Calendar Objective/Description:
Builds on CMPT 120 to give a hands-on introduction to programming in C and C++, the basics of program design, essential algorithms and data structures. Guided labs teach the standard tools and students exploit these ideas to create software that works. To be taken in parallel with CMPT 125.

Instructor’s Objectives:
This course builds on CMPT 120 to give a hands-on introduction to programming in C and C++, basics of program design, essential algorithms and data structures. Guided labs teach the standard tools and students exploit these ideas to create software that works. To be taken in parallel with CMPT 125. This is a lab-only class and attendance in the lab sessions is mandatory.

Prerequisites:
CMPT 120 or CMPT 128 or CMPT 130. Corequisite: CMPT 125.

Topics:
- C and C++ programming
- Testing and debugging strategies
- Structured programming using functions
- Compound data types and objects
- Implementation of search and sort algorithms
- Abstract data types, containers and generics
- Practice writing programs to specification
- Recursion
- Empirical performance measurement and comparison with algorithm analysis

Grading:
Students will complete several individual assignments. All assignments are automatically graded by an online server. There will be two in-lab hands-on programming exams.

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).

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).