BAHRIA UNIVERSITY

Software Engineering Department

SPRING 2024, WEEKLY COURSE BREAKUP PLAN

Course Title**: CLOUD COMPUTING**
Course Code**: SEN-401**
Credit Hours**: 2+1**
Prerequisite**: NONE**
Course**: BSE-6**
Section**: A/B**

Course Objectives & Description:

The course familiarizes students with cloud computing technologies and practices into a series of well-defined concepts, models, technology mechanisms, and technology architectures, all from an industry-centric and vendor-neutral point of view.

COURSE LEARNING OUTCOMES (CLO):

CLO#	Statement	Bloom's Taxonomy	Associated PLO
1	Define the fundamental concepts of cloud computing.	C1	PLO1
2	Analyze problem requirements to recognize what type of data and processes are involved in a cloud computing solution.	C2	PLO2
3	Apply and develop business centric models on cloud based IT resources.	C3	PLO3
4	Present the updated technologies evolving in the field of Cloud Computing.	A2	PLO9

Week	Starting Date	Tentative Course Plan
1	12th Feb	Course Introduction Fundamentals of Cloud Computing
2	19th Feb	Fundamentals of Cloud Computing [Cont…]
3	26th Feb	Broadband Networks and Internet Architecture Virtualization Technology Web Technology
4	4th Mar	Cloud Applications + Quiz#1
5	11th Mar	Popular Cloud Platforms in Industry (AWS, Google AppEngine, Windows Azure)
6	18th Mar	Virtualization and Containerization in Cloud Computing + Quiz#2
7	25th Mar	Web API Services

8	1st April	Cloud Storage
9	**8th to 16th April**	**MIND TERM EXAMINATIONS**
10	15st Apr	MID TERM PAPER SHOWING Accessing and Manipulating Cloud Data
11	22th Apr	Windows Azure SQL Database
12	29th Apr	Cloud Load Balancing
13	6th May	Cloud Security
14	13thMay	Cloud Computing application life cycle management - Quiz#3
15	20th May	An architecture and applications of IoT, Fog/Edge Computing and Cloud Computing
16	27th May	An architecture and applications of IoT, Fog/Edge Computing and Cloud Computing [Cont…]
17	3rd June	Presentations
18	**10th to 17th June**	**FINAL TERM EXAMINATIONS**

NOTE:

a. *This schedule is subject to revisions as conditions may warrant.*

b. *Topics will be covered in sequence no matter if city observes any planned or unplanned holidays.*

c. *The information in this course outline is subject to revision as conditions may warrant.*

METHOD OF INSTRUCTION:

NOTE:

a. *This schedule is subject to revisions as conditions may warrant.*

b. *Topics will be covered in sequence no matter if city observes any planned or unplanned holidays.*

c. *The information in this course outline is subject to revision as conditions may warrant.*

COURSE ASSESSMENT METHOD

METHOD OF EVALUATION AND STRUCTURE:

A student's grade will be based on multiple measures of performance as mentioned below:

EVALUATION INSTRUMENTS (EI)	MARKS
Quizzes	10
Assignments	20
Mid Term Examination	20
Final Examination	50
Total	**100**

Mapping of CLOs to PLOs (Program Learning Outcomes)

PLOs	CLOs			
	CLO 1	CLO 2	CLO 3	CLO 4
PLO:1 (Engineering Knowledge)	X			
PLO:2 (Engineering Problem Analysis)		X		
PLO:3 (Designing and Development)			X	
PLO:4 (Investigation)				
PLO:5 (Modern tool usage)				
PLO:6 (Engineer and Society)				
PLO:7 (Environment and sustainability)				
PLO:8 (Professionalism and Ethics)				
PLO:9 (Individual and Team Work)				X
PLO:10 (Communication)				
PLO:11 (Lifelong learning)				
PLO:12 (Project Management)				

Mapping of CLOs to Course Assessment

EI	CLO's			
	CLO 1	CLO 2	CLO 3	CLO 4
Assignments			x	x
Quizzes	x	x	x	
Midterm Exam	x	x	x	
Final Exam	x	x	x	

GRADING SYSTEM:

Letter Grade	Grade Point	Percentage	
A	4.0	≥ 85	-
A-	3.67	≥ 80	< 85
B+	3.33	≥ 75	< 80
B	3.00	≥ 71	< 75
B-	2.67	≥ 68	< 71
C+	2.33	≥ 64	< 68
C	2.00	≥ 60	< 64
C-	1.67	≥ 57	< 60
D+	1.33	≥ 54	< 57
D	1.00	≥ 50	< 53
F	0.00	-	< 50

COURSE RESOURCES

INSTRUCTOR:

NAME: Engr. Muhammad Faisal
DESIGNATION: SR. Assistant Professor
OFFICE: Faculty 2, First Floor, Engineering Block
EMAIL: mfaisal.bukc@bahria.edu.pk

COUNSELING HOURS:

Wednesday: 10:30 TO 12:30
Friday: 10:30 TO 12:30

TEXT BOOK

1. Rajkumar Buyya, Christian Vecchiola "Mastering Cloud Computing", McGraw Hill
2. THOMAS ERL, "CLOUD COMPUTING CONCEPTS, TECHNOLOGY AND ARCHITECTURE", 1ST ED., 2014, PEARSON.

REFERENCE BOOKS

1. RONALD L. KRUTZ AND RUSSELL DEAN VINES, "CLOUD SECURITY-A COMPREHENSIVE GUIDE TO SECURE CLOUD COMPUTING", 2013, WILEY.
2. BARRIE SOSINKY, "CLOUD COMPUTING", 1ST ED., 2014, WILEY.
3. **"CLOUD COMPUTING:** PRINCIPLES AND PARADIGMS", JOHN WILEY & SONS