse. It all depends on how well you work together. Remember that you are responsible for learning the course material underlying all parts of the assignments. You will have the most success if you truly work together.

If you and your partner are not working well together, please contact us through the course account without delay. We can do little to help if you contact us close to the assignment due date. Students are sometimes reluctant to ask for help, feeling that it is a kind of betrayal. However, experience has shown us that things rarely go well when students avoid the problem. We are here to help. **You can dissolve a group up to five days before the due date.** In order to do so, at least one student in the

group must email the course email address before this time. Course staff will then follow up with all group members. After this deadline, no dissolution of groups will be permitted.

Midterm (16%) and Final Exam (41%)

The <u>Midterm and Final Exam (https://q.utoronto.ca/courses/309680/pages/policies-and-guidelines-midterm-test-and-final-exam)</u> 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 CSC148. 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.

Special Consideration

Students experiencing illness or other emergencies that prevent them from being able to complete homework on time, or write a test, can request 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), in particular, to be aware that it is an academic 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. Making a request does not guarantee that you will be granted special consideration.

<u>Special Consideration Request Form</u> ⇒ (https://forms.office.com/r/kyQPtWGXvN) (read the policy details below carefully before submitting a request!)

Weekly Preps

Weekly preparation exercises generally include two graded components: a Quercus quiz and programming exercises submitted on MarkUs. Late submissions are NOT accepted on either part of the weekly prep.

Assignments: Late submission accommodation policy

For assignments, which are significantly larger in scope, we recognize that unexpected problems,

illness, and disability-related barriers sometimes make it difficult to submit assignments on time. For this reason, we are adopting a policy of radical generosity with respect to assignment submissions. You may request an extension of up to **four days** for any assignment submission by completing **the** special consideration form (https://forms.office.com/r/kyQPtWGXvN). Notes:

- After making this request, you should see the extension appear on MarkUs within two business days (so please do not contact us if you don't see it right away).
- In A1 and A2, if you are working with a partner:
 - You must create your group on MarkUs and make sure your partner has been invited before requesting the extension.
 - Only one partner needs to request the extension.
 - You may not dissolve your partnership after requesting an extension without contacting the course email address first.
- You may request this extension up to 4 days after the assignment due date. However, note that
 the extended time will be relative to the assignment deadline, not relative to when you request the
 extension.
- If you initially request a shorter (e.g., 2-day extension), you can fill out the form again to request a longer extension. We will always use the *most recent* extension request you have asked for (up to 4 days after the assignment due date).
- No assignment submitted beyond this extension (even 1 second late!) will be graded.
- If you have been granted an extension of four days and then become ill on the extended due date, no further extension will be given unless further documentation is provided.

While it may seem like a "no-brainer" to always request a four-day extension for each assignment, we strongly recommend not making this request lightly. We have designed your assignments so that they can be completed by their actual deadlines, and we believe that for the vast majority of students, meeting these deadlines is the best way to keep up with the course material. Please do not use this policy lightly to simply shift the original deadline.

Students registered with Accessibility Services are free to use this policy. However, if you would like to request additional accommodations (beyond a 4-day extension), please reach out to the course email address before the original assignment deadline.

If you find yourself in a serious medical or emergency situation where a 4-day extension will not be sufficient, please email csc148-2023-09@cs.toronto.edu (mailto:csc148-2023-09@cs.toronto.edu) before the original assignment due date. We may require further documentation or confirmation from your college registrar, and further extensions are not always granted. So, you should submit any partial work that you've completed before the original assignment due date. Please also complete an Absence Declaration on ACORN when appropriate, (https://www.artsci.utoronto.ca/current/academics/student-absences) and send the notification to the course email address.

Finally, note that this policy only applies to assignments, and not the Weekly Preparation Exercises,

which must be submitted on time to be graded.

Missed Midterm

You may request special consideration if you missed the midtern due to illness or other extenuating circumstances by submitting the special consideration form (https://forms.office.com/r/kyQPtWGXvN). You will be asked to provide additional information, and this will be reviewed by the course staff. You should also complete an Absence Declaration on ACORN when appropriate (https://www.artsci.utoronto.ca/current/academics/student-absences), and send the notification to the course email address. Special consideration is NOT always granted. If it is granted, the weight of your midtern will be transferred to the final exam.

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>U of T Accessibility Services website (https://www.studentlife.utoronto.ca/as)</u>.

Midterm remark requests

If you believe there was an error in the marking of the midterm test, you may request that it be remarked. Please complete and submit a Remark Request Form via email to csc148-2023-09@cs.toronto.edu (mailto:csc148-2023-09@cs.toronto.edu). You must give a specific reason for the request, referring to a possible error or omission by the marker. 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.

For prompt turnaround, remark requests must be received within **one week** of when the midterm was returned.

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 your work, it is an offence. We want you to benefit from working with other students and will give you plenty of opportunities to do so in lectures and labs. But when it comes to course assessments,

collaboration on solutions is strictly forbidden (except between partners on Assignments 1 and 2). The most certain way to protect yourself is not to discuss solutions 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.)

For more information about what is and isn't allowed, please see <u>Academic Integrity in CSC148</u> (https://q.utoronto.ca/courses/309680/pages/academic-integrity-in-csc148?wrap=1).

Policy on generative AI (including ChatGPT)

In this course, you may use generative artificial intelligence (AI) tools, including ChatGPT and GitHub Copilot, as learning aids and to help complete weekly preps and assignments. You will not be permitted to use generative AI on the midterm test or final exam. While some generative AI tools are currently available for free in Canada, please be warned that these tools have not been vetted by the University of Toronto and might not meet University guidelines or requirements for privacy, intellectual property, security, accessibility, and records retention. Generative AI may produce content which is incorrect or misleading, or inconsistent with the expectations of this course. These tools may be subject to service interruptions, software modifications, and pricing changes during the semester.

Generative AI is not required to complete any aspect of this course, and we caution you to not rely on these tools to complete your coursework. Instead, we recommend treating generative AI as a supplementary tool only for exploration or drafting content. Ultimately, you (and not any AI tool) are responsible for your own learning in this course, and for all the work you submit for credit. It is your responsibility to critically evaluate the content generated, and to regularly assess your own learning independent of generative AI tools. Overreliance on generative AI may give you a false sense of how much you've actually learned, which can lead to poor performance on the midterm test or final exam, in later courses, or in future work or studies after graduation.

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 CSC148 (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).

<u>GitHub (https://www.github.com)</u> 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 <u>GitHub's instructions for creating a repository</u> (https://docs.github.com/en/github/getting-started-with-github/create-a-repo) and select "Private" in Step 4.)

Quercus cover image credit: https://www.pexels.com/photo/short-coated-black-and-brown-puppy-in-white-and-red-polka-dot-ceramic-mug-on-green-field-39317/)