

CS 5123 Software Validation and Quality Assurance Fall 2018

Course Instructor

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Office Hours:
TR 10am to 11:30am

Course Information

Class Time: TR 7:30pm to 8:45pm

Course Web Site

<http://xywang.100871.net/CS5123.htm>

Reference Books

As below (optional):

- Software Testing and Quality Assurance: Theory and Practice, by Kshirasagar Naik and Priyadarshi Tripathy
- Software Testing: Principles and Practice, by Srinivasan Desikan and Gopalaswamy Ramesh
- Introduction to Software Testing, by Paul Ammann and Jeff Offutt

Prerequisites

Introductory Programming, Software Engineering

Course Outline

This course reviews the basic concepts and knowledge of software validation and quality assurance. We will introduce various techniques to support software validation and quality assurance, include software testing, software debugging, software verification, anti-pattern checking, and field bug management. As the major software validation approach in practice, software testing will account for a large portion of the course content. We will also discuss some recent research progress on major problems of software validation and quality assurance.

Course Objectives

- To understand the basic concepts of software quality, and major approaches to software validation and quality assurance

- To learn and gain experience on software validation and quality assurance with existing tools and approaches
- To acquire insights about current research progress and the software validation and quality assurance in future

Course Topics

- Software Testing
- Software Debugging
- Software Verification
- Anti-Pattern Checking
- Field Bug Management
- Recent Research Progress

Grading Scheme

Mid-term Project: 20%
Mid-term Exams: 20 %
Assignment: 10%
Final Exam: 20%
Final Project: 20%
Course participation: 10%

Exam Schedule

Mid-Term Exam: Oct. 2nd, in class

Final Exam: Dec. 4th, in class

No makeup exam allowed unless supported by university regulation rules.

Course Evaluation

The feedback collected from course evaluation process helps teachers to improve the course and their teaching skills. Please participate in course evaluations after the 13th week of the semester. One extra point will be given to each student who finishes course evaluation.

Common Information

The common information about courses can be found at <http://utsa.edu/syllabus>.

This Syllabus is provided for informational purposes regarding the anticipated course content and schedule of this course. It is based upon the most recent information available on the date of its issuance and is as accurate and complete as possible. I reserve the right to make any changes I deem necessary and/or appropriate. I will make my best efforts to communicate any changes in the syllabus in a timely manner. Students are responsible for being aware of these changes
Roadrunner Creed can be found at www.utsa.edu/about/creed.