

CLOUD COMPUTING (MINOR)

Course Code		Year	IV	Semester	I
Course Category	MINOR	Branch	IT	Course Type	Theory
Credits	4	L-T-P	4-0-0	Prerequisites	DCCN
Continuous Internal Evaluation:	30	Semester End Evaluation:	70	Total Marks:	100

Course Outcomes		Blooms Taxonomy Level
Upon Successful completion of course, the student will be able to		
CO1	Understand 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.	L3

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations(3:Substantial,2:Moderate,1:Slight)

	PO1	PO2	PO3	PO4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO11	PO12	PSO1	PSO2
CO1	3												2	
CO2	3			3									2	
CO3	3			3									2	
CO4	3	3											2	

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: Datacenter 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, Fail over System, Hypervisor, Resource Cluster, Multi-Device Broker, State Management Database.	CO3

V	Fundamental Cloud Architectures: Workload distribution Architecture, resource pooling architecture, dynamic scalability architecture, elastic bresource capacity architecture, service load balancing architecture, cloud bursting architecture, elastic disk provisioning architecture, redundant storage architecture.	CO1, CO4
Learning Resources		
Text Books		
1.Thomas Erl, Ricardo Puttini, Zaigham Mahmood, Cloud Computing: Concepts ,Technology & Architecture, Prentice Hall,2013.		
References		
1. JohnW. Rittinghouse, JamesF. Ransome, Cloud Computing: Implementation, Management and Security, CRC Press,2012.		
2. AnthonyT.Velte, TobyJVelte Robert Elsenpeter, Cloud Computing a practical approach, McGrawHill,2010.		
3. MichaelMiller,CloudComputing:WebbasedApplicationsThatChangetheWay You Work and Collaborate Online, QuePublishing,2008.		
e-Resources& other digital material		
NPTELVIDEOLECTURES		