

Course Description Form for Fundamentals of Cloud Computing

1. Course name:	Fundamentals of Cloud Computing
2. Course code:	CCF
3. Semester / Year:	2026-2027
4. Date of preparation of this description:	14/10/2026
5. Available forms of attendance:	In-person + online (when needed)
6. Total number of study hours / total number of units:	3 hours / 4 units
7. Name of course coordinator	Name: Asst. Lect. Ali Jaber Shinawa Email: ali.jaber@uowa.edu.iq

8. Course objectives					
Understanding the fundamentals of cloud computing and its strategic importance in the digital .media industry ✓ Employing cloud services effectively in the .production, editing, and storage of multimedia ✓ Understanding the role of content delivery networks (CDNs) in the speed of streaming and .distributing digital content ✓ Using cloud collaboration tools to manage media .projects and facilitate remote work ✓ Becoming familiar with the fundamentals of cloud security to protect media assets and intellectual .property ✓ Practical application on cloud content .management systems (Cloud CMS) and digital archiving ✓ Evaluating and selecting the cloud solutions most suitable technically and economically for media .platforms ✓			Objectives of the course subject		
9. Teaching and learning strategies					
.Theoretical lectures supported by applied examples ✓ .Class discussions and analysis of real case studies ✓ .Applied projects (reports and short research papers) ✓ .Training in using quantitative methods for forecasting and decision-making ✓ .E-learning through digital resources and educational videos ✓				Strategy	
10. Course structure					
Assessment method	Learning method	Unit or topic name	Required learning outcomes	Hours	Week
Oral questions	Lecture + discussion	Introduction to Cloud Computing	Identifying the basic concepts of cloud computing	3	1
Short quiz	Lecture + examples	Overview of Computing Patterns	Distinguishing between the different computing patterns and models and their evolution	3	2

Short report	Lecture + participation	Motivations for the Emergence of Cloud Computing	Understanding the technical reasons and motivations that led to the emergence of the cloud	3	3
Assignment	Lecture + discussion	Importance of Cloud Computing	Recognizing the strategic and operational importance of cloud computing	3	4
Assignment	Lecture + exercise	Basic Principles of Cloud Computing	Understanding the concepts and rules guiding cloud architecture	3	5
Short quiz	Lecture + case study	Basic Characteristics of Cloud Computing	Identifying the basic characteristics and features of the cloud	3	6
Assignment	Lecture + training	Cloud Deployment and Launch Models	Distinguishing between cloud deployment and launch models	3	7
Monthly test	Lecture + practical exercise	Cloud Computing Service Provider	Identifying the leading cloud computing service providers	3	8
Short report	Lecture + discussion	Beneficiary of Cloud Computing Services	Understanding the roles and forms of beneficiaries (consumers) in the cloud environment	3	9

Assignment	Lecture + practical examples	Cloud Computing Architecture and Design	Identifying the architectural components of the cloud environment	3	10
Short quiz	Lecture + training	Cloud Computing Architecture and Design Model	Analyzing the structural model of cloud design and its applications	3	11
Assignment	Lecture + case study	1 Consumer Layer	Understanding the functions and tasks of the consumer layer in the architecture	3	12
Report	Lecture + training	2 Computer Network Layer	Understanding the role of networks and their connectivity in the cloud infrastructure	3	13
Class participation	Review + exercises	3 Cloud Management Layer	Identifying how the cloud is managed and its resources controlled	3	14
Final exam	Written	Exam	Final test	3	15
Short report	Lecture + examples	Cloud Computing Service Models: Infrastructure as a Service (IaaS) Model	Identifying cloud computing service models (IaaS)	3	16
Assignment	Lecture + participation	Components of Infrastructure as a Service	Analyzing the physical and virtual components of the infrastructure	3	17

Assignment	Lecture + discussion	When to Use Infrastructure as a Service	Determining the appropriate cases for adopting Infrastructure as a Service	3	18
Short quiz	Lecture + exercise	Components of Platform as a Service (PaaS)	Identifying Platform as a Service (PaaS) and its components	3	19
Assignment	Lecture + case study	Cloud Computing Management and the Importance of Cloud Computing Management	Understanding the foundations and importance of effective management of cloud resources	3	20
Monthly test	Lecture + training	Success Factors for Transitioning to the Cloud	Determining the requirements and success factors for a smooth transition to the cloud	3	21
Short report	Lecture + practical exercise	The Role of the Beneficiary in Activating Cloud Operation and Managing the Cloud Infrastructure	Understanding the role of the beneficiary in activating and managing the infrastructure	3	22
Assignment	Lecture + discussion	Cloud Application Management	Identifying the mechanisms for managing and updating cloud applications	3	23
Short quiz	Lecture + practical examples	Cloud Computing Security	Recognizing the security challenges and threats in cloud computing	3	24

Assignment	Lecture + training	Main Strategies for Managing Cloud Service Security, and Security Controls	Identifying the strategies controlling service security	3	25
Report	Lecture + case study	Data Security, Cloud Network Security	Evaluating the mechanisms for securing cloud data and networks	3	26
Class participation	Lecture + training	Platform Security	Understanding how to secure platforms against breaches	3	27
Short report	Review + exercises	Disaster Recovery Planning	Understanding backup and service restoration plans	3	28
Assignment	Lecture + examples	Privacy and Integrity Protection	Applying standards for privacy protection and data integrity	3	29
Final exam	Written	Exam	Final test	3	30

11. Course evaluation

Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily and oral exams, monthly and written exams, reports, etc.

Preparation and class participation: 10 marks. طط

Monthly test: 30 marks. يي

Final exam: 60 marks. كك

Total = 100 marks لل

12. Learning and teaching resources

Cloud Computing, Dr. Khalid bin Nasser	Required textbooks
National Institute of Standards and Technology Patrick D. Gallagher, Under Secretary for Standards and Technology and Director	Main references

	Recommended supporting books and references
Amazon Web Services (AWS) Documentation	Electronic references, internet websites