Elements of Software Engineering (CS 300)
Ref. No: 40815
Winter 2022

Course Objective

- To study techniques for software development from problem specification through design, implementation, testing, and maintenance

Class Homepage

- http://web.cecs.pdx.edu/~xie/cs300-w22/cs300-w22.htm

Instructor

- **Prof.** Fei Xie
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Office Hours

- By appointment

Prerequisites:

- Programming skills (CS 161, 162, 163, and 202) in a high-level programming language

Meeting Time and Location

- T/Th 12-1:50PM, Remote

Textbooks

- **Required:** Engineering Software Products: An Introduction to Modern Software Engineering (1st Edition) by Ian Sommerville, Pearson

Grading

- **Exams**: 40%
  - In-class Exam on Mar. 10.
- **Term project**: 40%
  - The term project will be an individual software development project.
  - The term project will be announced in Jan. 18.
  - Due Days:
    - Feature Document Due: Jan. 25
    - Architecture Document Due: Feb. 15
    - Test Plan Due: Mar. 8
    - Project Report and Final Deliverables: Mar. 13

- **Homework assignments**: 15%
- **Class participation and popup quizzes**: 5%
  - o Popup quizzes may be given at the beginning or the end of each lecture.

Homework Policies

- **Submission Policy**
  - o Each assignment must be submitted electronically on Canvas by 12pm on due day.
- **Late Policy**
  - o Extension is only given due to illness and other hardships.

Class Schedules

	Dates	Topics	Readings
Week 1	Jan. 4	Software Product	Chapter 1
	Jan. 6		
Week 2	Jan. 11	Agile Software Engineering	Chapter 2
	Jan. 13		
Week 3	Jan. 18	Features, Scenarios, and Stories	Chapter 3
	Jan. 20		
Week 4	Jan. 25	Software Architecture	Chapter 4
	Jan. 27		
Week 5	Feb. 1	Cloud-Based Software	Chapter 5
	Feb. 3		
Week 6	Feb. 8	Microservices Architecture	Chapter 6
	Feb. 10		
Week 7	Feb. 15	Security and Privacy	Chapter 7
	Feb. 17		
Week 8	Feb. 22	Reliable Programming	Chapter 8
	Feb. 24		
Week 9	Mar. 1	Testing	Chapter 9
	Mar. 3		
Week 10	Mar. 8	Devops and Code Management	Chapter 10
	Mar. 10	**In-class Exam**	N/A

(This schedule is subject to changes according to the need of the class. All suggested readings are from the required textbook, Engineering Software Products: An Introduction to Modern Software Engineering (1st Edition) by Ian Sommerville.)

Academic Integrity

- Academic misconducts will be handled according to the rules of the Department of Computer Science, Maseeh College of Engineering and Computer Science, and Portland State University.