CMPT 128 - D100 Intro. Cmpt.Sci/Prgm/Engineers

**Instructor(s):** Rob Cameron

**Calendar Objective/Description:**
Intro. Cmpt.Sci/Prgm/Engineers

**Instructor's Objectives:**
This course is a rigorous introduction to computing science and computer programming, suitable for engineering students. Students will learn fundamental concepts of computing science as well as develop basic skills in software development, with application to engineering problems.

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

**Topics:**
- Computer Systems, Algorithms, Program design and development, Programming tools
- Basic data types, Representation of values of variables, Conversion between data types
- Variables, arithmetic, logical and relational operators, Input and Output,
- Functions, arguments, return values, scope,
- Control structures: decision and repetition structures
- 1D and 2D Arrays, structures, strings
- Dynamic memory allocation and pointers
- Recursion, Searching and Sorting, Analyzing and Comparing Algorithms (Big O)

**Grading:**
To be finalized during the first week. Preliminary: 30% Assignments and Lab Exercises, 30% in class/in lab quizzes and 40% Final Exam.

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:**
Intro to Computing Science & Programming for Engineers (custom textbook), Multiple, Pearson, 2017, 9781323688816, custom textbook

**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).