Tamkang University Academic Year 109, 2nd Semester Course Syllabus

Course Title	OPERATING SYSTEMS	Instructor	HUANG-WEN HUANG
Course Class	TQICB2A DIVISION OF SOFTWARE ENGINEERING, DEPARTMENT OF INNOVATIVE INFORMATION AND TECHNOLOGY (ENGLISH-TAUGHT PROGRAM), 2A	Details	◆ General Course ◆ Required ◆ One Semester
Relevance to SDGs	SDG4 Quality education SDG9 Industry, Innovation, and Infrastructure		

Departmental Aim of Education

Cultivate professional talents in developing and applying information system in various fields.

Subject Departmental core competences

E. Capability of integrating information system(ratio:100.00)

Subject Schoolwide essential virtues

2. Information literacy. (ratio:70.00)

3. A vision for the future. (ratio:10.00)

5. Independent thinking. (ratio:10.00)

7. A spirit of teamwork and dedication. (ratio:10.00)

Course Introduction	The purpose of this course is to describe the theory of operating systems. It concentrates on each of the "managers" in turn and shows how they work together. Then it introduces network organization concepts, security, ethics, and management of network functions. In the second half-semester we will introduce actual operating systems, how they apply the theories presented in the first half and how they compare with each other.

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	Students are able to get familiar with all "managers" in operating systems	Cognitive
2	Students are able to understand operation principles of all managers in operating systems.	Affective
3	Students are able to analyze manager' s functionalities in operating systems.	Cognitive
4	Students are able to integrate or understand all parts in operating systems as a whole.	Cognitive
5	Students are able to understand the importance of resource management from operating systems and their performance.	Cognitive
6	Students are able to get familiar with recent technologies in operating systems.	Cognitive
7	Enhancing students' ability to write read and speak technical English especially in the operating systems theory.	Psychomotor

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	E	2	Lecture, Discussion, Imitation	Testing, Study Assignments, Report(including oral and written)
2	E	2	Lecture	Study Assignments, Report(including oral and written)
3	E	2	Lecture, Discussion	Testing, Study Assignments, Report(including oral and written)
4	E	5	Lecture, Discussion	Testing, Study Assignments, Report(including oral and written)

5	E	3	Lecture, Discussion	Testing, Study Assignments, Report(including oral and written)
6	E	3	Lecture	Testing
7	E	7	Lecture	Testing, Study Assignments, Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note
1	110/02/22 ~ 110/02/28	Introduction to operating systems(1.1);A Brief Story of Machine Hardware(1.8)	
2	110/03/01 ~ 110/03/07	Memory Management: Early Systems (2.1); Single-User Contiguous Scheme(2.2)	
3	110/03/08 ~ 110/03/14	Fixed Partitions (2.3); Dynamic Partitions (2.4);	
4	110/03/15 ~ 110/03/21	Memory Management: Virtual Memory (3.1)	Shown in the Parentheses are corresponding sections in the textbook.
5	110/03/22 ~ 110/03/28	Page Replacement Policies (3.4);Segmented Memory Allocation (3.5)Segmented/Demand Paged Memory Allocation (3.6)	
6	110/03/29 ~ 110/04/04	Processor Management(4.1); Job Scheduling (4.2);	
7	110/04/05 ~ 110/04/11	Process Scheduling Policies (4.4); Process Scheduling Algorithms (4.5)	
8	110/04/12 ~ 110/04/18	Process Management (5.1); Deadlock (5.2)	
9	110/04/19 ~ 110/04/25	In-Class Exercises	
10	110/04/26 ~ 110/05/02	Midterm Exam Week	
11	110/05/03 ~ 110/05/09	Solutions to midterm; Concurrent Processes (6.1)	
12	110/05/10 ~ 110/05/16	Device Management (7.1)	
13	110/05/17 ~ 110/05/23	RAID (7.2)	
14	110/05/24 ~ 110/05/30	FILE Management (8.1)	
15	110/05/31 ~ 110/06/06	Access Methods (8.2)	
16	110/06/07 ~ 110/06/13	UNIX	

17	110/06/14～ 110/06/20	In-class exercises	
18	110/06/21～ 110/06/27	Final Exam Week	

Requirement	1.平時評量 means term project or small test. 10%
Teaching Facility	Computer, Projector
Textbooks and Teaching Materials	Ida M. Flynn, Ann McIver McHoes, Understanding Operating Systems, Fourth Edition, Course Technology, 2006, ISBN 0-534-42366-3.
References	1. Jose M. Garrido, and Richard Schlesinger, Principles of Modern Operating Systems, Jones and Bartlett Publications, Inc. 2008.
Number of Assignment(s)	3 (Filled in by assignment instructor only)
Grading Policy	◆ Attendance： 10.0 % ◆ Mark of Usual：10.0 % ◆ Midterm Exam： 25.0 % ◆ Final Exam： 25.0 % ◆ Other〈project and Homework〉：30.0 %
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.**