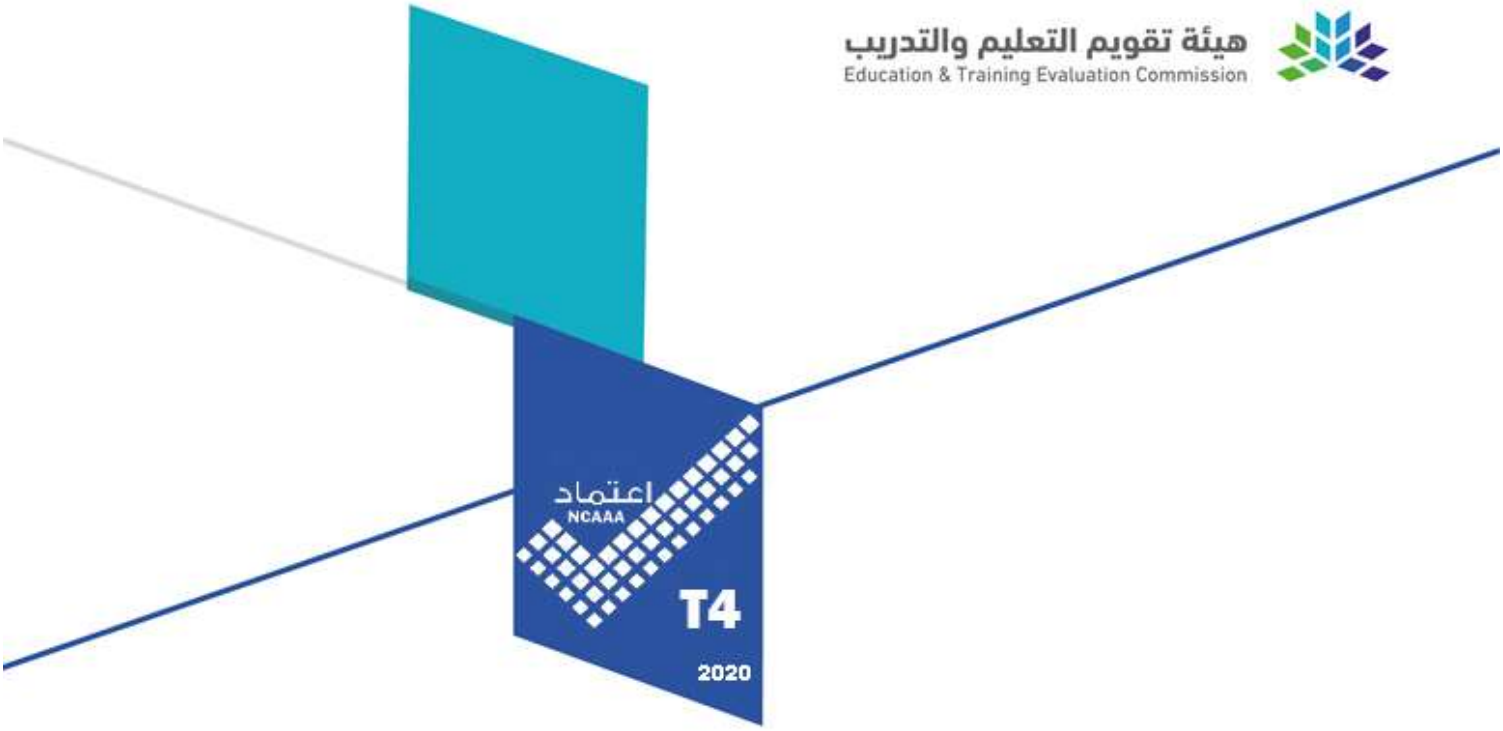
هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission



Course Specifications

Course Title:	**Principles of Operating Systems**
Course Code:	**MIS10605**
Program:	**Management Information Systems**
Department:	**Management Information Systems**
College:	**College of Business Administration**
Institution:	**Albaha University**

Table of Contents

A. Course Identification

1. Credit hours: 3
2. Course type **a.** University ☐ College ☐ Department ☒ Others ☐ **b.** Required ☒ Elective ☐
3. Level/year at which this course is offered: 6th level/ 3rd year
4. Pre-requisites for this course (if any)**:** N/A
5. Co-requisites for this course (if any)**:** N/A

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	30	%67
2	**Blended**		
3	**E-learning**	15	%33
4	**Distance learning**		
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	30
2	**Laboratory/Studio**	-
3	**Tutorial**	15
4	**Others** (specify)	-
	Total	45

B. Course Objectives and Learning Outcomes

1. Course Description

The course is a general introduction of operating systems that deals with the structure and mechanisms of operating systems from the theoretical perspectives, the fundamentals of operating system design and the current direction of development of the system. The course completion will develop familiarity of students with the concepts, procedures, the analysis and application of the operating systems.

