Tamkang University Academic Year 101, 2nd Semester

Course Syllabus

Course Title	OPERATING SYSTEMS PRACTICES	Instructor	Ay-Hwa Andy Liou

Department/Year/Class	Course Details			
Department of Information Management, Sophomore year, Class A	☑Required ☐Selective	☑**0（One Semester）** ☐**1（1st Semester）** ☐**2（2nd Semester）** ☐**3（3rd Semester）**	Credits	2

Aim of Education	Core Competences
In response to the international academic trends and domestic practice needs to cultivate the tremendous professional personnel of information technology, information applications, management and planning with positive attitude and team spirit.	A. Problem analysis and critical thinking B. Corporate fundamentals and practical knowledge C. Information Systems Application D. Program design E. Network system planning F. Database design and management G. System integration H. Information Systems Analysis and Design I. Project Management

Course Introduction (50 to 100 words)	After the students have basic concepts about the computer hardware and process scheduling, this course focuses on advanced concepts of process synchronization, memory management, deadlocks, file systems, and secondary storage structures. Some examples of related system programs will be demonstrated too.

The Relevance among Teaching Objectives, Objective Levels and Core Competences

I.Objective Levels (select applicable ones)：

(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 Core Competences：

(I)Determine the objective level(s) in any one of the three learning domains (cognitive, psychomotor, and affective) corresponding to the teaching objectives. 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 core competences that correspond to each teaching objective. Each objective may correspond to one or more core competences at a time. (For example, if one objective corresponds to three core competences: A, AD, and BEF, list all of the three in the box.)

Teaching objectives	**Relevance**

	Objective Levels	Core Competences
1. Aware of the principle of the Operating Systems and its ways of operation.	C2	BEF
2. Understand the evolvement of Operating Systems and its current trend of development.	C3	ACDG
3. Apply the knowledge of Operating Systems to give suggestions or analysis for the work and problems facing.	C5	ACEGI

Teaching Objectives, Teaching Methods and Assessment

Teaching Objectives	Teaching Methods	Assessment
1. Aware of the principle of the Operating Systems and its ways of operation.	Lectures, Demonstrations, In-class Exams, Question Answering	Examinations, Homeworks, Credits from question answering and textbook readings.
2. Understand the evolvement of Operating Systems and its current trend of development.	Lectures, Demonstrations, In-class Exams, Question Answering	Examinations, Homeworks, Credits from question answering and textbook readings.
3. Apply the knowledge of Operating Systems to give suggestions or analysis for the work and problems facing.	Lectures, Demonstrations, In-class Exams, Question Answering	Examinations, Homeworks, Credits from question answering and textbook readings.

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

Essential Qualities of TKU Students	Description
□global perspectives	
□a vision for the future	
☑information literacy	The concept of Operating Systems can be applied to almost all the computing devices that require a controlled and convenient ways of operations. This course enhances the capabilities of applying the general concepts of Operating Systems to multiple areas of computer usages.
□ethical and moral principles	
☑independent thinking	The high-level discussions about the managing and arranging of all the processes or modules existing and running in the Operating Systems encourage profound considerations and concept exchanges.
□an awareness of healthy living	
□effective teamwork	
□an appreciation of the arts	

Course Schedule			
Week	Date	Subject/Topics	Note
1	2/22	Synchronization	
2	3/1	Synchronization	
3	3/8	Synchronization	
4	3/15	Synchronization	
5	3/22	Deadlocks	
6	3/29	Deadlocks	
7	4/5	Spring Break Holiday	
8	4/12	Deadlocks	
9	4/19	Deadlocks	
10	4/26	Midterm Exam Week	
11	5/3	Memory Management Strategies	
12	5/10	Memory Management Strategies	
13	5/17	Memory Management Strategies	
14	5/24	Virtual Memory Management	
15	5/31	Virtual Memory Management	
16	6/7	File System	
17	6/14	File System	
18	6/21	Final Exam Week	

Requirement	The course chapters covered and the calculation of final grades will be adjusted according to the actual class progress.
Teaching Facility	☑Computer ☑Overhead Projector ☐Other（_____）
Textbook(s)	Operating System Concepts, 8th edition, by Silberschatz, Galvin, and Gagne（新月）
Suggested Readings	None
Number of Assignment(s)	5 ~ 6 Homeworks will be assigned. (Filled in only for those courses that apply)
Grading Policy	◆In-class Exams：10~20.0 % ◆Midterm Exam：20~30.0 % ◆Final Exam：30~40.0 % ◆Homeworks： 10~20 % ◆Others〈Course attending, Question Answering〉：5~10 % (All percentages are adjustable)
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/index.asp. **※Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.**