

Tamkang University Academic Year 108, 2nd Semester Course Syllabus

Course Title	BROADBAND ACCESS NETWORKS	Instructor	LIN, CHI-YI
Course Class	TEIBM1A MASTER'S PROGRAM, DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING (ENGLISH- TAUGHT PROGRAM), 1A	Details	<ul style="list-style-type: none"> ◆ 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			
B. Independent innovative thinking ability.(ratio:20.00) D. Research & development (R&D) ability in information engineering.(ratio:80.00)			
Subject Schoolwide essential virtues			
1. A global perspective. (ratio:20.00) 2. Information literacy. (ratio:80.00)			
Course Introduction	In this course we will first describe the fundamental principles of network technologies such as signal encoding, circuit/packet switching, Ethernet/VLAN, and priorities. Then we will focus on various types of wireline broadband access networks, including DSL, FTTx, and EPON/GPON.		

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 may understand the definition and characteristics of broadband access networks and its importance.	Cognitive
2	Students may learn the development background and technological advances in broadband access networks.	Cognitive
3	Students may understand evolution and trends of telecommunication industry, and develop their ability on technical analysis.	Cognitive
4	Enhancing students' ability of technical English reading and comprehension.	Cognitive
5	Enhancing students' ability of information searching, aggregation, and presentation.	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	BD	12	Lecture	Testing, Report(including oral and written)
2	BD	12	Lecture	Testing, Report(including oral and written)
3	BD	12	Lecture	Testing, Report(including oral and written)
4	BD	12	Lecture	Testing, Report(including oral and written)
5	BD	12	Lecture	Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note
1	109/03/02 ~ 109/03/08	Course Introduction	
2	109/03/09 ~ 109/03/15	Introduction to Telecom Networks (1/2)	

3	109/03/16 ~ 109/03/22	Introduction to Telecom Networks (2/2)	
4	109/03/23 ~ 109/03/29	Signal Fundamentals and Encoding (1/2)	
5	109/03/30 ~ 109/04/05	Signal Fundamentals and Encoding (2/2)	
6	109/04/06 ~ 109/04/12	Circuit Switching and Packet Switching & Network Quality of Service	
7	109/04/13 ~ 109/04/19	Network Quality of Service (1/2)	
8	109/04/20 ~ 109/04/26	Network Quality of Service (2/2)	
9	109/04/27 ~ 109/05/03	Midterm Examination	
10	109/05/04 ~ 109/05/10	QoS in Packet Networks (1/2)	
11	109/05/11 ~ 109/05/17	QoS in Packet Networks (2/2)	
12	109/05/18 ~ 109/05/24	Ethernet and VLAN	
13	109/05/25 ~ 109/05/31	DSL and FTTx	
14	109/06/01 ~ 109/06/07	Passive Optical Networks (1/2)	
15	109/06/08 ~ 109/06/14	Passive Optical Networks (2/2)	
16	109/06/15 ~ 109/06/21	Final Oral Presentation	
17	109/06/22 ~ 109/06/28	Final Examination	
18	109/06/29 ~ 109/07/05	Supplementary teaching: On-line Course	
Requirement	About the final oral presentation, students may select any topics in the field of broadband access networks, and do the presentation in English.		
Teaching Facility	Computer, Projector		
Textbooks and Teaching Materials	Principles of Computer Networks and Communications, Dumas and Schwartz, Pearson, 2009. Broadband Network Architectures, Hellberg et al., Prentice Hall, 2007.		
References	Triple Play, Hens and Caballero, Wiley, 2008.		
Number of Assignment(s)	(Filled in by assignment instructor only)		
Grading Policy	◆ Attendance : 10.0 % ◆ Mark of Usual : % ◆ Midterm Exam : 40.0 % ◆ Final Exam : 30.0 % ◆ Other (Oral Presentation) : 20.0 %		

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>.

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