Faculty: Information Technology	
Department: Computer Science	**Program: Bachelor**
Academic year:	**Semester:**

Course Plan

First: Course Information

Course No.: 1501438	***Course Title: Cloud Computing***	***Credit Hours: 3***	***Theoretical: 3***	***Practical: 0***
Prerequisite No. and Title: 1501430	***Section No.:***	***Lecture Time:***		
Level in JNQF	***7***			
Type Of Course:	☐ ***Obligatory University Requirement*** ☐ ***Elective University Requirement*** ☐ ***Obligatory Faculty Requirement*** ☐ ***Elective Faculty Requirement*** ■ ***Obligatory Specialization Requirement*** ☐ ***Elective Specialization Requirement*** ☐ ***Ancillary course***			
Type of Learning:	☐ ***Face-to-Face Learning*** ■ ***Blended Learning (2 Face-to-Face + 1 Asynchronous)*** ☐ ***Online Learning (2 Synchronous+ 1 Asynchronous)***			

Second: Instructor's Information

Course Coordinator:			
Name:	***Academic Rank:***		
Office Number:	***Extension Number:***	***Email:***	
Course Instructor:			
Name:	***Academic Rank:***		
Office Number:	***Extension Number:***	***Email:***	
Office Hours:	***Sunday Monday Tuesday Wednesday Thursday***		

Third: Course Description

Cloud computing has become everywhere. It started with storing files on the cloud and retrieving them, and recently the cloud includes many services that make computing ubiquitous. Cloud computing is growing and it provides services to different levels of users from beginners to professionals. This course discusses all aspects of cloud computing, its applications, services, deployment models, and migration strategies.

Fourth: Course Objectives

1. List cloud concepts and the services provided.
2. Identify the different deployment models.
3. Explain the challenges and risks of cloud computing.
4. Plan for cloud migration using the cloud migration strategies.

Fifth: Learning Outcomes

Level descriptor according to (JNQF)	*CILOs Code*	*CILOs* If any CLO will not be assessed in the course, mark NA.	*Associated PILOs Code* *Choose one PILO for each CILO**	*Assessment method* *Choose at least two methods*
Knowledge	**K1**	Explain cloud computing fundamentals.	**PK1**	• Mid-term Exam • Final Exam • Quizzes
	K2	Select cloud computing applications.	**PK2**	• Mid-term Exam • Final Exam • Quizzes
	K3	Illustrate the basic security threats and concerns for cloud computing.	**PK3**	• Mid-term Exam • Final Exam • Quizzes
Skills	**S1**	List cloud computing services.	**PS3**	• Mid-term Exam • Final Exam • Assignments • Quizzes
	S2	Examine cloud computing deployment models.	**PS3**	• Mid-term Exam • Final Exam • Assignments • Quizzes
	S3	Compare the cloud computing migration strategies.	**PS4**	• Mid-term Exam • Final Exam • Assignments • Quizzes
Competencies	**C1**	Create a cloud computing migration plan using one of the migration strategies.	**PC4**	Project
	C2	Develop a cloud computing deployment plan based on the business needs.	**PC3**	Project

*CILOs: Course Intended Learning Outcomes; PILOs: Program Intended Learning Outcomes; For each CILO, the PILO could be the same or different.

Sixth: Learning Resources

Main Reference:	***Cloud Computing: Business Trends and Technologies***		
Author: Faynberg I., Lu, H., and Skuler, D	***Issue No.:***	***Print:***	***Publication Year: 2016***
Additional Sources and Websites:	• ***What is cloud computing? URL: https://cloud.google.com/learn/what-is-cloud-computing*** • ***What is cloud computing? URL: https://azure.microsoft.com/en-us/resources/cloud-computing-dictionary/what-is-cloud-computing/*** • ***What is cloud computing? URL: https://aws.amazon.com/what-is-cloud-computing/***		
Teaching Type:	■ ***Classroom*** ☐ ***Laboratory*** ☐ ***Workshop*** ■ ***MS Teams*** ■ ***Moodle***		

