Computing Science Course Outlines 2020 Spring

CMPT 295 - D200 Introduction to Computer Systems

Instructor(s): Harinder Khangura

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Calendar Objective/Description:
The curriculum introduces students to topics in computer architecture that are considered fundamental to an understanding of
the digital systems underpinnings of computer systems.

Instructor's Objectives:
This introduction to computer systems provides students with some of the basic principles and concepts that underpin the design of
computer hardware and systems software. It provides a basis for topics such as computer architecture, operating systems, data
communications, and database design. An understanding of how instructions are executed and how data types are interpreted by computer
hardware can also help students improve the performance and the reliability of the programs they write.

Prerequisites:
Either (MACM 101 and ((CMPT 125 and CMPT 127) or CMPT 135)) or (MATH 151 and CMPT 102 for students in an Applied
Physics program). Students with credits for CMPT 150 or 250 may not take this course for further credit.

Topics:
- Representation of symbolic and numeric data
- Representation of instructions (instruction set architecture)
- Machine language programs
- Basic digital systems
- CPU organization
- Memory organization
- Threads and synchronization (time permitting)

Grading:
There will be assignments/labs, one or two midterms, and a final examination. Details will be confirmed during the first week of
lectures.

Students must attain an overall passing grade on the weighted average of exams in the course in order to obtain a clear pass
(C- or better).

Reference Books:
EITHER THIS ONE: Computer Systems MasteringEngineering with Pearson eText -- Standalone Access Card -- for Computer

OR THIS ONE: Computer Systems: A Programmer's Perspective, 3/E, Randal E. Bryant, David R. O'Halloran, Pearson, 2016,
9780134092669, (Hardcopy version)

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Conduct Policies (http://www.sfu.ca/policies/gazette/student.html).