

Prerequisites

CPSC 110 or mathematics skills appropriate for enrolling in a calculus class.

What does this really mean?

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Prerequisites

Either you have

- some familiarity with very basic constructs of programming (such as selection, iteration, etc.) or
- no prior programming experience but not *really afraid* of mathematics and logic.

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Prerequisites

You should probably take CPSC 110 instead if

- you have no prior programming experience and
- you are not mathematically strong (for example, you are yet to take MATH 101 and/or MATH 125).

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Difference with CPSC 110

Compared to CPSC 110, this course

- is more technical,
- is somewhat fast-paced,
- makes you think a bit harder and thus
- requires more time (especially with weekly laboratories and homework assignments).

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How to succeed in this course

- Attend all classes.
- Keep up with laboratories and homework assignments.
- Do not wait too long to ask for help. Either see me or go to TA sessions.
- Understand what you turn in. Particularly important if you got a lot of help from me or a TA.
- Do not cheat.

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What is computer science?

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What is computer science?

Answer 1. *Computer science is the study of computers.*

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What is computer science?

Answer 2. *Computer science is the study of how to write computer programs.*

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What is computer science?

Answer 3. *Computer science is the study of the uses and applications of computers and software.*

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These answers are not entirely wrong,
but none of them really captures the
main spirit...

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Correct answer. *Computer science
is the study of **computing**, including*

- *its formal and mathematical
properties,*
- *its hardware realizations,*
- *its linguistic realizations,*
- *its application.*

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What is **computing** then?
We will learn in this course!

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Computing is everywhere

Computing sounds perhaps something abstract and foreign, but it is everywhere:

- Internet, e-mail and WWW
- Mobile phones
- DNA sequencing and human genome mapping
- Magnetic Resonance Imaging (MRI)
- GPS systems

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Computing is everywhere

- Social networking (e.g., Facebook)
- E-commerce and online shopping
- Cryptography and digital signature
- Media file compression (e.g., jpeg, mp3)
- Digital photography and videography
- Bar codes and scanners
- ATMs
- Toll collection (e.g., E-Zpass, FastLane)
- ...

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