CSC108H: Introduction to Computer Programming

Myrto Papadopoulou (myrto@ece.toronto.edu)
Tom Fairgrieve (tff@cs.toronto.edu)
Jacqueline Smith (jsmith@cs.toronto.edu)

This Course
Teaches the basics of programming in Python
Is intended for students with no programming experience
3 lecture hours per week
(L0101 is fully online, except the final exam, so there are no lectures for that section.)

Everybody Stand Up
Sit down if you have completed any programming course (for example, in high school) in any programming language.
Everybody Stand Up

Sit down if you have completed any programming course (for example, in high school) in any programming language.
Sit down if you know how to write a program that sorts a list (or array) of numbers.

Sit down if you have written any programs at all.

We assume that students in CSC108 have never programmed before!

Classroom rule: when the instructor poses a question, if you knew the answer before taking this course, do not answer the question.

What’s CSC108H about?

At the end of this course, you will
- know most Python instructions
- be able to take human problems and write Python programs that solve them
- have a sense of what computer scientists do

```python
# first even items!
*** (list of int) -> int

Return the first even number from items. Return -1 if items contains no even numbers.

>>> first_even([5, 8, 3, 2])
8
>>> first_even([7, 1])
-1
>>> ***
```
Do you already know the 108 material?

You may want to take CSC148 instead:

- Assumes basic Python programming (strings, lists, sorting, functions, methods)
- Suitable for those with the equivalent of CSC108.
- Teaches more object-oriented concepts, plus data structures
- 3 lecture hours/week + 2-hour lab

If you know only some of the csc108 material, you may want to consider the csc108 online section (L0101).

“U of T’s best program remains computer science, which landed in 10th spot among some of the best universities in the world.”
- Toronto Star

Outstanding Research

“Google acquires U of T neural networks company”
“Bianca Schroeder: creating more efficient, reliable data centres”
“U of T spinoff company launches tiny, smarter keyboard”
“Raptor ball according to computer scientist Richard Zemel”

Outstanding Teaching

“Celebrating great teaching at U of T”
“Top U of T teachers recognized by president, provost”
“Engaged students, higher marks on finals: benefits of the inverted classroom”
Outstanding Students

“Undergrad research opportunities: designing video games, challenging seniors”

Computer Science Student Union
http://cssu.cdf.toronto.edu/ @cssu

UofT Hacks
http://uofthacks.com @UofTHacks
“Ingenuity and endurance at UofTHacks’ marathon”

Meet your neighbour(s)

With 1 or 2 of your classmates…

1. Introduce yourself
2. Discuss why you decided to take this course (or, the program that requires it)
3. Share a U of T tip or fact you learned recently.

Syllabus + Course Website

The syllabus has all the key administrative details.
The course website is here:
http://www.cdf.toronto.edu/~csc108h/fall/

Coursework Overview

<table>
<thead>
<tr>
<th>Work</th>
<th>Weight</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Surveys (2)</td>
<td>0%</td>
<td>Online section (L0101) only.</td>
</tr>
<tr>
<td>Prepare Exercises (11)</td>
<td>5%</td>
<td>Watch videos and complete problems. At start of Weeks 2-12, 0.5% each, best 10 of 11 weeks.</td>
</tr>
<tr>
<td>Perform Exercises (10)</td>
<td>9%</td>
<td>By end of Weeks 2-5, 7-12 1% each, best 9 of 10 weeks.</td>
</tr>
<tr>
<td>Assignments (3)</td>
<td>21%</td>
<td>A1: 5% (on own) A2: 8% (one partner allowed) A3: 8% (one partner allowed)</td>
</tr>
<tr>
<td>Midterm Test</td>
<td>15%</td>
<td>During lecture time, but in a different room. (L0101: as times to be announced)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>50%</td>
<td>You must get ≥ 40% on the final exam to pass CSC108!</td>
</tr>
</tbody>
</table>

You must get ≥ 40% on the final exam to pass CSC108!
Inverted Classroom

**Prepare:** watch lecture videos and complete an exercise.

**Rehearse:** apply the concepts covered in the lecture videos by completing activities of various kinds and working through more complex examples with the support of your instructor and TAs.

**Perform:** demonstrate your understanding of the material by completing an exercise.

Due Sundays by 10pm  
Completed online

Completed in lecture

Due Friday by 6pm  
Completed online

PCRS

The weekly **Prepare** and **Perform** coursework will be completed using an online tool called the PCRS (Programming Course Resource System).

