



CPSC 100

Computational Thinking

Syllabus + Introduction

Instructor: Parsa Rajabi
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University of British Columbia

Land Acknowledgement

UBC: on the traditional, ancestral,
and unceded territory of the
Musqueam people.

kʷikʷəłəm First Nation

Ellen Neel, Victory Through Honour





Agenda

- Introduction
- Syllabus
 - Learning Goals
 - Course Breakdown
- Wrap up



Instructor: Parsa Rajabi



Lecturer
UBC CS

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Teaching experience

- UBC, SFU, Northeastern University
- Software Eng, HCI, Web Development, Project Management, Technical Writing for CS, Intro to CS

Research in CS Education + HCI

- Focus: CS+X, AI in Education, Computational Thinking, HCI+Education

Interdisciplinary academic background:

- MSc in Computer Science Education at Simon Fraser University
- BSc in Computer Science at University of British Columbia (Okanagan)

Learning Goals

What are Learning Goals?

Learning Goals

A learning goal is designed to tell you what information you should learn about a topic

- At the beginning of the topic, the learning goal may not even make any sense
- By the end of a topic, it should help you know what to study

Learning Goals for the course

Learning Goals

At the highest level, this courses has three main goals.

Students who complete this course will be able to

- explain foundational computing concepts,
- explore applications built on these foundations,
- describe the implications of the applications.

**How are you
going to learn?**



How to learn?

The best way to learn is by doing

Weekly Labs - in labs you will

- Get hands-on practice with a computer
- Work on projects

“Lectures” will involve

- Doing exercises
- Discussing the readings (in small and large groups)
- Hearing concepts explained
- Answering clicker Questions



What does this mean for you?

You need to review the previous lesson content before class.
Sometimes there will be pre-class readings.

You need to come to class prepared to *do* things

- Bring paper and a writing implement – print or load slides before class
- Bring a computer/device so you can access iClicker
- If you have a laptop computer, you'll probably want to bring it

About this course



About this course

CPSC 100 - Computational Thinking [3]

“Lectures” will involve

- Monday / Wednesday / Fridays, 3-3:50pm in DMP 310
 - In class activities
 - Clickers
 - Discussions



What this course includes



Introduction to **Computational Thinking**

- Algorithms + Block based programming
- Data representation + Data Mining + Data Visualization
- Artificial Intelligence (AI)

Possible extra topics

- Ethics of AI, Human Computer Interaction (HCI)

Hands-on practice with tools + project



What this course is NOT

1) A typical Computer Science course

- You will do more reading/writing than coding

2) A coding-based course

- You will not be programming (only blocked-based)

3) An easy "A" course

- Course is set up reward attentive students



Course Logistics

Course website

Canvas + <https://parsa-rajabi.github.io/CPSC-100/>

Communication

Ed Discussion (join via link on Canvas)

It is your responsibility to check Ed and announcements

At least every 24 hours

Class Etiquette



Course Etiquette

Be professional, respectful and thoughtful

Attend class on time and prepared

Don't distract others

Please stay home if you are not feeling well

Review posted course material

Contact classmates to catch up on



Professionalism

A high level of professionalism is expected
Respectful communication in class, emails, etc.

A typical email:

A subject line (with course code e.g. CPSC 100)

A greeting, a clear message, student info, a closing

Using ChatGPT for emails is NOT recommended

such emails will be returned for revision



My Expectations of you

Reach out if you need help

Academic, mental health, etc.

Be honest

Academic integrity, always ask if you're unsure

Be a considerate team member

Attend (on-time) and participate in meetings

Do your share of the job, well and on time.

Syllabus Review

Computational Thinking

What is Computational Thinking?

“Computational thinking is the **thought processes** involved in formulating problems and their solutions so that the solutions are in a form that can be effectively carried out by an information-processing agent” [Cuny, Snyder, Wing 10].



This is **NOT** a
"GPA booster class"



Wrap up



Wrap Up

- Set up iClicker for next class
- No labs for the first week of classes
- Complete course survey via Canvas