DEPARTMENT OF INFORMATION TECHNOLOGY
TEACHING PLAN

Course Code	Course Title	Semester	Branch	Contact Periods /Week	Academic Year	Date of commencement of Semester
20IT6T02	CLOUD COMPUTING	VI	IT	6	2024-2025	18-11-2024

COURSE OUTCOMES

1	Illustrate the main concepts, key technologies, strengths and limitations of cloud computing. (K2)
2	Discover the enabling technologies that help in the development of cloud. (K4)
3	Develop the ability to understand and use the architecture of compute and storage cloud, service and delivery models. (K3)
4	Summarize the core issues of cloud computing such as resource management and security. (K2)
5	Identify the appropriate technologies, algorithms and approaches for implementation and use of cloud. (K3)

UNIT	Out Comes / Bloom's Level	Topics No.	Topics/ Activity	Text Book/ Reference	Contact Hour	Delivery Method
I	CO – 1	1.1	Introduction	T1	1	Chalk & Board; Power point presentations; Assignment; Test
		1.2	Basics of cloud computing	T1	1	
		1.3	Definition of cloud	T1	1	
		1.4	Evaluation of cloud computing	T1	1	
		1.5	Underlying principles of parallel computing	T1	1	
		1.6	Underlying principles of distributed computing	T1	1	
		1.7	Cloud characteristics	T1	1	
		1.8	Pron &cons of cloud	T1	1	
		1.9	Types of cloud computing	T3	1	
		1.10	Services of cloud computing	T3	1	
		1.11	On demand provisioning	T3	1	
Content beyond syllabus		1.12	Cloud computing services	T3	1	
				Total	12	
II		2.1	Cloud enabling Technologies	T3	1	Chalk & Board
		2.2	Service oriented architecture	T3	1	

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			implementation			
		2.6	Decomposition of cloud security	T3	1	Test
		2.7	Secure cloud software testing	T3	1	
		2.8	Cloud penetration	T3	1	
		2.9	Cloud disaster recovery	T3	1	
		2.10	Cloud testing	T3	1	
Content beyond syllabus		2.11	Secure cloud software testing	T3	1	
				Total	11	
III	CO – 3	3.1	Cloud computing risks	T3	1	Chalk & Board Power point presentations Assignment Test
		3.2	Cloud computing issues	T3	1	
		3.3	The CIA Triad	T3	1	
		3.4	Privacy and compliance risks	T3	1	
		3.5	Common threats	T3	1	
		3.6	Common vulnerabilities	T3	1	
		3.7	Cloud access control issues	T3	1	
		3.8	Cloud service provider risks	T3	1	
Content beyond syllabus		3.9	Cloud computing risks	T3	1	
				Total	09	
IV	CO – 4	4.1	Cloud computing security challenges	T3	1	Chalk & Board Power point presentations Assignment Test
		4.2	Security policy implementation	T3	1	
		4.3	Policy types	T3	1	
		4.4	Computer security	T3	1	
		4.5	Cloud Security challenges			
		4.6	Software as a service security			
		4.7	Security governance			
		4.8	IAM			
		4.9	Security standards			
		4.11	Computer security incident response	T3	1	
		4.12	Team (CSIRT) ,VM security recommendation	T3	1	
				Total	12	
V	CO – 5	5.1	Cloud computing security architecture and design patterns	T3	1	Chalk & Board

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		5.2	Architectural consideration	T3	1	Power point presentations
		5.3	Trusted cloud computing	T3	1	
		5.4	Secure excecution environemnts and communication	T3	1	Assignment
		5.5	Identity management and access control	T3	1	Test
		5.6	Autonomic security	T3	1	
		5.7	Introduction to design pattern	T3	1	
		5.8	Security patterns for cloud computing	T3	1	
Content beyond syllabus		5.9	Identity management and access control	T3	1	
				Total	9	
				CUMULATIVE PROPOSED PERIODS	52	

Text Books:

S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION
1	1. Kai Hwang, Geoffrey C. Fox, Jack G. Dongarra, Distributed and Cloud security From Parallel Processing to the Internet of Things, Morgan KaufmannPublishers.
2	Rittinghouse, John W. and James F. Ransome, Cloud security : Implementation, Management and Security, CRCPress.

Reference Books:

S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION
1	Rajkumar Buyya, Christian Vecchiola, S. ThamaraiSelvi, Mastering Cloud Cloud security Tata McgrawHill..
2	Toby Velte, Anthony Velte, Robert Elsenpeter, Cloud Cloud security - A Practical Approach, Tata McGrawHill..
3	George Reese, Cloud Application Architectures: Building Applications and Infrastructure in the Cloud: Transactional Systems for EC2 and Beyond (Theory in Practice), O'Reilly.

Web Details:

1	**https://www.javatpoint.com/ cloud -computing -tutorial**
2	**https://www.geeksforgeeks.org/cloud computing tutorials/**

		Name	Signature with Date
i.	Faculty	Ms. U Jenny Grace	18/11/24
ii.	Module Coordinator	Mr.Ch R K Raju	
iii.	Programme Coordinator	Dr. RVVSV Prasad	18/11/24

Principal

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