CS 550: Introduction to Software Engineering

Spring 2016

Instructor	Prof. Sungwon Kang
	sungwon.kang@kaist.ac.kr (Office: E3-1, Room 1429)
Class Hours	Tuesday, Thursday: 1:00 - 2:30
Prerequisites	Programming Experience
Classroom	E3-1, 3445
Office Hours	Tuesday: 4:00 - 6:00 pm
Couse Website	http://edu3.kaist.ac.kr/_HTML/index.php
	(Hard copy handouts are provided for the first class only.)
TAs	TBA
	(Office: E3-1, Room 1432, Tel. 7712)
Textbooks	[Pressman 14] Roger S. Pressman, *Software Engineering: A Practitioner's Approach*, 8th Ed., McGraw Hill, 2014.
Supplementary Textbooks	[Sommerville 15] Ian Sommerville, *Software Engineering*, 10th Ed., Addison-Wesley, May 2015. [Fox 14] Armando Fox, David Patterson, *Engineering Software As a Service*, Strawberry Canyon LLC, 2014.

Grading Policy:

Homeworks	Individual Study	Exam	Project(Team)	Instructor discretion
20%	10%	25%	40%	5%

Note 1) Instructor discretion: participation in/out of class, overall level of effort, peer evaluation

Note 2) Peer Evaluation will be performed.

Objectives

This course is a graduate-level introductory course on the fundamental concepts and principles of software engineering. This course is designed to provide students with all aspects of software development from the requirements specification to the maintenance of a software system. It also includes software development processes as well as all the activities such as project management, supporting tools, and other supporting theories. Students work as teams to do projects to get hands-on experience of software engineering and to apply what they learned in class.

Course Structure

- Overview
- Requirements
- Process
- Plan
- Design
- Testing & Implementation
- Management & Maintenance

Spring 2016 Course Schedule (Subject to Change!)

Week	Topics	Readings/Homeworks	Docs
1 Mar 4	Course Outline Ch1 - The Nature of Software Ch2 - Software Engineering		
2 Mar 8	Ch8- Understanding Requirements Ch9 - Requirements Modeling - Scenario		SRS
	Ch10- Requirements Modeling - Class Ch11- Requirements Modeling- Behavior		
3 Mar 15	Ch3 - Software Process Structure Ch4 - Process Models		
	Ch5- Agile Development Ch6-Human Aspects of SE Ch7 - Principles that Guide Practice	Proposal	
4 Mar 22	Ch33 -Estimation for Software Projects		Plan
	Ch34 - Project Scheduling		
5 Mar 29	Ch19 - Quality Concepts		Design
	Ch12 - Design Concepts		
6 Apr 5	Ch13 - Architecture Design		
	Ch14 - Component-Level Design		
7 Apr 12	Ch15 -User Interface Design		
	Ch18 - Mobile App Design		
8 Arp 19	Project Presentation 1 (MOSP)	Requirements and Design	
9 Arp 26	Midterm Exam		
10 May 3	Ch20 - Review Techniques		Testing & Impl.
11 Mar 10	Ch21 - Software Quality Assurance		
	Ch22 - Software Testing Strategies		
12 Mar 17	Ch23 - Testing Conventaionl Applications		
	Ch26 - Testing Mobile Apps		M&M
13 May 24	Ch27 - Security Engineering		
	Ch 29 - Software Configuration Management		
	Ch 30 - Product Metrics		
14 May 31	Ch31 - Project Management Concepts		
	Ch32 - Process and Project Metrics		
15 Jun 7	Individual Study Presentation		
	Project Presentation 2 (EOSP)	(Peer Evaluation)	
16 Jun 14	Final Exam		

- Homework should be submitted to the TA by email by 12:00 midnight of the due date.

Project Deliverables

- Should produce the following documents:
  1) Project Proposal (5%)
  2) Project Plan (10 %)
  3) Requirements Specification (15%)
  4) Design Document (20%)
  5) Quality Assurance Document(10 %)
  6) MOSP presentation (10 %)
  7) EOSP presentation (30 %)-Includes implementation and demo