



Future Academy Higher Future Institute for Specialized Technological Studies

Course Specification

1- Course information:	
Course Code:	C\$\$323
Course Title:	Operating Systems
Year/level	3 rd
Academic Programs	Computer Science Program (B.Sc.)
Contact hours/ week	(Theoretical = 2hrs, Practical = 2hrs), Total = 4hrs

2- Course aims:

Operating systems are essential part of any computer system. Therefore, a course in operating system is an essential part of any computer science education. And to provide student with knowledge & skills about the fundamental concepts of operating systems, also provide student with Practical knowledge about different OS Platform.

3- Intended learning outcomes of the course (ILOs):

a- Knowledge and understanding:

On successful completion of this course, the student should be able to:

al- Outline the concepts of the operating systems

- a2- Define the basic Components of an Operating Systems
- a3- Identify the development of an Operating Systems

b- Intellectual skills:

On completing this course, the student should be able to:

b1-Apply the suitable OS depending on their features.

b2- Compare the different type protocols of. an Operating Systems

c- Professional and practical skills:

At the end of this course, the student will be able to:

- c1-Use the basic concepts of operating systems together with the modules needed to manage the different computer resources.
- c2- Illustrate the Details of some units such as memory management, I/O, and File systems

d- General and transferable skills:

On successful completion of this course, the student should be able to:

d1- Working how to use the main OS with Professional way.

d2- Search, life-long, for information in a self-learning manner and refer to relevant literature efficiently. d3-Long life learning for business skills.

4- Course contents

Topics/units	Number	of hours	ILO's
-	Lecture	Practical	
	hours	hours	
Introduction	3	2	al
Basic Concepts of	3	2	a1,a2, b2,d1,d3,
Operating System, which			
(not linked to any			
particular or commercial			
operating system)			
Process Description and	3	2	a2,a3,c1.b2,d3
Control			
Process Description and	3	2	a1, a4,b1,c1,d2,d3
Control+ Quiz1			
Process and Processor	3	2	b2,c1,d2,d3
Scheduling			
Process and Processor	3	2	C2, d2
Scheduling			
Midterm Exam.	3	2	a3, b2, c2,d2
Memory management	3	2	a3, b2, c2,d1,d2
Memory management&	3	2	a3, b2, c2,d1,d2
Virtual Memory			
Operating system	3	2	b2, c2
management of I/O			
Disk Scheduling & its	3	2	b2, c2,d3
optimization			
Major Operating systems	3	2	a1,a2, c1,c2,b2,d1,d3,
Smart card OS	3	2	a1,a2, c1,c2,b2,d1
Course review	3	2	

5- Teaching and learning methods

Methods		ILO's																		
	a1	a2	a3	a4	a5	b1	b2	b3	b4	b5	c1	c2	c3	c4	c5	d1	d2	d3	d4	d5
Lectures																				
Practical sections																				
Self-learning																				
Assays and reviews																				

Discussion anoung											
Discussion groups								V	N	N	
Brainstorming											
Blended-learning											
E-learning											

6- Teaching and learning methods for Low-achieving students

- Extra teaching hours for those who need help
- More quizzes to assess their ability for understanding the course
- Encourage the team work for those students with other advanced ones to increase their participation and understanding

7-Student assessment

Assessment method	Time	Grade	Week	ILOs
		weight		
		(%)		
Course Work (Through	10	Every Week	a1, a2,a3, b1,b2, ,c1,c2,d1,d2,d3
Tutorial Exercise	the			
and Assignments)	semester			
	Through	5	Week#4	a1, a2,b1,b2,c1,d1
Quiz 1	the			
	lecture			
Mid-term exam	1 hours	10	Week#7	a2, a3,b1,b2,c1,c2
	Through	5	Week#11	a1, a2,a3 ,b1,b2,c1,d1
Quiz 2	the			
	lecture			
Practical exam	2 hours	10	Week#14	b2,c1, d3
Final Written exam	2 hours	60	Week# 15-16	a1, a2,b1,b2, ,c1,c2,d1,

8-List of references

8.1. Student notebooks:

- Comprehensive instructor notes ("PowerPoint slides") are available on the course web page (" Google Classroom")
- 8.2. Essential textbooks:
 - William Stallings, "Operating Systems Internals and Design Principles", 6th Edition.
- 8.3. Recommended textbooks:
 - Abraham silberschatz, peter baer galvin "operating system concepts ",10th Edition
- 8.4. Journals, Periodical and Reportsetc.
- 8.5. Websites
 - <u>https://www.dreamhost.com/blog/linux-commands/</u>

Course Coordinator: Dr. M Amer Head of department: Prof. Dr. Yasser F. Ramadan Date of Approval: 24/7/2024