Tamkang University Academic Year 112, 1st Semester Course Syllabus

Course Title	OPERATING SYSTEMS	Instructor	LIOU, AY-HWA ANDY
Course Class	TLMXB2A DEPARTMENT OF INFORMATION MANAGEMENT, 2A	Details	◆ General Course ◆ Required ◆ One Semester
Relevance to SDGs	SDG4 Quality education SDG9 Industry, Innovation, and Infrastructure		

Departmental Aim of Education

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

A. Problem analysis and critical thinking.(ratio:45.00)

B. Functional business Areas and business practices.(ratio:5.00)

C. Applications of information systems.(ratio:15.00)

D. Computer programming.(ratio:5.00)

E. Network system planning.(ratio:5.00)

F. Database design and management.(ratio:5.00)

G. Analysis, design and integration of information system.(ratio:15.00)

H. Project management.(ratio:5.00)

Subject Schoolwide essential virtues

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	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.

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	Aware of the principle of the Operating Systems and its ways of functioning.	Cognitive
2	Understand the devolvement of Operating Systems and its current trend of development.	Cognitive
3	Apply the knowledge of Operating Systems to give suggestions or analysis for the work and problems facing.	Cognitive
4	Allow the students to be aware of Operating Systems' current technologies, including the principle and method of managing an effective and resource-saving system. The students should be able to understand the basic idea and apply it to a future career when possible. The algorithms and principles introduced can be a general idea for solving related problems, which can be considered valuable for an Information Management student.	Cognitive

The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment				
No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCDEFGH	12345678	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written)
2	ABCDEFGH	12345678	Lecture, Discussion	Testing, Discussion(including classroom and online), Report(including oral and written)
3	ABCDEFGH	12345678	Lecture, Discussion	Testing, Discussion(including classroom and online), Report(including oral and written)
4	ABCDEFGH	12345678	Lecture	Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written)

Course Schedule			
Week	Date	Course Contents	Note
1	112/09/11 ~ 112/09/17	Introduction	
2	112/09/18 ~ 112/09/24	Computer System Structure	
3	112/09/25 ~ 112/10/01	Computer System Structure	
4	112/10/02 ~ 112/10/08	Computer System Structure	
5	112/10/09 ~ 112/10/15	Processes	
6	112/10/16 ~ 112/10/22	Processes	
7	112/10/23 ~ 112/10/29	Processes	
8	112/10/30 ~ 112/11/05	Threads	
9	112/11/06 ~ 112/11/12	Midterm Exam Week	
10	112/11/13 ~ 112/11/19	Threads	
11	112/11/20 ~ 112/11/26	CPU Scheduling	
12	112/11/27 ~ 112/12/03	CPU Scheduling	

13	112/12/04 ~ 112/12/10	CPU Scheduling	
14	112/12/11 ~ 112/12/17	CPU Scheduling	
15	112/12/18 ~ 112/12/24	Process Synchronization	
16	112/12/25 ~ 112/12/31	Process Synchronization	
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	Information Technology Problem solving
Interdisciplinary	STEAM course (S:Science, T:Technology, E:Engineering, M:Math, A field:Integration of Art and Humanist) Competency-based education 'competency exploration' sustained competency or global issues STEEP (Society, Technology, Economy, Environment, and Politics)
Distinctive teaching	
Course Content	Computer programming or Computer language (students have hands-on experience in related projects) Logical Thinking
Requirement	No late turn-in for Homework or Quiz. All asking for leave should perform make-up after. (All percentages are adjustable)
Textbooks and Teaching Materials	Using teaching materials from other writers:Textbooks Name of teaching materials: Operating System Concepts, 9th edition, by Silberschatz, Galvin, and Gagne（新月）
References	
Grading Policy	◆ Attendance： 5.0 % ◆ Mark of Usual： % ◆ Midterm Exam： 25.0 % ◆ Final Exam： 35.0 % ◆ Other〈Notes, HW, quiz, TA〉：35.0 %
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.**