2. Course Main Objective

This course is designed to provide students with an overview of essential concepts and principles of operating systems. Upon successful completion of the course, the student will develop fundamental understanding of operating systems.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and Understanding**	
1.1	Define principles of operating systems.	K.1
1.2	List the types of operating systems.	K.1
1.3	Recall different types of CPU scheduling algorithms.	K.1
2	**Skills :**	
2.1	Compare between different operating systems.	S.1
2.2	Explain how an operating system controls hardware component.	S.3
2.3	Demonstrate effectiveness in working in a group	S5
3	**Values:**	
3.1	Develop time management skills	V.2
3.2	Develop research and Web search skills	V.2
3.3	Demonstrate effective communications	V.1

C. Course Content

No	List of Topics	Contact Hours
1	**Course Introduction:** - Computer System Structure - What is an Operating System? - Computer-System Organization - Computer-System Operation - Storage Structure - Computer-System Architecture - Operating System Service	9
2	Types of User Operating System Interfaces Types of System Calls Operating-System Structure Operating-System Debugging Operating-System Operations Process Management Memory Management File-system Management Mass-Storage Management	9
3	Caching Protection and Security Virtualization	6
4	Distributed Systems Special-Purpose Systems	6
5	Open-Source Operating Systems	6
6	CPU Scheduling	9
Total		45

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	Define principles of operating systems.	*Lecture, Support readings, group discussions, writing reports , research..* *Conducting individual tasks, practical training, field training, and presentations.* *Activities and homework*	*Mid term and Final exam* *Assessing individual & group tasks and presentation and discussions* *Assessment of activities, participations and homework*
1.2	List the types of operating systems.	*Lecture, Support readings, group discussions, writing reports , research..* *Conducting individual tasks, practical training, field training, and presentations.* *Activities and homework*	*Mid term and Final exam* *Assessing individual & group tasks and presentation and discussions* *Assessment of activities, participations and homework*
…	Recall different types of CPU scheduling algorithms.	*Lecture, Support readings, group discussions, writing reports , research..* *Conducting individual tasks, practical training, field training, and presentations.* *Activities and homework*	*Mid term and Final exam* *Assessing individual & group tasks and presentation and discussions* *Assessment of activities, participations and homework*
2.0	**Skills**		
2.1	Compare between different operating systems.	• *Testing and training process* • *Fields studies and group discussion* • *Individual group tasks* *Problem solving tasks and case study*	• *Evaluating individual and group tasks* • *Written exams* • *Assessments of activities and home work*
2.2	Explain how an operating system controls hardware component.	• *Testing and training process* • *Fields studies and group discussion* • *Individual group tasks* *Problem solving tasks and case study*	• *Evaluating individual and group tasks* • *Written exams* • *Assessments of activities and home work*
2.3	Demonstrate effectiveness in working in a group	• *Cooperative learning and application of scientific method in thinking by solving problems.* • *Work as part of a team.* • *Conducting group research and writing reports.* *Dividing students into groups to cooperate with each other for a better*	• *Assessment of group project.* • *Assessment of projects conducted individually.* *Solving case studies.*

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
		understanding of the terms of marketing.	
3.0	**Values**		
3.1	Develop time management skills	• *Cooperative learning and application of scientific method in thinking by solving problems.* • *Work as part of a team.* • *Conducting group research and writing reports.* *Dividing students into groups to cooperate with each other for a better understanding of the terms of marketing.*	• *Assessment of group project.* • *Assessment of projects conducted individually.* *Solving case studies.*
3.2	Develop research and Web search skills	• *Promoting students to submit activities, homework and writing reports.* • *Encouraging students to carry small research and surveys.* • *Encouraging students to use computer-based assignments*	• *Assessment by written reports.* • *Assessing activities and homework.* • *Group and individual presentations.* • *Computer and internet-based assignments.*

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quiz 1	4	8%
2	Midterm	7	30%
3	Quiz 2	10	8%
4	Homework	At the end of each unit	4%
5	Final Exam	17	50%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

Instructor will be available for student consultation and academic advice on weekdays during their office hours. Additional assistance by appointment only. (9 hours per week

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	ABRAHAM SILBERSCHATZ, PETER BAER GALVIN, GREG GAGNE, "Operating System Concepts, 10th Edition" Addison-Wesley world student series Theory; 16 Addison-Wesley,

	2018 ISBN, 978-1-119-32091-3. The covering percentage of the book: 100%
Essential References Materials	Crowley, C., Operating Systems: A Design-Oriented Approach. Irwin, 1997. M., et al, LINUX Kernel Internals, Addison Wesley, 1996 Palmer, Guide to Operating Systems, 3rd Ed, Course Technology. ISBN: 0619213477. Stallings, Operating Systems: Internals and Design. Prentice Hall, 1998.
Electronic Materials	• www.bell-labs.com/topic/books/os-book • (http://www.cim.mcgill.ca/~jer/courses/os/): contains, lecture summaries, assignments, exercises, and pointers to other useful resources. • http://www.howstuffworks.com/ Extra resources can be found at the ACM's website www.acm.org
Other Learning Materials	• Microsoft Office • Internet Explorer 6.0 or later. Windows XP with Service Pack (SP2), Windows Server 2003 with SP1 or Vista operating system

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	• Air conditioned with at least 20 adequate seats. • Interactive/smart Board. • Up-to-date projector.
Technology Resources (AV, data show, Smart Board, software, etc.)	• Personal computer with necessary up-to-date software. • DBS Smart Systems. • Interactive Board. Laptop
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	• Colored Printer (needed). • Central laser-Printer, and Scanner. • Wall Boards (are essentially needed.). • Internet inside the classroom (missed.). Library: Up to date scientific books, in the library. Wi-Fi and internet connections are available inside the teaching staff rooms, and the seminar room.

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Strategies for Obtaining Student Feedback on Effectiveness of Teaching	Course teacher	• *Questionnaires (course evaluation) achieved by the students and it is electronically organized by the University.* • *Students-faculty management meetings.*
Other Strategies for Evaluation of Teaching by the Instructor or by the Department	Instructor or the Department	• Discussions within the staff member teaching the course. • Departmental internal review of the course. • Outside reviewer of the course.

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	Minutes of the Council of Management Information Systems Department
Reference No.	3
Date	8.12.2021