Tamkang University Academic Year 111, 2nd Semester Course Syllabus

Course Title	INTRODUCTION TO INTERNET OF THINGS	Instructor	FU-YI HUNG
Course Class	TEIDB2A DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING (ENGLISH-TAUGHT PROGRAM), 2A	Details	◆ General Course ◆ Selective ◆ One Semester
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:15.00)

B. Mathematical reasoning ability.(ratio:15.00)

C. Implementing computer systems ability.(ratio:15.00)

D. Computer networking application skills.(ratio:40.00)

E. Professional skills for information technology (IT) industry.(ratio:15.00)

Subject Schoolwide essential virtues

1. A global perspective. (ratio:10.00)

2. Information literacy. (ratio:20.00)

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

4. Moral integrity. (ratio:10.00)

5. Independent thinking. (ratio:10.00)

6. A cheerful attitude and healthy lifestyle. (ratio:10.00)

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

8. A sense of aesthetic appreciation. (ratio:10.00)

	Course Introduction	This course provides the basic principles and practice of Internet of Things (IoTs). It includes 3 main parts. Part I covers the building blocks of IoTs and their characteristics. Part II introduces the programming aspects of IoTs with a view towards rapid prototyping of complex IoT applications. Part III introduces some advanced topics on IoT including IoT data analytics and Tools for IoT.

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	Students can understand the fundamental principles and architecture of IoT system	Cognitive
2	Students can understand the main data collection, transmission, storage and analysis tools for the IoTs	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, Discussion(including classroom and online), Report(including oral and written)
2	ABCDE	12345678	Lecture, Discussion	Testing, Discussion(including classroom and online), Report(including oral and written)

Course Schedule			
Week	Date	Course Contents	Note
1	112/02/13 ~ 112/02/19	Introduction	

2	112/02/20～112/02/26	IoT Architecture	
3	112/02/27～112/03/05	IoT Architecture	
4	112/03/06～112/03/12	IoT - Device Layer	
5	112/03/13～112/03/19	IoT - Device Layer	
6	112/03/20～112/03/26	IoT - Device Layer	
7	112/03/27～112/04/02	IoT - Network Layer	
8	112/04/03～112/04/09	IoT - Network Layer	
9	112/04/10～112/04/16	IoT - Network Layer	
10	112/04/17～112/04/23	Midterm Exam Week	
11	112/04/24～112/04/30	IoT - Application Layer	
12	112/05/01～112/05/07	IoT - Application Layer	
13	112/05/08～112/05/14	Data Analytics for IoT	
14	112/05/15～112/05/21	Data Analytics for IoT	
15	112/05/22～112/05/28	Case Studies	
16	112/05/29～112/06/04	Case Studies	
17	112/06/05～112/06/11	Case Studies	
18	112/06/12～112/06/18	Final Exam Week	

Requirement	
Teaching Facility	Computer, Projector
Textbooks and Teaching Materials	Internet of Things: A Hands-on Approach, Arshdeep Bahga and Vijay Madisetti, Hands On Books Series, August 2014.
References	

Number of Assignment(s)	(Filled in by assignment instructor only)
Grading Policy	◆ Attendance： 15.0 % ◆ Mark of Usual：20.0 % ◆ Midterm Exam： 25.0 % ◆ Final Exam： 25.0 % ◆ Other〈Project〉：15.0 %
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.**