Seventh: Course Structure

Week	Course Intended Teaching Outcomes (CILOs)	Topics	Teaching Procedures*	Teaching Methods**	References***
1	K1, K2	Cloud fundamentals	Face-to-Face	Lectures	Chapter 1
		What is cloud computing?	Asynchronous	videos	Web Ref.
2	K1, K2	The total cost of ownership and general cloud benefits.	Face-to-Face Asynchronous	Lectures	Chapter 2
		How to calculate cloud total cost of ownership	Asynchronous	videos, quiz	Web Ref.
3	S3	Migrating to the cloud: Investigate service migration to the cloud. Identifying services to be migrated to the cloud.	Face-to-Face Asynchronous	Lectures	Chapter 2
		What is Cloud Migration? Strategy, Process, and Tools	Asynchronous	videos, assignments, reading	Web Ref.
4	K1, K2, K3	Disadvantages of cloud computing to end users and organizations.	Face-to-Face Asynchronous	Lectures	Chapter 2

		The pros and cons of cloud computing	Asynchronous	videos, reading, quiz	Web Ref.
5	S1, S2	Cloud computing services models	Face-to-Face Asynchronous	Lectures	Chapter 3
		Cloud computing service models	Asynchronous	videos, reading	Web Ref.
6	S1	Differentiate between On-Premise, SaaS, PaaS, and IaaS with a view to understanding when and how they are deployed.	Face-to-Face Asynchronous	Lectures	Chapter 3
		How to select the cloud computing service model for your business	Asynchronous	videos, assignments	Web Ref.
7	S2, S3	Cloud deployment models: Interpret the differences between public, private, hybrid, and permutations of each .	Face-to-Face Asynchronous	Lectures	Chapter 3
		Cloud Deployment Models	Asynchronous	videos, reading	Web Ref.
8	S1, S2, S3	Design of a simple deployment model to include the application to be hosted, selection of IaaS, SaaS, PaaS, platform hosting option, and management options.	Face-to-Face Asynchronous	Lectures	Chapter 3
		How to select the cloud computing deployment model for your business	Asynchronous	videos, assignments, reading	Web Ref.
Midterm Exams					
9	S1, S2, S3	Review different CSP frameworks, including best practices, implementation recommendations, and products and services offered	Face-to-Face Asynchronous	Lectures	Chapter 4
		Compare between different CSPs.	Asynchronous	videos, assignments, reading	Web Ref.
10	K3	Understand the security risks and	Face-to-Face Asynchronous	Lectures	Chapter 5

		ways of minimizing them			
		Cloud computing security concerns	Asynchronous	videos, reading, quiz	Web Ref.
11	K3	Identify different legal factors involved in commissioning a cloud system	Face-to-Face Asynchronous	Lectures	Chapter 5
		Cloud computing legal issues	Asynchronous	videos, reading	Web Ref.
12	K1, K2, K3	Virtualization	Face-to-Face Asynchronous	Lectures	Chapter 6
		What is Virtualization	Asynchronous	videos, reading, quiz	Web Ref.
13	S2, S3	scalability, availability, fault tolerance, and disaster recovery	Face-to-Face Asynchronous	Lectures	Chapter 7
		Popular Virtualization Platforms and Technologies	Asynchronous	videos, assignments, reading	Web Ref.
14	K1, K2, K3, S1, S2, S3, C1, C2	Presentations & Projects Discussions		Projects	-
	-	Review	Asynchronous	Forum	-
Final Exams					

*Teaching procedures: (Face-to-Face, synchronous, asynchronous). ** Teaching methods: (Lecture, video….).
*** Reference: (Pages of the book, recorded lecture, video….)

Eighth: Assessment Methods

Methods	Online Learning	Blended Learning	Face-To-Face Learning	Specific Course Output to be assessed **If any CILO will not be assessed in the course, mark NA.							
				K1	K2	K3	S1	S2	S3	C1	C2
First Exam											
Second Exam											
Mid-term Exam		30		✓	✓	✓	✓	✓	✓		
Participation											
Asynchronous Activities											
Quizzes		5		✓	✓	✓					
Assignments		5					✓	✓	✓		
Group presentation		10		✓	✓	✓	✓	✓	✓	✓	✓
Final Exam		50		✓	✓	✓	✓	✓	✓		
Total out of 100		100									

Ninth: Course Policies

- All course policies are applied to all teaching patterns (online, blended, and face-to-face Learning) as follows:
  a. Punctuality.
  b. Participation and interaction.
  c. Attendance and exams.
- Academic integrity: (cheating and plagiarism are prohibited).

Approval	Name	Date	Signature
Head of Department			
Faculty Dean			