

CE/CS/SE 3354

Software Engineering

Instructor

- Instructor: Dr. Shiyi Wei
- Office: ECSS 2.702
- Email: swei@utdallas.edu

Background



Research Interests

- ◎ Software tools
 - program analysis & testing
 - web & mobile applications
- ◎ Software security
- ◎ Programming languages

Hours

- ◎ Class meetings:
 - MW 11:30am – 12:45pm
 - ECSN 2.120
- ◎ Office hours:
 - MW 2:00pm - 3:00pm
 - ECSS 2.702 (enter from Office of Undergraduate Advising)
- ◎ TA:TBA

Week 1&2: 5-min meetings during office hours

Required Course Textbooks

Recommended Course Textbooks

- Ian Sommerville, “Software Engineering”, 10th Edition, Addison-Wesley, 2016.
- Pressman, “Software Engineering: A Practitioner’s Approach”, 8th Edition, McGraw Hill, 2014.
- D.C. Kung, Object-Oriented Software Engineering: An Agile Unified Methodology, 2014

Grading

- Quizzes 8%
- Homework: 12%
- Project: 30%
- Exam 1: 25% (Oct 4, tentatively)
- Exam 2: 25%

Quizzes

- ◎ 5 quizzes
 - typically true/false, multiple-choice questions
- ◎ In class, not announced in advance
- ◎ Lowest grade dropped
- ◎ No makeup quizzes

Homework

- ◎ 2 homework assignments
 - typically about a week until due
- ◎ Individual work
- ◎ Submitted up to 24 hours late for a 30% penalty

Project

The way to learn software engineering is to go out there and do software engineering.

-- Fred Brooks

- ◎ 3-4 members per team
 - use eLearning forum to find teammates
 - instructor makes final team assignment decision
- ◎ Go through the software development cycle

Exams

- ◎ Multiple-choice, true/false, fill-in-the-blank and discussion questions
 - concise answers for discussion questions
- ◎ Problems similar to homework assignments
- ◎ Makeup exams may be scheduled
 - must contact the instructor in advance to discuss the circumstances

Resources & Policies

- ◎ eLearning.utdallas.edu
 - announcements, assignments, discussion, etc.
- ◎ Classroom behavior
 - laptop usage discouraged
- ◎ Attendance policy
 - <http://cs.utdallas.edu/education/undergraduate/attendance-policy/>
- ◎ Code of conduct
 - <https://policy.utdallas.edu/utdsp5003>

Questions?

Attributes of Quality Software

- ◎ Dependability
 - reliability, security, and safety
- ◎ Efficiency
 - processing time, memory utilization, responsiveness,
- ◎ Usability
 - appropriate user interface and adequate documentation
- ◎ Maintainability
 - ease of change

Goal: Produce Quality Software

Produce Quality Software (CE/CS/SE 3354 Course Topics)

- Software development process
- Software requirements engineering
- Architecture & design patterns
- Implementation, coding styles, & tools
- Software testing & debugging
- Software refactoring
- Software management

CE/CS/SE 3354 Learning Outcomes

- ◎ Ability to
 - understand software lifecycle development models
 - understand and apply software requirements engineering techniques
 - understand and apply software design principles
 - understand and apply software testing techniques
 - understand the use of metrics in software engineering
 - understand formal methods in software development
 - establish and participate in an ethical software development team
 - understand software project management
 - understand CASE tools for software development