



"الريادة والإبداع في الأعمال"
"Entrepreneurship and
Innovation in Business"

جامعة الزيتونة الأردنية
Al-Zaytoonah University of Jordan
كلية الأعمال
Faculty of Business



"عراقة وجودة"
"Tradition and Quality"

	Detailed Course Description - Course Plan Development and Updating Procedures/ Management Information System Department	QF05/0408-3.0E
--	--	-----------------------

Faculty	Business	Department	Management Information System
Course number	0506372	Course title	Operating System
Number of credit hours	3	Pre-requisite/co-requisite	Advanced Visual Programming Language for Business

The course objectives are to define principles of computer organization and operation, to show how hardware is controlled by program at the hardware / software interface, to outline the basic OS resource management function :memory, file, I/O devices, and process management, and to explore the need for concurrency control.

	Course goals and learning outcomes
Goal 1	To describe the basic organization of computer systems.
Learning outcomes	1.1 Knowing about the computer system. 1.2 Understanding the computer hardware components.
Goal 2	To provide a grand tour of the major components of operating systems.
Learning outcomes	2.1 Understanding the operating system. 2.2 Understanding the goals of operating system. 2.3 Knowing the functions of operating system
Goal 3	To describe the services an operating system provides to users, processes, and other systems.
Learning outcomes	3.1 Understanding operating system services. 3.2 Knowing the user and operating system interface. 3.3 Understanding the system calls.
Goal 4	To explain how operating systems are installed and customized and how they boot.
Learning outcomes	4.1 Learning how operating systems are installed. 4.2 Knowing the types of operating system. 4.3 Learning how to boot.
Goal 5	To introduce the notion of a process and the various features of processes, including scheduling, creation, and termination.
Learning outcomes	5.1 Knowing the process. 5.2 Understanding the various features of processes.
Goal 6	To introduce CPU scheduling and algorithms.
Learning outcomes	6.1 Knowing CPU scheduling. 6.2 Being able to implement the scheduling algorithms.
Goal 7	To discuss evaluation criteria for selecting a CPU-scheduling algorithm for a particular system and to examine the scheduling algorithms of several operating systems.
Learning outcomes	7.1 Understanding the evaluation criteria for selecting a CPU-scheduling algorithm for a particular system. 7.2 Being able to examine the scheduling algorithms of several operating systems.
Goal 8	To provide a detailed description of various ways of organizing memory hardware.
Learning outcomes	8.1 Understanding various techniques allocating memory to processes. 8.2 Being able to organize the memory hardware.



"الريادة والأبداع في الأعمال"
"Entrepreneurship and
Innovation in Business"

جامعة الزيتونة الأردنية
Al-Zaytoonah University of Jordan
كلية الأعمال
Faculty of Business



"عراقة وجودة"
"Tradition and Quality"

	Detailed Course Description - Course Plan Development and Updating Procedures/ Management Information System Department	QF05/0408-3.0E
--	--	-----------------------

Goal 9	To describe the benefits of a virtual memory system.
Learning outcomes	9.1 Knowing the meaning of virtualization. 9.2 Understanding the benefits of virtual memory system.
Goal 10	To present a number of different methods for preventing or avoiding deadlocks in a computer system.
Learning outcomes	10.1 Understanding the deadlock. 10.2 Understanding the deadlock methods. 10.3 Being able how to prevent or avoid deadlocks in a computer system.
Textbook	A.Silberschatz , P.B.Galvin and G.Gagne (2013), Operation System Concepts , 9 th Edition, John Wiley and Sons Inc..
Supplementary references	

Course timeline				
Week	Number of hours	Course topics	Pages (textbook)	Notes
01	1 1 1	- What Operating Systems Do ? - Operating systems goals. - Operating systems functions.	1 - 12	
02	1 1 1	- Computer System Organization - Computer System Architecture	22-13	
03	1 1 1	-Operating Systems types -Operating Systems trends.	42-31	
04	1 1 1	- O.S Structure - O.S Operations - System Structure	23 - 30	
05	1 1 1	- O.S Services - System Calls - Types Of System Calls	49 – 52 55 – 58	
06	1 1 1	- System Programs - Process concept	66 – 68 101 – 105	
07	1 1 1	- Process Management. - Process Scheduling.	105 - 110	
08	1 1 1	- Inter process communication.	116 – 123	
09	1 1	-Process Scheduling - Scheduling Criteria	183 – 187 187 – 188	



جامعة الزيتونة الأردنية
Al-Zaytoonah University of Jordan
كلية الأعمال
Faculty of Business



"الريادة والإبداع في الأعمال"
"Entrepreneurship and
Innovation in Business"

"عراقة وجودة"
"Tradition and Quality"

	Detailed Course Description - Course Plan Development and Updating Procedures/ Management Information System Department	QF05/0408-3.0E
--	--	-----------------------

	1			
10	1 1 1	-Scheduling Algorithms	188 - 199	
11	1 1 1	-Memory – Management Strategies - Swapping	315 – 322 358 – 360	
12	1 1 1	- Contiguous Memory Allocation - Paging - Segmentation	360 – 364 364 – 366 366 - 378	
13	1 1 1	- Dead Locks - Dead lock Characterization - Methods for Handling Deadlock -Deadlock Prevention and avoidance	315-335	
14	1 1 1	- Virtual Memory Management - Penang Paging		
15	1 1 1	Presentation		
16	1 1 1	Presentation		

Theoretical course evaluation methods and weight	Participation = 10% First exam 20% Second exam 20% Final exam 50%	Practical (clinical) course evaluation methods	Semester students' work = 50% (Reports, research, quizzes, etc.) Final exam = 50%
---	--	---	---

Approved by head of department		Date of approval	
---	--	-------------------------	--

Extra information (to be updated every semester by corresponding faculty member)

Name of teacher	Dr. Qeethara Al-Shayea	Office Number	260
Phone number (extension)	142	Email	drqeethara@zuj.edu.jo
Office hours	9-10 9:30:10:30		