DEPARTMENT OF MATHEMATICAL AND COMPUTATIONAL SCIENCES
UNIVERSITY OF TORONTO MISSISSAUGA

CSC108H5 Winter 2021
Introduction to Computer Programming

Course Description

Welcome to CSC108H5, Introduction to Computer Programming!

Successful students from past terms agree that the keys to this course are: (1) frequent practice; and (2) being active in the community. First, read or write Python code every day - if only for a few minutes - rather than cramming the exercises and assignments into full-day sessions. This will make lectures easier to understand, will give you plenty of time to ask questions, and utilizes spaced repetition, which has been shown to improve learning. Second, make friends with your peers in lecture and labs.You will see the people in this class also taking MAT102, calculus, and in later computer science courses (e.g. CSC148). Communicate with each other on the discussion board, form study groups, and look for departmental seminars and social events to get engaged early.

Prerequisite: Grade 12 Advanced Functions (MHF4U).
Exclusion: CSC108H1 or CSC120H1 or CSC148H5 or CSC148H1 or CSC150H1 or CSCA08H3 or CSCA20H3 (SCI)
Distribution Requirement: SCI

Students who lack a pre/co-requisite can be removed at any time unless they have received an explicit waiver from the department. The waiver form can be downloaded from here.

Note about Time Zone

All dates and times for lectures/labs/deadlines reflect the time zone in which the University of Toronto Mississauga is in (i.e. Eastern Daylight Time/Eastern Standard Time).

Learning Outcomes

By the end of this course, you should be comfortable with procedural programming in Python and will have been exposed to software development topics like testing, design, and documentation. You will also be exposed to some core computer science ideas, such as complexity, abstraction, and the use of algorithms.

Some of the topics covered in this course are:
- Python Arithmetics, Logic and Booleans
- Functions, Procedures, Scoping, Design
- Strings, Indexes, Formatting
- Conditionals, Loops
- Data Structures (Lists, Dictionaries, Tuples)
- File I/O (Reading, Parsing, Writing)
- Testing (Doc Tests and Unit Tests)
- Introduction to OOP (Structures, Methods, Magic Methods, Design)
- Introduction to Sorting, Timing, and Complexity

Course Links

Quercus (for announcments, lecture exercises/slides, labs, quizzes/tests): https://q.utoronto.ca/courses/210506 (also includes all password-protected links, i.e. for lecture, piazza and discord access)

Course Website (central hub): https://mcs.utm.utoronto.ca/~108s21/ (this website has our weekly breakdown, as well as information about all the course tools we will be using such as Zoom, Python, IDLE, etc.)

Course Instructors

Sadia Sharmin (co-ordinator)

Lecture times: MWF 11-12 (LEC9101) on Zoom (link on Quercus)

Office Hours: Mon 12:30-2, on our Discord Server (click on "#chat-with-sadia" on the sidebar, and we can chat on there during office hour times – you can also request private voice/video chat)

Email Address: s.sharmin@mail.utoronto.ca

Barbara Pioro

Lecture times: MWF 12-1 (LEC9102) on Zoom (link on Quercus)

Office Hours: Wed 12:30-2, on our Discord Server (click on "#chat-with-barbara" on the sidebar, and we can chat on there during office hour times – you can also request private voice/video chat)

Email Address: b.pioro@utoronto.ca

Lecture Information

This course will involve a virtual flipped classroom.

Here is your weekly routine for most weeks:

Monday by 10:00am (Before lecture):
Watch and complete "Prepare" exercises on PCRS (link will be available on Quercus)

Monday, Wednesday, Friday 11am - 12pm / 12pm - 1pm (During lecture):
Take part in synchronous online lecture exercises and discussion guided by your instructor, often working with peers in the class to solve problems together

Sunday by 11:59pm (After lecture):
Complete the "Practice/Perform" exercises on PCRS

NOTE:
For Weeks 1 & 2: the PCRS exercises will be due late for these two weeks (see deadlines in the calendar on Quercus), to give students who may join the course late a chance to catch up.

Lab Information

Starting from Week 3, you will have bi-weekly lab sessions during PRA times run by your TAs (see calendar on Quercus and weekly breakdown on course website for exact dates). Labs are a scheduled time for you to get hands-on experience applying course concepts. Each one consists of a few tasks that range from design, implementing functions in Python, writing tests, and even learning some new material then applying it!

Some Lab Tips:
1. Your TAs are there to help! Don't be afraid to ask them questions about the lab - that's why they are there.
2. If you happen to finish the regular lab tasks early, there are challenge problems that you can work on! These are great practice!

Textbook Information

There is no required textbook, all course materials are provided on the course website. The course website and PCRS is required reading.

