Welcome to CSC165!

CSC165, MATHEMATICAL EXPRESSION AND REASONING FOR COMPUTER SCIENCE

JONATHAN CALVER
Get to know each other

What’s your name?
What did you do over the holidays?
What other courses are you taking this semester?
What are you most excited about this year?

Class starts at 10 after the hour
Who is David? (Yes, call me David)
A bit about me (call me Jonathan or Jon)

- I’m from Saskatoon, Saskatchewan
- Undergrad at University of Saskatchewan (physics / CS)
- MSc and PhD in CS from UofT
- Currently a teaching-stream postdoc in the CS department
What is CSC165 about?

In this course, you will learn to:

• Express statements and problems using precise mathematical language in both familiar and new domains.

• Create a mathematical proof or disproof of a given statement, using different proof techniques.
Preparation for CSC165

CSC165 does **not** assume any prior knowledge in *formal* logic or proofs, or mathematics beyond "pre-calculus."

Some similarities to MAT137/157, but different approach/style and domains of study.
Course website and email address

https://www.teach.cs.toronto.edu/~csc165h/winter/
csc165-2020-01@cs.toronto.edu
A typical week in CSC165

Each week, you’ll have:

- Prep readings and comprehension quiz
- Two-hour class, twice per week
  - Hour 1 is a traditional lecture
  - Hour 2 consists of active learning exercises to get you working!
Preps

Weekly prep readings are designed to prepare you for the week's material. However, this class isn't fully inverted: *most* of the course content is still taught in lecture.

Readings are followed by a short-answer quiz on Quercus.
Classes

Classes are designed to promote active engagement with course content. You’ll make the most of your time here by:

- **Before class**: completing preps
- **In class**: taking notes, removing distractions, asking questions
- **In problem sessions**: reviewing notes, working with each other, writing full solutions, asking questions
<table>
<thead>
<tr>
<th>Assessment</th>
<th>Weight</th>
<th>Comments</th>
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<tbody>
<tr>
<td>9 preps</td>
<td>4.5% (0.5% each)</td>
<td>Due Mondays before 1pm</td>
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<tr>
<td>Problem set 0</td>
<td>1%</td>
<td>Completed individually</td>
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<tr>
<td>Problem sets 1-4</td>
<td>20% (5% each)</td>
<td>Completed in groups of 1-3</td>
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<tr>
<td>2 midterm tests</td>
<td>30% (15% each)</td>
<td>In-class, February 10 and March 16</td>
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<tr>
<td>Final exam</td>
<td>44.5%</td>
<td>You must score at least 40% on the exam to pass the course.</td>
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Problem sets

Each CSC165 problem set is your opportunity to apply your learning to new and challenging concepts and domains.

Some details:
- Start early
- Must be electronically *typeset* (Problem Set 0 should help)
- Often the most challenging part of the course.
- *Start early!!!*
Midterms and final exam

Exams will be on paper, and are largely based on skills and concepts, not simple facts.

*Cramming and memorization are not good strategies for this course.*

Instead, focus on learning and reviewing steadily each week, and you’ll find you don’t need to “study” nearly as much.
## Academic integrity

<table>
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<tr>
<th>The work you submit must be your own.</th>
<th>Do discuss course concepts, what an assignment is asking, high-level ideas about the solution.</th>
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<tr>
<td>Your work must not be submitted by anyone else.</td>
<td>Don’t show anyone your work (including rough work).</td>
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<td>Academic offences are taken very seriously.</td>
<td>Don’t copy work from any source.</td>
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“American culture in particular has instilled in us the bizarre notion that to ask for help amounts to an admission of failure. But some of the most powerful, successful, admired people in the world seem, to me, to have something in common: they ask constantly, creatively, compassionately, and gracefully.”
Getting help: please don’t be shy!

Instructor office hours (BA4290)
- Tuesdays 2-3 (Jonathan) and 3-4 (David)
- Wednesdays 1-3 (David)
- Thursdays 4-6 (Jonathan)

CS Help Centre hours (BA2230)
- 2-6pm every day
Office Hour Tool: My Digital Hand

This term, CSC165 is piloting *My Digital Hand* to help coordinate office hours. Please sign up for CSC165 at:

https://mdh.teach.cs.toronto.edu/
David, alone in office hours
Getting help: please don’t be shy!

**Online course forum (Piazza)**
- A good place to ask *and answer* questions
- Monitored regularly by course staff

**Individual appointments**
- By request – email the course address, and please include the purpose of the request and some times you’re available
- (these are generally reserved for special circumstances)
Tips for success in CSC165

✓ Prepare for, attend, and actively work in lectures.
✓ Start problem sets early. Time-on-task isn’t enough. You need *elapsed time* to:
  ✓ let ideas percolate
  ✓ get answers to questions that crop up
✓ Don’t spin your wheels. Come talk to us, *we want you to succeed!*
✓ Practice, practice, practice. You are learning ways of thinking and new skills, and mastery of these will only come with lots of practice.