

Tamkang University Academic Year 111, 1st Semester Course Syllabus

Course Title	NETWORK PROGRAMMING	Instructor	TRAN, HUU KHOA
Course Class	TLMXB3C DEPARTMENT OF INFORMATION MANAGEMENT, 3C	Details	<ul style="list-style-type: none"> ◆ General Course ◆ Required ◆ One Semester
Relevance to SDGs	SDG9 Industry, Innovation, and Infrastructure		
Departmental Aim of Education			
<ul style="list-style-type: none"> I. Refining information management skills. II. Enhancing information technology capabilities. III. Thinking independently with logic analysis. IV. Reinforcing team-working spirit. V. Valuing business and information ethics. VI. Cultivating global view. 			
Subject Departmental core competences			
<ul style="list-style-type: none"> A. Problem analysis and critical thinking.(ratio:5.00) B. Functional business Areas and business practices.(ratio:5.00) C. Applications of information systems.(ratio:5.00) D. Computer programming.(ratio:65.00) E. Network system planning.(ratio:5.00) F. Database design and management.(ratio:5.00) G. Analysis, design and integration of information system.(ratio:5.00) H. Project management.(ratio:5.00) 			
Subject Schoolwide essential virtues			
<ul style="list-style-type: none"> 1. A global perspective. (ratio:5.00) 2. Information literacy. (ratio:30.00) 3. A vision for the future. (ratio:15.00) 4. Moral integrity. (ratio:5.00) 			

- 5. Independent thinking. (ratio:30.00)
- 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

Introduction to the basic principles underlying the various functions of the Internet. Students will learn not only what the Internet is and how it works today, but also why it is designed the way it is and how it is likely to evolve in the future. Topics include the Internet layering architecture, congestion control, switching, routing, scheduling, and information security. The course will involve experiments of protocols commonly used in the Internet.

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	1. Inspiring students interest in learning Information Technology (IT), and cultivating their basic core competence of IT so as to make it reality in daily lives.	Cognitive
2	2 Guiding students IT skills with diverse examples so that they can apply what they have learned in their live and work	Psychomotor
3	3 Keeping abreast of the developments and applications of information communication and technology.	Affective

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment

1	DEFGH	123457	Lecture, Discussion, Practicum	Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written)
2	BCGH	68	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written)
3	ABGH	3568	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online)

Course Schedule

Week	Date	Course Contents	Note
1	111/09/05 ~ 111/09/11	Introduction. Overview and motivation.	
2	111/09/12 ~ 111/09/18	Direct Connection	
3	111/09/19 ~ 111/09/25	Internet Working	
4	111/09/26 ~ 111/10/02	Advanced Internetworking	
5	111/10/03 ~ 111/10/09	End to End Protocols	
6	111/10/10 ~ 111/10/16	Congestion control.	
7	111/10/17 ~ 111/10/23	End to End Data	
8	111/10/24 ~ 111/10/30	Network Security	
9	111/10/31 ~ 111/11/06	Programming language	
10	111/11/07 ~ 111/11/13	Midterm Exam Week	
11	111/11/14 ~ 111/11/20	5G	
12	111/11/21 ~ 111/11/27	Data Frame	
13	111/11/28 ~ 111/12/04	Database	
14	111/12/05 ~ 111/12/11	Hot topics - IoT, NFV and SDN	
15	111/12/12 ~ 111/12/18	Applications	
16	111/12/19 ~ 111/12/25	Project Presentation	
17	111/12/26 ~ 112/01/01	Project Presentation	

18	112/01/02 ~ 112/01/08	Final Exam Week	
Requirement			
Teaching Facility	Computer, Projector		
Textbooks and Teaching Materials	- Computer Networks - A Systems Approach by Peterson and Davie, published by Morgan Kaufmann, 1996. Handouts		
References	- Python programming books		
Number of Assignment(s)	4 (Filled in by assignment instructor only)		
Grading Policy	◆ Attendance : 10.0 % ◆ Mark of Usual : 10.0 % ◆ Midterm Exam : 20.0 % ◆ Final Exam : % ◆ Other (Project presentation) : 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.		