Tamkang University Academic Year 102, 2nd Semester Course Syllabus

Course Title	PRACTICE OF OPEN SOURCE SOFTWARE	Instructor	FENG-CHENG CHANG
Course Class	TPIAB2A DIVISION OF SOFTWARE ENGINEERING, DEPARTMENT OF INNOVATIVE INFORMATION AND TECHNOLOGY, 2A	Details	◆ Selective ◆ One Semester ◆ 3 Credits

Departmental Aim of Education

Cultivate professional talents in software engineering and communication technology.

Departmental core competences

A. Capability of computer program coding, process planning, and problem solving.

B. Capability of applying basic mathematics and information technology related mathematics.

C. Capability of applying knowledge of internet structure and protocol in communication system.

D. Capability of data collecting and analyzing, and organizing software and hardware.

E. Capability of understanding and integrating system structure for problem solving.

F. Capability of system analyzing, modeling, and designing.

G. Capability of management utilizing information technology system.

Course Introduction	There has been a few sucess stories since the initiation of the open-source concepts. For example, GNU/Linux and FreeBSD are two distinguished operating systems; OpenOffice.org is a production-grade office suite. These software packages has been developed by volunteers from all over the world, colaboratively. To support such kind of development model, they implicitly incorporate many tools and concepts from various software engineering methodologies. They are so important that we can study the important elements by practical cases.

The Relevance among Teaching Objectives, Objective Levels and Departmental core competences

I.Objective Levels (select applicable ones) :
 (i) Cognitive Domain : C1-Remembering,   C2-Understanding,   C3-Applying,
                       C4-Analyzing,   C5-Evaluating,   C6-Creating
 (ii) Psychomotor Domain : P1-Imitation,   P2-Mechanism,   P3-Independent Operation,
                       P4-Linked Operation, P5-Automation, P6-Origination
 (iii) Affective Domain : A1-Receiving,   A2-Responding,   A3-Valuing,
                       A4-Organizing,   A5-Charaterizing,   A6-Implementing

II.The Relevance among Teaching Objectives, Objective Levels and Departmental core competences :
 (i) Determine the objective level(s) in any one of the three learning domains (cognitive, psychomotor, and affective) corresponding to the teaching objective. Each objective should correspond to the objective level(s) of ONLY ONE of the three domains.
 (ii) If more than one objective levels are applicable for each learning domain, select the highest one only. (For example, if the objective levels for Cognitive Domain include C3,C5,and C6, select C6 only and fill it in the boxes below. The same rule applies to Psychomotor Domain and Affective Domain.)
 (iii) Determine the Departmental core competences that correspond to each teaching objective. Each objective may correspond to one or more Departmental core competences at a time. (For example, if one objective corresponds to three Departmental core competences: A,AD, and BEF, list all of the three in the box.)

No.	Teaching Objectives	Relevance	
		Objective Levels	Departmental core competences
1	Understand the open-source development model	C4	AEG
2	Install the platforms and tools for collaborative work	P3	EG
3	Learn the popular development tools for open-source software	P3	AC
4	The techniques for developing cross-platform software	P6	ACEG

Teaching Objectives, Teaching Methods and Assessment

No.	Teaching Objectives	Teaching Methods	Assessment
1	Understand the open-source development model	Lecture, Discussion	Written test, Report
2	Install the platforms and tools for collaborative work	Lecture, Practicum	Written test, Practicum
3	Learn the popular development tools for open-source software	Lecture, Practicum	Written test, Practicum
4	The techniques for developing cross-platform software	Lecture, Discussion, Practicum	Written test, Practicum, Report

This course has been designed to cultivate the following essential qualities in TKU students	
Essential Qualities of TKU Students	Description
◇ A global perspective	Helping students develop a broader perspective from which to understand international affairs and global development.
◆ Information literacy	Becoming adept at using information technology and learning the proper way to process information.
◆ A vision for the future	Understanding self-growth, social change, and technological development so as to gain the skills necessary to bring about one's future vision.
◇ Moral integrity	Learning how to interact with others, practicing empathy and caring for others, and constructing moral principles with which to solve ethical problems.
◆ Independent thinking	Encouraging students to keenly observe and seek out the source of their problems, and to think logically and critically.
◇ A cheerful attitude and healthy lifestyle	Raising an awareness of the fine balance between one's body and soul and the environment; helping students live a meaningful life.
◇ A spirit of teamwork and dedication	Improving one's ability to communicate and cooperate so as to integrate resources, collaborate with others, and solve problems.
◇ A sense of aesthetic appreciation	Equipping students with the ability to sense and appreciate aesthetic beauty, to express themselves clearly, and to enjoy the creative process.

Course Schedule

Week	Date	Subject/Topics	Note
1	103/02/17 ~ 103/02/23	Linux installation and setup (1)	
2	103/02/24 ~ 103/03/02	Linux installation and setup (2)	
3	103/03/03 ~ 103/03/09	Linux commands	
4	103/03/10 ~ 103/03/16	Commands and Shell Scripts	
5	103/03/17 ~ 103/03/23	X Window and Desktop Environments	
6	103/03/24 ~ 103/03/30	Apache Web Server	
7	103/03/31 ~ 103/04/06	MySQL and PostgreSQL	
8	103/04/07 ~ 103/04/13	Web-based Applications (1)	
9	103/04/14 ~ 103/04/20	Web-based Applications (2)	
10	103/04/21 ~ 103/04/27	Midterm Exam Week	
11	103/04/28 ~ 103/05/04	C/C++/Java Command-line Development Tools	
12	103/05/05 ~ 103/05/11	Integrated Development Tools	

13	103/05/12～103/05/18	Makefile	
14	103/05/19～103/05/25	Version Control	
15	103/05/26～103/06/01	Collaborative Development Platforms	
16	103/06/02～103/06/08	Collaborative Development Platforms	
17	103/06/09～103/06/15	Cross-platform Techiniques	
18	103/06/16～103/06/22	Final Exam Week	

Requirement	1. 期中考無故缺席者學期成績扣十分（期末考亦同）。 2. 無正當理由不得補考及補交作業。 3. 出席率不計入學科專業成績計算，但請注意未符合蘭陽校園規定之出席標準者，校園將逕行扣考，導致本科零分計算。
Teaching Facility	Computer, Projector
Textbook(s)	Due to the fast evolving of open-source software, we will mostly use the class notes and the on-line resources as our material
Reference(s)	
Number of Assignment(s)	**6**　(Filled in by assignment instructor only)
Grading Policy	◆ Attendance：　　　% ◆ Mark of Usual：40.0 % ◆ Midterm Exam： 30.0 % ◆ Final Exam： 30.0 % ◆ Other〈　〉：　　%
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.**