

Tamkang University Academic Year 104, 1st Semester Course Syllabus

Course Title	OPERATING SYSTEMS	Instructor	LIOU, AY-HWA ANDY
Course Class	TLMXB2A DEPARTMENT OF INFORMATION MANAGEMENT, 2A	Details	<ul style="list-style-type: none"> ◆ Required ◆ One Semester ◆ 2 Credits
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. 			
Departmental core competences			
<ul style="list-style-type: none"> A. Refining information management skills. B. Functional business Areas and business practices. C. Independent thinking and logical analysis. D. Computer programming. E. Information ethics. F. Database design and management. G. Analysis, design and integration of information system. H. Project management. 			
Course Introduction	<p>This course provides an introduction to the operation concepts of modern operating systems. Specifically, the course will cover computer system structure, processes, threads and CPU scheduling. Depending on the actual progress of the course schedule, Microcodes and Queueing Theory may also be covered. The material covered will be considered a basis for the advanced course of Operating Systems Practices.</p>		

The Relevance among Teaching Objectives, Objective Levels and Departmental core competences

I. Objective Levels (select applicable ones) :

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|-------------------------|-------------------------------------|---------------------------|
| (i) Cognitive Domain | : C1-Remembering, C2-Understanding, | C3-Applying, |
| | C4-Analyzing, C5-Evaluating, | C6-Creating |
| (ii) Psychomotor Domain | : P1-Imitation, P2-Mechanism, | P3-Independent Operation, |
| | P4-Linked Operation, P5-Automation, | P6-Origination |
| (iii) Affective Domain | : A1-Receiving, A2-Responding, | A3-Valuing, |
| | A4-Organizing, A5-Charaterizing, | A6-Implementing |

II. The Relevance among Teaching Objectives, Objective Levels and Departmental core competences :

- (i) Determine the objective level(s) in any one of the three learning domains (cognitive, psychomotor, and affective) corresponding to the teaching objective. Each objective should correspond to the objective level(s) of ONLY ONE of the three domains.
- (ii) If more than one objective levels are applicable for each learning domain, select the highest one only. (For example, if the objective levels for Cognitive Domain include C3, C5, and C6, select C6 only and fill it in the boxes below. The same rule applies to Psychomotor Domain and Affective Domain.)
- (iii) Determine the Departmental core competences that correspond to each teaching objective. Each objective may correspond to one or more Departmental core competences at a time. (For example, if one objective corresponds to three Departmental core competences: A, AD, and BEF, list all of the three in the box.)

No.	Teaching Objectives	Relevance	
		Objective Levels	Departmental core competences
1	Aware of the principle of the Operating Systems and its ways of functioning.	C2	G
2	Understand the devolvement of Operating Systems and its current trend of development.	C3	C
3	Apply the knowledge of Operating Systems to give suggestions or analysis for the work and problems facing.	C4	A

Teaching Objectives, Teaching Methods and Assessment

No.	Teaching Objectives	Teaching Methods	Assessment
1	Aware of the principle of the Operating Systems and its ways of functioning.	Lecture, Discussion	Written test
2	Understand the devolvement of Operating Systems and its current trend of development.	Lecture, Discussion	Written test
3	Apply the knowledge of Operating Systems to give suggestions or analysis for the work and problems facing.	Lecture, Discussion	Written test

This course has been designed to cultivate the following essential qualities in TKU students

Essential Qualities of TKU Students	Description
◇ A global perspective	Helping students develop a broader perspective from which to understand international affairs and global development.
◆ Information literacy	Becoming adept at using information technology and learning the proper way to process information.
◇ A vision for the future	Understanding self-growth, social change, and technological development so as to gain the skills necessary to bring about one's future vision.
◇ Moral integrity	Learning how to interact with others, practicing empathy and caring for others, and constructing moral principles with which to solve ethical problems.
◇ Independent thinking	Encouraging students to keenly observe and seek out the source of their problems, and to think logically and critically.
◇ A cheerful attitude and healthy lifestyle	Raising an awareness of the fine balance between one's body and soul and the environment; helping students live a meaningful life.
◇ A spirit of teamwork and dedication	Improving one's ability to communicate and cooperate so as to integrate resources, collaborate with others, and solve problems.
◇ A sense of aesthetic appreciation	Equipping students with the ability to sense and appreciate aesthetic beauty, to express themselves clearly, and to enjoy the creative process.

Course Schedule

Week	Date	Subject/Topics	Note
1	104/09/14 ~ 104/09/20	Introduction	
2	104/09/21 ~ 104/09/27	Computer System Structure	
3	104/09/28 ~ 104/10/04	Computer System Structure	
4	104/10/05 ~ 104/10/11	Computer System Structure	
5	104/10/12 ~ 104/10/18	Processes	
6	104/10/19 ~ 104/10/25	Processes	
7	104/10/26 ~ 104/11/01	Processes	
8	104/11/02 ~ 104/11/08	Threads	
9	104/11/09 ~ 104/11/15	Threads	
10	104/11/16 ~ 104/11/22	Midterm Exam Week	
11	104/11/23 ~ 104/11/29	CPU Scheduling	
12	104/11/30 ~ 104/12/06	CPU Scheduling	

13	104/12/07 ~ 104/12/13	CPU Scheduling	
14	104/12/14 ~ 104/12/20	CPU Scheduling	
15	104/12/21 ~ 104/12/27	Process Synchronization	
16	104/12/28 ~ 105/01/03	Process Synchronization	
17	105/01/04 ~ 105/01/10	Process Synchronization	
18	105/01/11 ~ 105/01/17	Final Exam Week	
Requirement	(All percentages are adjustable)		
Teaching Facility	Computer, Projector		
Textbook(s)	Operating System Concepts, 9th edition, by Silberschatz, Galvin, and Gagne (新月)		
Reference(s)			
Number of Assignment(s)	5 (Filled in by assignment instructor only)		
Grading Policy	◆ Attendance : 10.0 % ◆ Mark of Usual : 15.0 % ◆ Midterm Exam : 25.0 % ◆ Final Exam : 30.0 % ◆ Other 〈Homework〉 : 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 . ※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.		