You will login to the PCRS using your UTORid and password.

Assignments

Due on Tuesdays before 10:00 pm (sharp)

Handouts will be posted on course website.

Submitted electronically using MarkUs

Assignment 1 must be completed individually.

Assignments 2 and 3 solo or with a partner:

Pick anyone in any of the five St. George campus lecture sections.

Lecture and the discussion boards are great for meeting people.

Late Policy:

5% per hour for the first 5 hours, 15% per hour for any additional hour

No other late coursework accepted

No other late assignments will be accepted.

No late surveys will be accepted.

No late exercises will be accepted.

If you can’t finish an assignment, you can earn part marks for a good partial solution.

Of course, illness and other disasters are another matter; contact your instructor as soon as possible if you run into this sort of trouble.
Midterm Test

During lecture time
Location will be posted on the course website
No partners for tests!

Final Exam

Scheduled by the Faculty of Arts and Science
Exam schedule will be posted here:
http://www.artsci.utoronto.ca/current/undergraduate/exams
We can’t change it or allow you to write it at a different time!
All exceptions must be handled through Office of the Faculty Registrar: we can’t set a makeup test, we can’t waive it for you.

Doing Your Work

Our labs: the Computing Discipline Facility (CDF)
Bahen Centre for Information Technology:
BA3175, BA3185, BA3195, BA3200,
BA2200, BA2210, BA2220, BA2240, BA2270
You have 24/7 access using your T-card to these rooms (with some exceptions).

Use your CDF username to log into the lab computers:
http://www.cdf.toronto.edu/resources/cdf_username_lookup.html

Working on your own computer

You can install Python 3 (not 2!) on your own computer.
You can also install Wing IDE 101, the application we’ll use to write Python programs.
Instructions for both are on the course website.
Getting Help

Don’t spin your wheels, ask for help!

Instructor Office Hours (two formats: in person and online)
108 Drop-in Centre (BA 2230)
CSC Help Centre (also BA 2230)
Textbook
Piazza (online discussion forum)
Instructor Email

The schedule is posted here:
http://www.cdf.toronto.edu/~csc108h/fall/gethelp.shtml

108 Drop-in and CSC Help Centres

Drop by the 108 Drop-in Centre to get help with the current exercise, assignment, or general course topics.

This should be the first place you go for exercise help.

Exercise-related questions have priority over other questions, but feel free to ask for help with other course material, and the TA will help if they can.

There is also a general CSC Help Centre M-Th 4-6pm (starts week 2)
Anyone in any CSC class can go ask questions.
Warning: it gets busy!

Textbook

Be sure to get the 2nd edition!

eBook: $25 USD
Formats: PDF, ePub, mobi
If you buy the eBook, you can have it right away.

Paper version: ~$45 CAD
Sold at UofT bookstore, amazon.ca, etc.

Discussion Forums: Piazza

Discussion forums are available for you to post questions about the course material.

Ask questions if you’re confused!

Provide answers if you know them!

Please don’t post solutions (or partial solutions or incorrect solutions) about any coursework until after the due date. Even then, ask your instructor first!

piazza.com/utoronto.ca/fall2015/csc108h
Email

It really, really helps us if you start email subjects with "108:"
Please read announcements on Blackboard before sending email
Use a good subject, such as "108: missing test with doctors note"
Sign your full name and include your student number. (There are hundreds of you and some even have the same name!)

Academic Offenses

All of the work you submit must be your own and your work must not be submitted by someone else (except your assignment partner)
The department uses software that compares programs for evidence of similar code

How to be good

To avoid plagiarism:
• Never look at another team's assignment work
• Never show another team your work
• Applies even to drafts and to incomplete solutions
• Discuss how to solve an assignment only with the Help Centre TAs, the course TAs, and the course instructors

What to do by 10pm Sunday

Read the syllabus
Bookmark the course website
Log in to Blackboard portal
If you plan on using your own computer, install Python and Wing 101
• For help with software installation, visit the 108 Drop-in Centre
Complete the Week 2 Prepare exercise on the PCRS (due Sunday 20 September by 10pm)
You made it! Welcome to first-year computer science at U of T! Join us to meet with faculty and students, where we will answer frequently asked questions about CS courses and programs. Learn about opportunities to take your undergrad experience up a notch by getting involved in clubs, hackathons, research, and more.

FIRST-YEAR ORIENTATION
Monday, September 14, 2015
3:00 PM - 5:00 PM
BA3200