23-09-05  1

What is the most important goal to you?

Computers can be part of the solution to each of these
Solving problems of social value

- Computers are a tool to change the world
  - Programming is how you get full control.
  - We can help people.
Topics

1) Who’s Dr. Brian?
2) What’s in CMPT 130?
3) Who are the students?
4) How do I succeed & connect?

ENIAC computer - 1945
Who’s Dr. Brian?
Dr. Brian (Fraser) (he/him)

- I love questions and feedback!
About Me

• Love Teaching: I can help share my excitement for programming, and for making the world a better place.
• Degrees: BSc & PhD from SFU (AI)
• Favourite Video Game: StarCraft 2, WoW, Valheim, Mario Kart
• Family: Married with 2 girls (7y & 9y)
• I recognize that I am privileged to be in my position with many advantages afforded to me throughout my life.
  – I work to build a positive inclusive experience for everyone.
Course Expectation

• Only one thing
  – Use a positive tone for all communication (asking questions, on Piazza forums, with TAs)
  – Anon trolling hurts and won’t be tolerated
  – Students have wide range of backgrounds; respect it

• If sending a message
  – Give a little context (class, your name, topic, ...)
  – Email: If you are sending more than 2 per week on average, over multiple weeks, it may be too many.
What’s in CMPT 130?

http://tinyurl.com/briansfu/cmpt130/
Course Topics

• Basic Course Goal
  - Solving problems of social value
  - Thinking through problems: Programming in C++
  - Simple data structures
  - Algorithms
Flipped Classroom

• “Notes” Videos
  − Pre-recorded videos; posted by Monday
  − You should watch these before class (1-2h)

• Lecture (M/W/F) - Live Coding / Activities
  − Interactive coding and activities to engage content
  − Recorded and posted online

• Labs
  − Guided activities; one per week to get started

• Assignments
  − One every 2 weeks
  − Practice applying skills more independently

http://tinyurl.com/briansfu/cmpt130/
# 2 Week for Assignments

<table>
<thead>
<tr>
<th>Week n</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thur</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
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<tbody>
<tr>
<td></td>
<td>Lecture: Coding + Activities</td>
<td>Lecture: Coding + Activities Lab</td>
<td>Lecture: Coding + Activities</td>
<td>Lecture: Coding + Activities</td>
<td>Lab due</td>
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<tr>
<td>Week n+1</td>
<td>Lecture: Coding + Activities</td>
<td>Lecture: Coding + Activities Lab</td>
<td>Lecture: Coding + Activities</td>
<td>Lecture: Coding + Activities</td>
<td>Assignment due</td>
<td>Lab due</td>
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- Next Wed: Quiz on previous assignment
- Last day to hand in assignment (4 days late; 0% penalty)

http://tinyurl.com/briansfu/cmpt130/
Weekly Expectations

• 3 Units = ~10 hours / week

• Your week might look like:
  – Sunday: watch videos 1h
  – Monday: lecture 1h
  – Tuesday: try assignment, watch video 2h
  – Wednesday: lecture + labs 2h
  – Thursday: try assignment, complete lab 2h
  – Friday: lecture 1h
  – Weekend: try assignment 1h
Assignments

- Programming is like driving a car:
  - They tell you what to do, not how; you write code to solve the problem
  - You can’t really say you know the course material unless you can do (re-do?) the assignments well!

- Generative AI
  - You may use AI tools to help (ChatGPT/Copilot/...)

- It’s cheating to submit someone else’s work
  - We check carefully & apply stiff penalties
  - It’s also cheating to submit your previous work again
Evaluation

• 10% Labs
  - Most weeks (starting next week)
  - Attend any section(s)! (or none?)
  - Submit lab online by Sunday;
    completion marks

• 35% Assignments + Quiz (~6)
  - Assignment due about every 2 weeks; on Sunday
  - Following Wednesday has a short in-class quiz
  - Quiz limits (or scales?) your grade on the assignment; such as
    Credit = minimum of (assignment mark, quiz mark)

• 20% Midterm
  35% Final
Who are the students?
How are you feeling?
You already known:

• How to use a computer and the web.
  – You are comfortable using directories/folders to find, create, copy and edit files.
  – You can check email and browse the web.

• You are eager to learn programming
  – Course is a rigorous introduction to programming.
  – It assumes no previous programming experience, nor experience with Linux.
  – Expect to put in a strong effort to learn programming.
Real-time Stand-up Survey

• Everyone stand up!

• How much programming have you done? (in any language)
  - None?
    • This is the right class for you to start your journey!
      Have a seat.
  - Some experience, but not a lot?
    • This is the right class for you to build your skills!
      Have a seat.
  - A lot!
    • This is the right class for you to help others!
      Have a seat.

• Lecture is for participation for everyone.
Growth Mindset

- Programming is skill a person develops; not one they were born with.
  - Nobody was born being good at C++.
  - Nobody was born being bad at C++.
  - Everyone good at C++ has worked hard and learned it.

- Computer Scientists learn helpful dispositions such as:
  - Collaborative
  - Inventive
  - Persistent
  - Meticulous
  - ...
How to Succeed
+
Make Connections
Stay home sick

• Stay home when needed
  - Feeling a little sick?
    Covid, cold or the flu!
    You should stay home
    and watch the video too!

• If I’m sick, I’ll cancel lecture, present remotely,
  or record a video
Guide to Slides

- Slide Colour Guide (often...):
  - Green: headings.
  - Yellow: Highlighted text.
    - Course has: midterm, quizzes, & final.
  - Blue: Term being defined.
    - Hour: 60 minutes.
  - Sweep-in Text: Blanked out text.

- Joke:
  - There are 10 types of people in the world...
Advice

- Previous Students have said about this course
  - Useful, practical course; May help you love programming
  - Easy start, gets really challenging really fast
  - Time consuming assignments
  - Tough but fair exams
  - Live long and prosper (Star Trek: technology for social good?)
Connecting

• Connect with Me
  - Come chat after class
  - Come to Lunch with Dr. Brian

• Connect with Help
  - Come to lectures & labs
  - Come to “Gathering Hour”
    (in-person office hour in a big room for everyone)
  - Come to my & TA online office hours (Discord)

• Start connecting early

• Start your assignments early
Meeting Someone!

Start chatting in groups of 3-4
- Exchange names and contact info
  (email/discord/whatsapp/instagram/X/?)
- Discuss the following:

1. What is the best thing computers have been used for?

2. What is the worst thing computers have been used for?