

Course Syllabus

Course Information

CS/SE 3354: Software Engineering
Spring 2013
Mon/Wed 1600-1715
JSOM 1.102

Professor Contact Information

Dr. Mark C. Paulk
Office: ECSS 3.610
Phone: (972) 883-4839
e-mail: Mark.Paulk@utdallas.edu
Office hours: Fridays 1:30-2:30 or by appointment

Course Pre-requisites, Co-requisites, and/or Other Restrictions

CE/CS 2336 (Computer Science II)
CS 3333 (Data Structures)
CE/TE 3307 or CS 2305 (Discrete Mathematics for Computing I)
Pre- or co-requisite: ECS 3390 (Professional and Technical Communication)

Course Description

Introduction to software life cycle models. Software requirements engineering, formal specification and validation. Techniques for software design and testing. Cost estimation models. Issues in software quality assurance and software maintenance.

Student Learning Objectives/Outcomes

1. Ability to understand software lifecycle development models.
 2. Ability to understand and apply software requirements engineering techniques.
 3. Ability to understand and apply software design principles.
 4. Ability to understand and apply software testing techniques.
 5. Ability to understand the use of metrics in software engineering.
 6. Ability to understand formal methods in software development.
 7. Ability to establish and participate in an ethical software development team.
 8. Ability to use software project management tools and techniques.
 9. Ability to use CASE tools for software development.
-

Required Textbooks and Materials

None.

Suggested Course Materials

- R. Pressman, Software Engineering: A Practitioner's Approach, Seventh Edition, 2009.
 - F.P. Brooks, Jr., The Design of Design, 2010.
 - C. Larman, Applying UML and Patterns, Third Edition, 2005.
-

Assignments & Academic Calendar

| Class Date | Topics, Reading Assignments, Due Dates, Exam Dates |
|-------------|---|
| Mon, Jan 14 | Introduction. People issues. Pressman chapter 1. |
| Wed, Jan 16 | People issues. |
| Mon, Jan 21 | MLK Day. No class. |
| Wed, Jan 23 | Software development life cycles. Pressman chapter 2. |
| Mon, Jan 28 | Project management. Pressman chapter 24. |
| Wed, Jan 30 | Continued. |
| Mon, Feb 4 | Estimating. Pressman chapter 26. |
| Wed, Feb 6 | Scheduling. Pressman chapter 27. |
| Mon, Feb 11 | Agile methods. Pressman chapter 3. |
| Wed, Feb 13 | Continued. |
| Mon, Feb 18 | Risk management. Pressman chapter 28. |
| Wed, Feb 20 | Maintenance. Pressman chapter 29. |
| Mon, Feb 25 | Requirements. Pressman chapters 4-5. |
| Wed, Feb 27 | Pressman chapters 6-7. |
| Mon, Mar 4 | Review for midterm. |
| Wed, Mar 6 | Midterm Exam. |
| Mon, Mar 11 | Spring Break. No classes. |
| Wed, Mar 13 | Spring Break. No classes. |
| Mon, Mar 18 | Design. Pressman chapters 8-9. |
| Wed, Mar 20 | Pressman chapters 10-13. |
| Mon, Mar 25 | Testing. Pressman chapters 17-18. |
| Wed, Mar 27 | Pressman chapters 19-20. |

| Class Date | Topics, Reading Assignments, Due Dates, Exam Dates |
|-------------------|---|
| Mon, Apr 1 | Peer reviews. Pressman chapter 14-15. |
| Wed, Apr 3 | Software CMM and CMMI readings. IEEE 1028. |
| Mon, Apr 8 | Formal methods. Pressman chapter 21. |
| Wed, Apr 10 | Continued. |
| Mon, Apr 15 | QA. Pressman chapter 16. |
| Wed, Apr 17 | Software CMM and CMMI readings. |
| Mon, Apr 22 | CM. Pressman chapter 22. |
| Wed, Apr 24 | Continued. |
| Mon, Apr 29 | Measurement. Pressman chapters 23, 25. |
| Wed, May 1 | Review for final. |
| Fri, May 10 | Final Exam in JSOM 1.110 at 1400-1645. |

Grading Policy

Homework: 40%

Midterm Exam: 30%

Final Exam: 30%

The final exam will not be cumulative.

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. All assignments are due by the beginning of class on the day due.
4. Late work will be assessed a penalty of 10% per (partial) day.
5. If a member of a project team is not contributing to the team's work, the team may notify me in writing as to the circumstances. The student will be given a chance to participate; at the end of that period if there is no improvement, the student will be removed from the team and given a zero (0) for the project.
6. Assignments should be submitted through e-learning.
7. You are expected to attend class.
8. Cell phones shall not be used in the classroom during sessions. If you are expecting an emergency you may place them on silent. If you receive a call, leave the room.
9. Taping is not allowed.
10. Exams are closed book; no laptops; no calculators; a one-page (front and back) set of notes may be used.

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.