2309 SE250 Course Outline

Subject Code	:	**SE250**
Subject Title	:	Software Engineering
Course Type	:	Compulsory
Level	:	3
Credits	:	3
Teaching Activity	:	Lecture 45 hours
Prior Knowledge*	:	SE240 Data Base System, SE111 Object-Oriented Programming
Class Schedule	:	

Class	Week	Time	Classroom	Date
D1	THU	12:00-15:20	C408	2023/09/04-2023/12/17

Instructor	:	Tao Zhang
Contact Number	:	(853) 88973009
E-mail Address	:	tazhang@must.edu.mo
Office	:	A321
Office Hour	:	Monday (9:00 - 11:00) Tuesday (9:00 - 11:00) Wednesday (14:30 - 17:30) Thursday (9:00 - 12:00)

Course Description

This subject aims to introduce theories, methods, technologies and general practices for large-scale software development. It covers the software life cycle, software processes, requirements engineering, system modelling, software design, implementation, software testing, maintenance, object-oriented software engineering, software project management, software reuse, computer aided software engineering and reversed engineering.

Textbook(s)

Book Name: Object-Oriented Software Engineering
Author/Editor: Timothy C. Lethbridge and Robert Laganière
Edition: Second Edition
ISBN: 007124770X
Publisher: McGraw Hill
Date: 2001

INTENDED LEARNING OUTCOMES

Upon successful completion of this subject, students will be able to:

1. Understand the concepts and principles of software engineering
2. Analyze OO and process oriented approaches in software development

3. Ability to conduct a literature survey in software engineering
4. Ability to define the software problems
5. Ability to generate solutions to develop software for applications
6. Design and implement a chosen solution by the way of software engineering.

- **Schedule**

Week	Topic	Hours	Teaching Method
1	Overview of Software Engineering	1.5	lecture
	Overview of Software Engineering	1.5	lecture
2	Software Processes: software life cycle, Process models	1.5	lecture
	Software Processes: software life cycle, Process models	1.5	lecture
3	Prototyping	1.5	lecture
	Prototyping	1.5	lecture
4	Software Qualities	1.5	lecture
	Software Qualities	1.5	lecture
5	Cost Estimation	1.5	lecture
	Cost Estimation	1.5	lecture
6	Requirements and Modelling specification	1.5	lecture
	Requirements and Modelling specification	1.5	lecture
7	OO modelling: Class modelling	1.5	lecture
	OO modelling: Class modelling	1.5	lecture
8	Methods to Gather Software Requirements	1.5	lecture
	Methods to Gather Software Requirements	1.5	lecture
9	Software Design, Design Principles	1.5	lecture
	Software Design, Design Principles	1.5	lecture
10	User Interface Design	1.5	lecture
	User Interface Design	1.5	lecture
11	Software Testing: Testing principles, Test case, testing steps	1.5	lecture
	Software Testing: Testing principles, Test case, testing steps	1.5	lecture
12	Managing Software Project: People management, Project planning, Scheduling and tracking, Risk Management, Software Configuration Management	1.5	lecture
	Cutting-edge topics in software engineering	1.5	lecture
13	Paper Presentation & Discussion	1.5	lecture
	Paper Presentation & Discussion	1.5	lecture
14	Paper Presentation & Discussion	1.5	lecture
	Paper Presentation & Discussion	1.5	lecture

15	Review	1.5	lecture
	Review	1.5	lecture

- **ASSESSMENT APPROACH**

Assessment method	% weight
1. Attendance (Class participation)	**10%**
2. Assignment	**20%**
3. Paper Presentation	**20%**
5. Final exam	**50%**
Total	**100 %**

Guideline for Letter Grade:

Marks	Grade
93-100	A+
88-92	A
83-87	A-
78-82	B+
72-77	B
68-71	B-
63-67	C+
58-62	C
53-57	C-
50-52	D
0-49	F
Marks	Grade

Notes:
Students will be assessed on several assessment items (i.e. attendance, assignments, paper presentation and the final exam.).
The attendance evaluates the student's participation of discussion in the classes.
The final exam evaluates the student's understanding of the concepts of software engineering.

The paper presentation is used to evaluate the student's ability to study the cutting-edge software engineering research topics.