CMPT 473 - D100 Software Testing, Reliab & Sec

**Instructor(s):** Nick Sumner

**SFU Surrey**

**Calendar Objective/Description:**
Software Testing, Reliability & Assurance

**Instructor's Objectives:**

The goal of this course is to provide students a comprehensive understanding of the quality factors in software as well as the tools, technologies, and techniques that may be used to assess and improve software quality, reliability, and security. Students will apply these concepts to real world software projects and gain an understanding of the challenges that arise in practice.

This course will be taught using a combination of synchronous and asynchronous methods. Students will be expected to watch video lectures asynchronously as well as participate in exercises, quizzes, and exams at times scheduled for the class. These may require video or voice chat. Projects will involve group collaboration for which students must be able to synchronously meet via voice and/or video chat.

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

**Topics:**

- Overview of software quality assurance
- Defining quality: requirements and specifications
- Quality by design: building in quality
- Program verification technologies and methods
- Testing methods - white box, black box, control flow, data flow
- Test data assessment: when have you tested enough?
- Standards for software quality assurance

**Grading:**

Course work will consist of applied assignments, written homework, exams, and quizzes. The marking scheme will be given in the first week of the course.

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).