Course Syllabus

Course Information
SE 4367.001 Software Testing, Verification, Validation, and Quality Assurance
Spring 2018
Tuesday/Thursday 11:30-12:45
ECSS 2.201

Professor Contact Information
Dr. Mark C. Paulk
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Office hours: Tue/Thur 2:30-3:30 or by appointment

Course Pre-requisites, Co-requisites, and/or Other Restrictions
SE 3306 (Mathematical Foundations of Software Engineering)
CE/CS/SE 3354 (Software Engineering)

Course Description
Methods for evaluating software for correctness and reliability, including code inspections, program proofs and testing methodologies.
Formal and informal proofs of correctness.
Code inspections and their role in software verification.
Unit and system testing techniques, testing tools and limitations of testing.
Statistical testing, reliability models.

Student Learning Objectives/Outcomes
1) Ability to understand the goals and different types of software testing
2) Ability to understand and apply functional testing
3) Ability to understand and apply structural testing
4) Ability to understand and apply GUI testing
5) Ability to understand and apply security-related testing
6) Ability to understand and apply software testing tools

Required Textbooks and Materials
- A.P. Mathur, Foundations of Software Testing, 2nd Edition, 2013.
- IEEE 29119 Part 4 (Software Testing), 2015

Suggested Course Materials

- P. Ammann and J. Offutt, Introduction to Software Testing, Second Edition, 2017.
- D.G. Firesmith, Common System and Software Testing Pitfalls, 2014.
- C. Kaner, J. Falk, and H.Q. Nguyen, Testing Computer Software, Second Edition, 1999.
- C. Kaner, J. Bach, and B. Pettichord, Lessons Learned in Software Testing, 2001.
- G.J. Myers, T. Badgett, T.M. Thomas, and C. Sandler, The Art of Software Testing, Second Edition, 2004.
- R.A. Radice, High Quality Low Cost Software Inspections, 2002.
- G.M. Weinberg, Perfect Software and Other Illusions About Testing, 2008.

Assignments & Academic Calendar

Tue, Jan 9	Classes begin
Tue, Feb 27	Midterm exam
March 12-18	Spring Break (no classes)
Thur, April 26	Last day of class
May 1-7	Finals

Lecture sequence: see eLearning Presentations folder

Grading Policy

Quizzes	10%
Homework	10%
Midterm exam	40%
Final exam	40%

Grading Curve

97-100	A+
93-97	A
90-93	A-
87-90	B+
83-87	B
80-83	B-
77-80	C+
73-77	C
70-73	C-
65-70	D-
under 65	F

Course & Instructor Policies

1. Make-up exams will be granted only for exceptional conditions, as approved by the instructor.
2. There will be no extra credit work.
3. Assignments will not be accepted late unless there are extenuating circumstances.
4. Assignments should include the class, the assignment, and your name.
5. File names of softcopy assignments should include the class, the assignment, and your name, e.g., se4367a01jdoe.doc.
6. If you send email to the teacher or the TA, include which class you are discussing in the email (including the section number).
7. The lowest homework grade will be dropped.
8. The lowest quiz grade will be dropped.
9. Assignments should be submitted through eLearning, but will also be accepted as hardcopy hand-ins.
10. Cell phones shall not be used in the classroom during sessions. Place them on mute. If you receive a call, leave the room.
11. Exams are closed book; no laptops; a one-page (front and back) set of notes may be used.
12. You are expected to attend class.
13. By CS Dept policy, missing three (3) consecutive classes results in a letter grade drop and missing four (4) consecutive classes is an automatic failure for the class.

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.