

Tamkang University Academic Year 112, 1st Semester Course Syllabus

Course Title	NETWORK PROGRAMMING	Instructor	TRAN, HUU KHOA
Course Class	TLMXB3B DEPARTMENT OF INFORMATION MANAGEMENT, 3B	Details	♦ General Course ♦ Required ♦ One Semester
Relevance to SDGs	SDG9 Industry, Innovation, and Infrastructure		
D e p a r t m e n t a l A i m o f E d u c a t i o n			
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.			
S u b j e c t D e p a r t m e n t a l c o r e c o m p e t e n c e s			
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)			
S u b j e c t S c h o o l w i d e e s s e n t i a l v i r t u e s			
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	<p>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.</p> <p>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.</p>
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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	112/09/11 ~ 112/09/17	Introduction. Overview and motivation.		
2	112/09/18 ~ 112/09/24	Direct Connection		
3	112/09/25 ~ 112/10/01	Internet Working		
4	112/10/02 ~ 112/10/08	Advanced Internetworking		
5	112/10/09 ~ 112/10/15	End to End Protocols		
6	112/10/16 ~ 112/10/22	Congestion control.		
7	112/10/23 ~ 112/10/29	End to End Data		
8	112/10/30 ~ 112/11/05	Network Security		
9	112/11/06 ~ 112/11/12	Midterm Exam Week		
10	112/11/13 ~ 112/11/19	Programming language		
11	112/11/20 ~ 112/11/26	5G		
12	112/11/27 ~ 112/12/03	Data Frame		
13	112/12/04 ~ 112/12/10	Database		
14	112/12/11 ~ 112/12/17	Hot topics - IoT, NFV and SDN		
15	112/12/18 ~ 112/12/24	Applications		
16	112/12/25 ~ 112/12/31	Project Presentation		
17	113/01/01 ~ 113/01/07	Final Exam Week		

18	113/01/08 ~ 113/01/14	Flex week, learning activities should be arranged.	
Key capabilities	self-directed learning Information Technology Interdisciplinary		
Interdisciplinary	STEAM course (S:Science, T:Technology, E:Engineering, M:Math, A field:Integration of Art and Humanist)		
Distinctive teaching	Industry-university collaboration courses Project implementation course		
Course Content	Computer programming or Computer language (students have hands-on experience in related projects) AI application		
Requirement			
Textbooks and Teaching Materials	Self-made teaching materials:Handouts Using teaching materials from other writers:Handouts		
References	- Python programing books		
Grading Policy	◆ Attendance : 10.0 % ◆ Mark of Usual : 20.0 % ◆ Midterm Exam : 20.0 % ◆ Final Exam : % ◆ Other 〈Project presentation〉 : 50.0 %		
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.		