Tamkang University Academic Year 110, 1st Semester Course Syllabus

Course Title	SOFTWARE ENGINEERING	Instructor	FENG-CHENG CHANG
Course Class	TEIDB4A DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING (ENGLISH-TAUGHT PROGRAM)SCIENCE AND	Details	◆ General Course ◆ Required ◆ One Semester
Relevance to SDGs	INFORMATION ENGINEERING, 4A SDG4 Quality education		

Departmental Aim of Education

Ⅰ. Comprehend professional knowledge.

Ⅱ. Acquire mastery of Practical Skills.

Ⅲ. Establish creative achievement.

Subject Departmental core competences

A. Programming and application ability.(ratio:20.00)

C. Implementing computer systems ability.(ratio:70.00)

E. Professional skills for information technology (IT) industry.(ratio:10.00)

Subject Schoolwide essential virtues

2. Information literacy. (ratio:60.00)

5. Independent thinking. (ratio:20.00)

7. A spirit of teamwork and dedication. (ratio:20.00)

Course Introduction	Combining the fundamental knowledge of information systems and the experiences of programming, learn how to develop high quality software by engineering approaches. Due to the diversity of program development capability, the actual learning schedule of each student is different. The listed topics are for reference. Note that this course comes with extra 18 service-learning hours.

The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.

Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.

Ⅰ. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of the course's veracity, conception, procedures, outcomes, etc.

Ⅱ.Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal, morals, attitude, conviction, values, etc.

Ⅲ.Psychomotor: Emphasis upon the study of the course's physical activity and technical manipulation.

No.	Teaching Objectives	objective methods
1	Learn what is software engineering	Cognitive
2	Learn the related software engineering methodologies and tools	Psychomotor
3	Develop software by a certain process, including the analysis/design techniques	Psychomotor

The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ACE	25	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online)
2	ACE	27	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online)
3	ACE	257	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online)

Course Schedule

Week	Date	Course Contents	Note
1	110/09/22 ~ 110/09/28	Introduction	
2	110/09/29 ~ 110/10/05	Software Life Cycle	
3	110/10/06 ~ 110/10/12	Software Development Process	
4	110/10/13 ~ 110/10/19	Software Modeling	
5	110/10/20 ~ 110/10/26	Requirement Analysis	
6	110/10/27 ~ 110/11/02	Object Oriented Analysis	

7	110/11/03～110/11/09	Object Oriented Design	
8	110/11/10～110/11/16	Design Patterns (1)	
9	110/11/17～110/11/23	Midterm Exam Week	
10	110/11/24～110/11/30	Design Patterns (2)	
11	110/12/01～110/12/07	Design Patterns (3)	
12	110/12/08～110/12/14	Implementation Techniques (1)	
13	110/12/15～110/12/21	Implementation Techniques (2)	
14	110/12/22～110/12/28	Implementation Techniques (3)	
15	110/12/29～111/01/04	Case Study (1)	
16	111/01/05～111/01/11	Case Study (2)	
17	111/01/12～111/01/18	Case Study (3) and Final Evaluation	
18	111/01/19～111/01/25	Supplementary Topics	

Requirement	The assignments include homework and quizzes/exams. There is no make-up assignment if you miss it without a reason.
Teaching Facility	Computer, Projector
Textbooks and Teaching Materials	R. S. Pressman, Software Engineering: A Practitioner's Approach, 7th Ed., International Edition 2010, McGraw-Hill. I. Sommerville, Software Engineering, 9th Ed., International Edition, 2011, Pearson.
References	D. A. Gustafson, Schaum's Outline of Theory and Problems of Software Engineering, McGraw-Hill, 2002. E. Gamma et al., Design Patterns: Elements of Reusable Object-Oriented Software, Addison Wesley Longman, Inc., 1994.
Number of Assignment(s)	6 (Filled in by assignment instructor only)
Grading Policy	◆ Attendance： % ◆ Mark of Usual：60.0 % ◆ Midterm Exam： 15.0 % ◆ Final Exam： 15.0 % ◆ Other〈service learning〉：10.0 %
Note	This syllabus may be uploaded at the website of Course Syllabus Management System at http://info.ais.tku.edu.tw/csp or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at http://www.acad.tku.edu.tw/CS/main.php . **※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.**