Tamkang University Academic Year 108, 1st Semester Course Syllabus

Course Title	WIRELESS LOCAL AREA NETWORKS	Instructor	KUEI-PING SHIH
Course Class	TEIBM1A MASTER'S PROGRAM, DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING (ENGLISH-TAUGHT PROGRAM), 1A	Details	◆ General Course ◆ Selective ◆ One Semester

Departmental Aim of Education

Ⅰ. Cultivate the ability to conduct independent research and problem solving.

Ⅱ. Strengthen creativity and research capacity.

Ⅲ. Build profound professional knowledge in computer science and information engineering.

Ⅳ. Engage in self-directed lifelong learning.

Subject Departmental core competences

D. Research & development (R&D) ability in information engineering.(ratio:100.00)

Subject Schoolwide essential virtues

2. Information literacy. (ratio:100.00)

Course Introduction	This course is mainly targeted at graduate-level students, at academic and industrial researchers working in the field, and also at engineering developing actual solutions for wireless LANs. This course contains basic concepts of wireless LANs, the protocol stack of wireless LANs, and challenges of wireless LANs, and so on. Moreover, the students can realize the state-of-the-art technology via literature survey, paper presentation and discussions.

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	Realize the operations of WLANs.	Cognitive
2	Realize the challenges and possible solutions in operations of wireless LANs.	Cognitive
3	Cultivate the capabilities of independent thinking and investigation.	Cognitive
4	Increase English reading and writing capabilities.	Psychomotor
5	Increase the capabilities of oral presentation and defense.	Psychomotor

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	D	2	Lecture, Discussion	Discussion(including classroom and online), Report(including oral and written), Activity Participation
2	D	2	Lecture, Discussion	Discussion(including classroom and online), Report(including oral and written), Activity Participation
3	D	2	Lecture, Discussion	Discussion(including classroom and online), Report(including oral and written), Activity Participation
4	D	2	Lecture, Discussion	Discussion(including classroom and online), Report(including oral and written), Activity Participation

5	D	2	Lecture, Discussion, Practicum	Discussion(including classroom and online), Practicum, Report(including oral and written), Activity Participation

Course Schedule

Week	Date	Course Contents	Note
1	108/09/09 ~ 108/09/15	Introduction to WLANs	
2	108/09/16 ~ 108/09/22	Collision Resolution of IEEE 802.11 DCF	
3	108/09/23 ~ 108/09/29	Priority Scheme of IEEE 802.11 DCF	
4	108/09/30 ~ 108/10/06	Random Backoff Scheme of IEEE 802.11 DCF	
5	108/10/07 ~ 108/10/13	The Operation of IEEE 802.11 PCF	
6	108/10/14 ~ 108/10/20	The Coexistence of PCF and DCF	
7	108/10/21 ~ 108/10/27	IEEE 802.11 Other Issues: Fragmentation and Multirate Support	
8	108/10/28 ~ 108/11/03	Power Saving Schemes in IEEE 802.11 Infrastructure Mode	
9	108/11/04 ~ 108/11/10	Power Saving Scheme in IEEE 802.11 Infrastructure-less Mode	
10	108/11/11 ~ 108/11/17	Midterm Evaluation	
11	108/11/18 ~ 108/11/24	Paper Presentations and Discussions	
12	108/11/25 ~ 108/12/01	Paper Presentations and Discussions	
13	108/12/02 ~ 108/12/08	Paper Presentations and Discussions	
14	108/12/09 ~ 108/12/15	Paper Presentations and Discussions	
15	108/12/16 ~ 108/12/22	Paper Presentations and Discussions	
16	108/12/23 ~ 108/12/29	Paper Presentations and Discussions	
17	108/12/30 ~ 109/01/05	Paper Presentations and Discussions	
18	109/01/06 ~ 109/01/12	Concluding Remarks	

Requirement	

Teaching Facility	Computer, Projector, Other ((Blackboard)
Textbooks and Teaching Materials	Teaching materials are made by the lecturer and will be put on the learning platform.
References	Std 802.11-2012: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications. Institute of Electrical and Electronics Engineers, Inc., 2012. All related IEEE Standards, drafts, forums, and contributions. All related Journal and Conference papers.
Number of Assignment(s)	(Filled in by assignment instructor only)
Grading Policy	◆ Attendance： 10.0 % ◆ Mark of Usual：30.0 % ◆ Midterm Exam： % ◆ Final Exam： % ◆ Other〈Presentation, Report〉：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.**