Tamkang University Academic Year 113, 1st Semester Course Syllabus

Course Title	NETWORK-BASED APPLICATION DESIGN	Instructor	FENG-CHENG CHANG
Course Class	TEIDB3A DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING (ENGLISH-TAUGHT PROGRAM), 3A	Details	◆ General Course ◆ Selective ◆ One Semester ◆ 3 Credits
Relevance to SDGs	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:10.00)

B. Mathematical reasoning ability.(ratio:10.00)

C. Implementing computer systems ability.(ratio:30.00)

D. Computer networking application skills.(ratio:30.00)

E. Professional skills for information technology (IT) industry.(ratio:20.00)

Subject Schoolwide essential virtues

1. A global perspective. (ratio:10.00)

2. Information literacy. (ratio:30.00)

3. A vision for the future. (ratio:10.00)

4. Moral integrity. (ratio:20.00)

5. Independent thinking. (ratio:15.00)

6. A cheerful attitude and healthy lifestyle. (ratio:5.00)

7. A spirit of teamwork and dedication. (ratio:5.00)

8. A sense of aesthetic appreciation. (ratio:5.00)

Course Introduction	The prerequisites are the fundamental web application concepts and development experiences. We will use the following specific technology to develop the projects in his course: * learn how to write simple Node.js web services * learn how to extend and/or integrate developed web frameworks to construct a specific application * learn how to develop simple Android applications to interact with services

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	Javascript language	Psychomotor
2	Concepts of web application architecture	Cognitive
3	Integrate and implement the extensions of a web framework	Psychomotor
4	Develop Android applications	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCDE	12345678	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online)
2	ABCDE	12345678	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online)
3	ABCDE	12345678	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online)

4	ABCDE	12345678	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online)

Course Schedule

Week	Date	Course Contents	Note
1	113/09/09 ~ 113/09/15	Course Overview and Introduction	
2	113/09/16 ~ 113/09/22	Review: Web Application Architecture & Client-side JavaScript	
3	113/09/23 ~ 113/09/29	Server-side JavaScript and Node.js (1)	
4	113/09/30 ~ 113/10/06	Server-side JavaScript and Node.js (2)	
5	113/10/07 ~ 113/10/13	Node.js Web Application Framework - Express (1)	
6	113/10/14 ~ 113/10/20	Node.js Web Application Framework - Express (2)	
7	113/10/21 ~ 113/10/27	Electron	
8	113/10/28 ~ 113/11/03	Project: Web Service and Electron Application	
9	113/11/04 ~ 113/11/10	Midterm Exam Week	
10	113/11/11 ~ 113/11/17	Project: Web Service and Electron Application	
11	113/11/18 ~ 113/11/24	Simple Android Application Development with AndroidStudio	
12	113/11/25 ~ 113/12/01	Multi-page Application and Multi-lingual Support	
13	113/12/02 ~ 113/12/08	Integration of Android-based application and Node.js based Services (1)	
14	113/12/09 ~ 113/12/15	Integration of Android-based application and Node.js based Services (2)	
15	113/12/16 ~ 113/12/22	Considerations on Multi-type Clients and Web Services	
16	113/12/23 ~ 113/12/29	Project: Multi-type Client Web Applications	
17	113/12/30 ~ 114/01/05	Final Exam Week	
18	114/01/06 ~ 114/01/12	Flex week, learning activities should be arranged.	MSTeams sessions for supplementary topics

Key capabilities	Information Technology Problem solving

Interdisciplinary	
Distinctive teaching	
Course Content	Computer programming or Computer language (students have hands-on experience in related projects) Logical Thinking
Requirement	The assignments include homework, projects, and quizzes/exams. There is no make-up assignment if you miss it without a reason.
Textbooks and Teaching Materials	Self-made teaching materials:Presentations, Handouts, Videos Using teaching materials from other writers:Presentations, Handouts, Videos, Tutorial websites
References	
Grading Policy	◆ Attendance： % ◆ Mark of Usual：10.0 % ◆ Midterm Exam： 15.0 % ◆ Final Exam： 15.0 % ◆ Other〈assignents〉：60.0 %
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.**