



Swarnandhra College of Engineering & Technology

Autonomous and recognized under 2(F) and 12(B) by UGC

Recognized by AICTE, permanently affiliated to JNTUK Kakinada

Accredited by NAAC with 'A' Grade (2nd Cycle)

Seetharamapuram, Narsapur - 530280 (Andhra Pradesh)

DEPARTMENT OF INFORMATION TECHNOLOGY TEACHING PLAN

Course Code	Course Title	Semester	Branch	Contact Periods/ Week	Academic Year	Date of commencement
20IT6T02	CLOUD COMPUTING	VI	IT	6	2022-2023	21/2/2022

COURSE OUTCOMES

1	Articulate the main concepts, key technologies, strengths and limitations of cloud computing.
2	Learn the key and enabling technologies that help in the development of cloud.
3	Develop the ability to understand and use the architecture of compute and storage cloud, service and delivery models
4	4. Explain the core issues of cloud computing such as resource management and security.
5	Evaluate and choose the appropriate technologies, algorithms and approaches for implementation and use of cloud.

Implementation and use of Cloud.						
UNIT	Out Comes / Bloom's Level	Topics No.	Topics/ Activity	Text Book/ Ref	Contact Hour	Delivery Method
		Introduction				
I	CO - 1	1.1	Introduction to Cloud Computing.	T2	2	Chalk & Board
		1.2	Definition of Cloud.	T2	1	
		1.3	Evolution of Cloud Computing.	T2	1	
		1.4	Underlying Principles of Parallel and Distributed Computing.	T2	1	Power point presentations
		1.5	Cloud Characteristics.	T2	2	
		1.6	Elasticity in Cloud - On-Demand Provisioning.	T2	2	Assignment
Content beyond syllabus		1.7	Shell Programming Introduction	T1	1	Test
Total					10	
II	CO - 2	Cloud Enabling Technologies:				
		2.1	Service Oriented Architecture	T1	1	



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Chalk
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Board

Power point
presentations

Assignment

Test

CO - 2	2.2	REST and Systems of Systems	T1	1	Chalk & Board Power point presentations Assignment Test
	2.3	Web Services.	T1	1	
	2.4	Publish-Subscribe Model.	T1	1	
	2.5	Basics of Virtualization	T1	1	
	2.6	Types of Virtualization	T1	1	
	2.7	Implementation Levels of Virtualization.	T1	1	
	2.8	Virtualization Structures.	T1	1	
	2.9	Tools and Mechanisms.	T1	1	
	2.10	Virtualization of CPU.	T1	1	
	2.11	Memory, I/O Devices.	T1	1	
	2.12	Virtualization Support and	T1	1	
	2.13	Disaster Recovery	T1	1	
	2.14	Case studies on virtualization	T1,T2	1	
	Total			14	
CO - 3	Cloud Architecture, Services And Storage				Chalk & Board Power point presentations Assignment Test
	3.1	Layered Cloud Architecture Design.	T1	1	
	3.2	NIST Cloud Computing Reference Architecture.	T2	2	
	3.3	Public, Private and Hybrid Clouds.	T2	2	
	3.4	IaaS, PaaS, SaaS.	T2	1	
	3.5	Architectural Design Challenges.	T2	1	
	3.6	Cloud Storage, Storage-as-a-Service.	T2	1	
	3.7	Advantages of Cloud Storage.	T1	1	
	3.8	Cloud Storage Providers. S3.	T1	1	
	3.9	Security issues on private cloud	T1,T2	1	
	Total			11	
CO - 4	Resource Management And Security In Cloud:				Chalk & Board Power point
	4.1	Inter Cloud Resource Management.	T1	1	
	4.2	Resource Provisioning and Resource Provisioning Methods.	T1	2	



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	4.3	Global Exchange of Cloud Resources.	T1	1	presentations
	4.4	Security Overview.	T1	2	
	4.5	Cloud Security Challenges.	T1	1	Assignment
	4.6	Software-as-a-Service Security.	T1	1	
	4.7	Security Governance.	T1	1	Test
	4.8	Machine Security.	T1	1	
	4.9	IAM, Security Standards.	T1	1	
Content beyond syllabus	4.10	Analysis of Cloud Security Challenges.	T1	1	
Total				13	

		Cloud Technologies And Advancements:			Chalk & Board
	5.1	Hadoop	T1,R1	2	
	5.2	MapReduce	T1,R1	1	Power point presentations
	5.3	Virtual Box	T1,R1	1	
	5.4	Google App Engine	T1,R1	1	Assignment
	5.5	Programming Environment for Google App Engine.	T1,R1	1	
	5.6	Federation in the Cloud	T1,R1	2	
	5.7	Four Levels of Federation	T1,R1	1	Test
	5.8	Federated Services and Applications, Future of Federation.	T1,R1	2	
Content beyond syllabus	5.9	Comparison of Cloud Technologies	T1,R1	1	
Total				14	

Text Books:

Cumulative Proposed Periods 62

S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION
1	Kai Hwang, Geoffrey C. Fox, Jack G. Dongarra. Distributed and Cloud Computing. From Parallel Processing to the Internet of Things, Morgan Kaufmann Publishers, 2013

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(Autonomous)

Narsapur, West Godavari District, A.P. 534280

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Reference Books:

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1	Kai Hwang, Geoffrey C. Fox, Jack G. Dongarra, Distributed and Cloud Computing, From Parallel Processing to the Internet of Things, Morgan Kaufmann Publishers.
2	Rittinghouse, John W. and James F. Ransome, Cloud Computing: Implementation, Management and Security, CRC Press.

Web Details:

1	Rajkumar Buyya, Christian Vecchiola, S. ThamaraiSelvi, Mastering Cloud Computing, Tata McGrawHill.
2	https://lecturenotes.in/notes/17784-note-for-design-and-analysis-of-algorithm-daa-by-shekharesh-barik?reading=true
3	https://www.tutorialspoint.com/design_and_analysis_of_algorithms/index.htm
4	https://www.geeksforgeeks.org/fundamentals-of-algorithms/#AnalysisofAlgorithms

	Name	Signature with Date
ii Faculty	Ms U Jenny Grace	u. jenny 3/6/24
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Principal