CSC165 Mathematical expression and reasoning for computer scientists — Fall 2017

Short version: Welcome to CSC165, "Mathematical expression and reasoning for computer science." We'll have 24 lecture hours, a similar number of problem-solving hours (sometimes called tutorials in the timetable), five assignments, two tests, and a three-hour final exam. You'll find more details on the course web page. Please read your U of T email regularly, since I use it to announce course events.

Lectures/problem-solving:

L0101: Lectures are 1 p.m. Tuesdays in WB 116, and 1 p.m. Thursdays in PB B150. Problem-solving sessions are 2 p.m. Tuesdays in PB B250.[1] and 2 p.m. Thursdays in PB B150.

L5101: Lectures are 6 and 8 p.m. Thursdays in FG 103. Problem-solving sessions are 6 p.m. Tuesdays and 7 p.m. Thursdays in FG 103.

Contact:

face-to-face: Danny Heap, BA4270 (fourth floor of Bahen, behind the elevators).

office hours: Monday, Tuesday, Wednesday, 4–5 p.m., BA2230.

email: 165fall2017@cs.toronto.edu

phone: 416-978-5899

Prerequisites: Check the prerequisites for this course in the Arts & Science Calendar. If you don't satisfy these, the registrar might remove you from the course.

Textbook and computing: We will follow Profs. Liu and Pitassi's course notes (printed copies available in the U of T bookstore starting next week). Although you may find additional examples and exposition of course material elsewhere, for example Gallier or Lovász, use the course notes' approach whenever there are differences. Each student enrolled in the course has an account on teach.cs to tinker with programs, and to electronically submit assignments and exercises. Questions about the management of your teach.cs account should be addressed to `admin@teach.cs.toronto.edu`.

Syllabus: We'll discuss the following topics:

- logic and expression
- proof techniques
- analyzing algorithms
- graphs and trees

Course work: You'll be responsible for pieces of work, spread through the term: five assignments, two term tests, and the final exam:

[1] Except Oct 17, 31, and Dec 5

Item	Due	Weight
assignment #0	Wednesday September 20, 10 p.m.	2%
assignment #1	Wednesday October 4, 10 p.m.	7%
test #1	Tuesday October 10, 3 or 6 p.m.	14%
assignment #2	Wednesday October 25, 10 p.m.	7%
assignment #3	Wednesday November 15, 10 p.m.	7%
test #2	Tuesday November 28, 3 or 6 p.m.	14%
assignment #4	Wednesday December 6, 10 p.m.	7%
final exam	sometime during exam period	42%

Nuance: You must achieve at least 40% of the marks on the final exam to pass this course.

Late work, re-marks: Late assignments are penalized at the rate of 5% per hour. However, if you have a valid, documented reason for missing a deadline, you won't be penalized for events that are beyond your control. If you feel a piece of your work has been graded unfairly, please submit a written re-mark form within a week of receiving the work back. Re-mark decisions will be made before I submit course marks in December.

Academic integrity: Our university, including you, is a community of scholars. That means we share ideas here, and we have to do so in a responsible manner. A key ingredient is to always give generous, detailed, credit to others whose work you use, and never attempt to pass off somebody else's work as your own. Assignments and tests are meant to be the work of their authors, either individually (in the case of tests and quizzes), or in teams of up to three persons (in the case of some assignments). Here are tips to avoid passing off others work as your own, or (just as bad) having your work passed off as somebody else's.

- Never use other teams' partial or complete solutions. You may discuss **general** approaches, take no notes (paper or electronic), and leave an hour of mindless activity between discussions with others and authoring your own work.
- Never show your work to another team.
- Never interfere with university computers, other person's files, accounts, or programs.

Lecture notes, email: I will occasionally have draft versions of lecture slides posted ahead, so that you can print and annotate them with your own observations. Email is, by design, asynchronous. That means that at the particular time of day or night that you send email, I may be eating, sleeping, listening to music, or attending to other responsibilities. It could take 24 hours, or longer, to respond. Here are tips to make email correspondence about this course more effective:

- Use your utoronto.ca or cdf.toronto.edu email address.
- Put "CSC165" somewhere in the subject line.
- Compose a short message on a single topic. An open-ended question such as "what's wrong with this proof" is unlikely to receive a useful response.