CMPT 295 - D100 Intro. to Computer Systems

**Instructor(s):** Anne Lavergne

**Calendar Objective/Description:**
Intro. to Computer Systems

**Instructor's Objectives:**
This course is primarily a course on computer systems and low-level programming. We will discuss the relationship between the computer architecture (the hardware) and the applications that run on it (the software), and the issues that influence the design of both. Programs will be written in both C and x86-64 assembly. We will explore how instructions are encoded and executed and how binary data types are encoded and interpreted by computer hardware, and how these issues relate to the performance and reliability of our applications.

**This semester, this course is offered online via the Internet. Therefore, students will need access to a computer, the Internet and a browser application. Other computer-related requirements will be discussed during the semester.**

**Prerequisites:**
see go.sfu.ca

**Topics:**
- Representation of numeric data
- Machine language programs
- Representation of instructions (instruction set architecture)
- Basic digital systems
- CPU organization
- Memory organization
- Program/Code optimization

**Grading:**
Will be confirmed during first week of semester. Course activities will include (but may not be limited to) assignments, labs, midterm(s) and final examination.

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).

**Required Books:**

Academic Honesty Statement::

Academic honesty plays a key role in our efforts to maintain a high standard of academic excellence and integrity. Students are advised that ALL acts of intellectual dishonesty will be handled in accordance with the SFU Academic Honesty and Student Conduct Policies (http://www.sfu.ca/policies/gazette/student.html).