This course requires regular access to a computer*. The software required for this course has been installed in the computer science labs (DH2010/2020/2026). Due to the online nature of this semester, if you wish to install it on a personal machine, links to the required software and packages are found on the course webpage.

Software includes: Python 3.8, an IDE** (e.g. IDLE -- this comes with the Python installation, Wing101 -- your PCRS exercises use this, PyCharm, etc.), certain Python packages (see course webpage), and Google Chrome as your browser.

*Please see the recommended and minimum technology requirements for remote/online learning from the Office of the Vice Provost.
**This course will only support the use of IDLE and Wing101, if you choose to use another IDE you must do so at your own discretion and without the troubleshooting support of course staff/ faculty.

Assessment Information

Item	Deadline	Weight
PCRS (Prepare, Practice, Perform)	Ongoing	15%
Bi-weekly Labs	Ongoing	15%
Assignment 1 (Individual)	February 11, 2021	10%
Assignment 2 (Individual)	March 11, 2021	15%
Assignment 3 (Individual)	April 8, 2021	15%
Final Exam	TBA	30%

NOTE: Last Date to drop course from Academic Record and GPA is March 15, 2021

ALL COURSE ASSESSMENTS (Assignments, Labs, PCRS, Exam, etc.) MUST BE COMPLETED INDIVIDUALLY. THE WORK YOU ARE SUBMITTING SHOULD BE YOURS AND YOURS ALONE.

Weekly Practice (PCRS: Preparation, Practice, Perform)

Research consistently shows us that students remember only a small fraction of what is presented in lecture. It is not easy to make sense of material that you see for the first time in a fast-paced lecture environment, let alone to stay focused for 50-minutes. It's also important to space out your studying (spaced repetition). To prime you for what we will discuss, you will view a set of videos and complete exercises before Monday's lectures (by Monday 10AM). These are the "Prepare" exercises in PCRS. Then, you will complete a more challenging set of online exercises by the next Sunday night by 10PM to test your understanding of that week's material. These are the "Practice" and "Perform" exercises.

Although these exercises are marked, the important point is not that you get full marks but that you emerge with an understanding of what you do and do not know. Use these exercises as formative feedback: if you are struggling to answer the questions, go to the lab, ask questions in lecture, or visit office hours to get help early, before you are stuck.

PCRS content and exercises will be released every **Monday at noon**.

Preparations for lecture will be due ***before that lecture*** on **Mondays by 10:00 AM** (7 days after release).

Practice/Perform to reinforce that week's content will be due ***after the last lecture*** of each week, on **Sundays by 10:00 PM** (13 days after release).

The Preparation, Practice, Perform on PCRS is worth a total of 15% of your final grade - each week's exercises will be worth 1.5%.

You are allowed to skip two weeks (i.e. your lowest two marks will be dropped).

Labs

This course consists of 5 bi-weekly labs that will take place during your PRA sessions (see the calendar on Quercus for the exact dates), and will be run by your TAs. Each lab is worth 3% of your final mark and will mainly be graded based on your level of effort and creativity, as well as completion and reasonable correctness.

Assignments

This course has 3 assignments, which are much larger than Labs and PCRS exercises. They will combine multiple concepts indepth and comprehensively test your understanding of key course concepts.

You ***must work by yourself*** on all the assignments.

Assignment handouts will be made available on the course website. Assignments must be submitted by 11:59pm on the day due through MarkUs.

You may, and are encouraged, to submit your assignment as many times as you'd like (this will help deter technical issues when submitting but also act as a repository of your progress on the assignment). We mark the most recent submission (adhering to the deadline).

Final Exam

This course will have two practice tests and a final exam, they will be distributed on Quercus in the form of a "Quercus Quiz" and be entirely online. Additional details will be distributed in lecture and on the discussion board. The practice tests and exam are comprehensive and take place outside of lecture.

Practice Test 1: Will be available on Quercus starting from Friday, Feb 12
Practice Test 2: Will be available on Quercus starting from Friday, Mar 26
Final Exam: TBA by the Registrar's Office

The final exam will also take place on Quercus as a timed quiz (2 hours). More information will be announced closer to the exam date.

Note: You ***must achieve a minimum of 40% on the final exam***, failure to do so will result in a maximum mark of 47 for the course.

Policy for Seeking Help

Read Announcements

You are responsible for reading all Quercus announcements made by your instructors. We may provide clarifications or additional information, when necessary, so it is your responsibility to read the announcements carefully. It is also a good idea to periodically skim over your classmates' posts on Piazza.

Use Piazza over Email

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 feel free to answer other students' questions too! Helping someone else learn is one of the most effective ways of truly mastering a subject.

