COURSE DESCRIPTIONS

Faculty	Science and Information Technology				
Department	Computer Science			**NQF level**	6
Course Title	Operating Systems	**Code**	501471	**Prerequisite**	501291
Credit Hours	3	**Theory**	2	**Practical**	1
Course Leader	Dr. Arwa Zabian	**email**	arwa@jadara.edu.jo		
Lecturers	Dr. Arwa Zabian	**emails**	azabian@hotmail.com		
Lecture time	14.45-16.00	**Classroom**	Distance learning		
Semester	Summer	**Production**		**Updated**	2020-2021
Awards	Bachelor Degree			**Attendance**	Fulltime

Short Description

Operating systems are essential part of any computer system. This course provides a clear description of the concept that underlie operating systems. An operating system is software that manages the computer hardware. It acts as intermediary between the user of a computer and the computer hardware. The student before studying this course must be familiar with data structure concepts, computer organization and one high level programming language. For that, this course starts by introducing the main concepts needed in system structure and organization, and then the course will study process management and coordination. The main functions of operating system. Then this course will give a brief overview of memory management strategy and virtual memory management. This course is a theoretical course, it gives an overview of different operating systems like: Solaris, Linux, Microsoft Windows vista, windows 2000 and window XP….

Course Objectives

Upon completion of this course, students should be able to:

Understand how computer does work, and how operating system performs a resources management to allow the correct work of the system

Learning Outcomes

A. Knowledge - Theoretical Understanding

a1: Define the basic components and functions of operating systems (K1)

B. Knowledge - Practical Application

a2: Select the best scheduling algorithms used for each situation (K4)

a3: Apply Linux commands for performing command line operations (K5)

C. Skills - Generic Problem Solving and Analytical Skills

b1: Estimate the effect of small and large memory and disk space on the performance of computer systems (S2)

D. Skills - Communication, ICT, and Numeracy

E. Competence: Autonomy, Responsibility, and Context
Teaching and Learning Methods
• Generate debate and dialogue in the class meeting • Distance learning
Assessment Methods
By quizzes, home works and exams

Course Contents					
Week	**Hours**	**CLOs**	**Topics**	**Teaching & Learning Methods**	**Assessment Methods**
1	5	a1	Introduction : what the common feature of Operating systems are, what an OS does for the user, and what does for the computer	Distance learning	quiz
2	5	a1,a3	System structure, operating system architecture and command line operating systems (linux)	Distance learning	quiz
3	عطلة عيد الأضحى المبارك				
4	5	a1	Process management. Pipelining, inter-process communication	Distance learning	
5	1.25	a1	Process management	Distance learning	
	2.5	a2	Process scheduling	Distance learning	quiz
				Distance learning	
	1.25	a1,a2, a3	Mid exam	Online exam	Mid Term
6	5	a2	Process scheduling	Distance learning	quiz
7	1.25	a2	Process scheduling	Distance learning	quiz
	1.25	a1	Multithreading		
	2.5	a1	Process synchronization		
8	5	a1, b1	Memory management	Distance learning	
9	2	a1, b1, a2,a3	Final exam	Online exam	Final exam

Infrastructure	
Textbook	**Operating system concepts. Abraham Silberschatz, Peter B. Galvin. Wiley 2018 . Tenth edition .**
References	**ISBN: 1119320913**
Required reading	
Electronic materials	**Available on : https://dokumen.pub/operating-system-concepts-10nbsped-9781119320913.html**
Other	**Linux for beginners** . Jason Cannon . 2014. ISBN: 1496145097

Assessment Method		**Grade**	**a1**	**a2**	**a3**	**b1**
First (Midterm)		30	10	10	10	
Second (if applicable)						
Final Exam		50	10	20	10	10
Coursework		20		15	5	
Coursework assessment methods	Assignments	10		10		
	Case study					
	Discussion and interaction					
	Group work activities					
	Lab tests and assignments					
	Presentations					
	Quizzes	10		5	5	
Total		100	20	40	25	10

Plagiarism

Plagiarism is claiming that someone else's work is your own. The department has a strict policy regarding plagiarism and, if plagiarism is indeed discovered, this policy will be applied. Note that punishments apply also to anyone assisting another to commit plagiarism (for example by knowingly allowing someone to copy your code).

Plagiarism is different from group work in which a number of individuals share ideas on how to carry out the coursework. You are strongly encouraged to work in small groups, and you will certainly not be penalized for doing so. This means that you may work together on the program. What is important is that you have a full understanding of all aspects of the completed program. In order to allow proper assessment that this is indeed the case, you must adhere strictly to the course work requirements as outlined above and detailed in the coursework problem description. These requirements are in place to encourage individual understanding, facilitate individual assessment, and deter plagiarism.