

PVP SIDDHARTHA INSTITUTE OF TECHNOLOGY, KANURU, VIJAYAWADA
(AUTONOMOUS)
INFORMATION TECHNOLOGY

CLOUD COMPUTING

Course Code	19IT4602B	Year	III	Semester	II
Course Category	Program Elective	Branch	IT	Course Type	Theory
Credits	3	L-T-P	3-0-0	Prerequisites	DCCN
Continuous Internal Evaluation :	30	Semester End Evaluation:	70	Total Marks:	100

Course Outcomes		Blooms Taxonomy Level
Upon successful completion of the course, the student will be able to		
CO1	Understanding Fundamental Concepts and Models of Cloud Computing and Cloud Enabling Technologies, Infrastructure Mechanisms	L2
CO2	Determine Cloud Infrastructure Mechanisms	L3
CO3	Determine different Cloud Maintenance strategies	L3
CO4	Analyze Cloud Architectures and Delivery Model	L4

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:Substantial, 2: Moderate, 1:Slight)														
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	PSO1	PSO 2
CO 1	2												1	
CO 2	2			2									1	
CO 3	2			2									1	
CO 4	2	2											1	
Syllabus														
Unit No	Contents												Mapped CO	
I	Understanding Cloud Computing: Cloud origins and influences, basic concepts and terminology, goals and benefits, risks and challenges. Fundamental Concepts and Models: Roles and boundaries, cloud characteristics, cloud delivery models, cloud deployment models												CO1	
II	Cloud Enabling Technology: Data center technology, virtualization technology, web technology, multitenant technology, service technology.												CO1	

III	Cloud Infrastructure Mechanisms: Logical network perimeter, virtual server, cloud storage device, cloud usage monitor, resource replication	CO1, CO2
IV	Specialized Cloud Mechanisms: Automated Scaling Listener, Load Balancer, SLA Monitor, Pay-Per- Use Monitor, Audit Monitor, Failover System, Hypervisor, Resource Cluster, Multi-Device Broker, State Management Database. Case Studies.	CO3
V	Fundamental Cloud Architectures: Workload distribution architecture, resource pooling architecture, dynamic scalability architecture, elastic resource capacity architecture, service load balancing architecture, cloud bursting architecture, elastic disk provisioning architecture, redundant storage architecture. Cloud Delivery Model Considerations: The cloud provider perspective: Building IaaS environments, equipping PaaS environments, optimizing SaaS environments, the cloud consumer perspective: Working with IaaS environments, working with PaaS environments, working with SaaS services.	CO1,CO 4

Learning Recourses

Text Books

1. Thomas Erl, Ricardo Puttini, ZaighamMahmood, Cloud Computing: Concepts, Technology & Architecture, Prentice Hall, 2013.

References

1. John W. Rittinghouse, James F. Ransome, Cloud Computing: Implementation, Management and Security, CRC Press, 2012.
2. Anthony T.Velte, Toby J Velte Robert Elsenpeter, Cloud Computing a practical approach, ,McGraw Hill,2010.
3. Michael Miller, Cloud Computing: Web based Applications That Change the Way You Work and Collaborate Online, Que Publishing, 2008.

e-Resources & other digital material

NPTEL VIDEO LECTURES