Piazza Rules

Please do not commit academic offences on the discussion board. Both when asking and answering questions, you are not to post your solution (even partial code), nor your approach to solving a problem. You may provide hints to guide someone in the right direction, but you are not to discuss solutions or the ideas behind them with other students, as you are depriving them of valuable steps in their learning process.

Email Policy

For personal questions or emergencies, please email the course co-ordinator from your UofT address. Please include "CSC108" in the subject line, and your full name and UTORid/student number in the body of the email. Otherwise, your message might be marked as spam!

We will try to respond to email and discussion board postings by the end of the next business day. However, it may take longer, especially near due dates. If you do not hear back quickly, we are always available during office hours to help.

THINGS TO REMEMBER

1. You must start working on assignments early, in case you have questions, as we may not get back to you on time around the deadline when the discussion board is typically very busy.
2. Do not post parts of your solution code for exercises/assignments on the discussion board! If you have a question that requires disclosing code, you can make your post on Piazza PRIVATE (only instructors/TAs can see), or ask during a lab session or office hours.

Remark Requests

If you feel there was an error in the marking of an assignment, you may request a remark using this form: https://forms.gle/fU73favrpeyvtfDE7

You must give a specific reason for the request, referring to a possible error or omission by the marker. Please keep in mind that your grade may stay the same, may increase, or may even decrease, after your remark request is assessed.

Remark requests MUST be received within one week of when the grade was released.

Policy for Missed Deadlines

Penalties for Lateness

No late assignments accepted.
I do provide a one hour grace period. After that, no exceptions will be made.

Missed PCRS Exercises

PCRS exercises are timed with the delivery of the lectures, extensions will not be provided for these under any circumstance. Please note that you are allowed to miss two PCRS with no penalty (the lowest two scores get dropped).

Missed Lab and Assignment

Contact the co-ordinator as early as possible (hopefully before the assignment due date) if you feel as though you can't meet a deadline for a valid reason! Usually, if an extension is not possible then the weight of that missed term work will be redistributed to other parts of the course.

To request special consideration, do the following:

1. Declare your absence on ACORN if you are ill
2. Fill out this form: https://forms.gle/31KnkmDNPZbuMZvY8 and
3. Email the course coordinator, letting them know you have filled out the form.

Exact accommodations will be determined **on a case-by-case basis and will not be given automatically**. In other words, you risk getting a mark of zero for missed work unless you contact your instructor promptly.

In case of an emergency that will cause you to miss a midterm or an assignment deadline, please contact the course coordinator via email within 24 hours of the assignment deadline or test date.

Missed Final Exam

Students who cannot complete their online final examination due to illness or other serious causes must file an online petition within 72 hours of the missed examination. Late petitions will NOT be considered. Students must also record their absence on ACORN on the day of the missed exam or by the day after at the latest. At this time, the university has temporarily suspended the requirement to provide medical documentation if illness is cited as the reason for a deferred exam request. Fees for deferred exam requests are also temporarily being waived during this examination period.

Academic Integrity

Honesty and fairness are fundamental to the University of Toronto's mission. Plagiarism is a form of academic fraud and is treated very seriously. The work that you submit must be your own and cannot contain anyone elses work or ideas without proper attribution. You are expected to read the handout -- How not to plagiarize (http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize) and to be familiar with the Code of behaviour on academic matters, which is linked from the UTM calendar under the link Codes and policies.

All of the work you submit must be done by you alone, and your work must not be submitted by someone else. Plagiarism is academic fraud and is taken very seriously. The department uses software that compares programs for evidence of similar code.

Please read the Rules and Regulations from the U of T Calendar (especially the Code of Behaviour on Academic Matters).

Please don't cheat. It is unpleasant for everyone involved, including us. Here are a couple of general guidelines to help you avoid plagiarism:

- Never look at another student's assignment/lab/pcrs solution(s). Never show another student your assignment solution. This applies to all drafts of a solution and to incomplete and even incorrect solutions.
- Keep discussions with other students focused on concepts and examples. Never discuss assignments before the due date with anyone but your Instructors and your TAs.
- Do not discuss your solution publicly on the discussion board or publicly in the lab rooms/ office hours. (And never on online sites like Chegg, StackOverflow, etc.)

NOTE: A series of **plagiarism detection software** and tools will be utilized to detect the similarity of submissions in this course for the purpose of detecting plagiarism. All submitted work in this course is subject to this verification.

Accessibility Needs

Students with diverse learning needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach your instructor and/or Accessibility Services as soon as possible. Accessibility staff (located in

Room 2037, Davis Building) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. Please call 905-569-4699 or email access.utm@utoronto.ca. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

More information about course tools and topics will be posted on our course website as the term progresses. Stay up to date by reading all announcements, posts, and website updates!