

GANPAT UNIVERSITY									
FACULTY OF ENGINEERING & TECHNOLOGY									
Programme		Bachelor of Technology				Branch/Spec.		Electronics and Communication Engineering	
Semester		VII				Version		1.0.0.0	
Effective from Academic Year			2026-27			Effective for the Batch admitted in			July 2023
Course Code		2EC71PE01		Course Name		Cloud Computing			
Teaching Scheme					Examination Scheme (Marks)				
(Per week)	Lecture (DT)		Practical (Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	3	0	1	0	4	Theory	40	60	100
Hours	3	0	2	0	5	Practical	30	20	50
Pre-requisites									
Computer Networks									
Course Outcomes									
On successful completion of the course, the students will be able to:									
CO1	Explain cloud computing concepts, models, and architecture								
CO2	Describe virtualization techniques and cloud infrastructure								
CO3	Identify and use cloud platforms and services								
CO4	Analyze cloud security issues and management practices								
CO5	Apply cloud computing concepts to real-world applications								
Theory Syllabus									
Unit	Content								Hrs.
1	Introduction to Cloud Computing Cloud computing basics, evolution, characteristics, benefits, Cloud deployment models: Public, Private, Hybrid, Community, Cloud service models: IaaS, PaaS, SaaS								9
2	Virtualization and Cloud Infrastructure Virtualization concepts, types of virtualization, hypervisors, Data center architecture, cloud storage systems, resource provisioning								9
3	Cloud Platforms and Services Overview of AWS, Microsoft Azure, Google Cloud, Compute, storage, and networking services, cloud APIs								9
4	Cloud Security and Management Security challenges, authentication, authorization, Data security, privacy, service level agreements (SLA), cloud monitoring								9
5	Cloud Applications and Emerging Trends Cloud-based IoT, Big Data analytics, mobile cloud computing, Edge computing, future trends								9
Practical Content									
Practical assignments and tutorials are based on the above syllabus.									
Text Books									
1	Cloud Computing: Principles and Paradigms, Rajkumar Buyya, James Broberg, Andrzej M Goscinski, Wiley publication								
Reference Books									
1	Cloud Computing: A Practical Approach, Toby Velte, Anthony Velte, McGraw-Hill Osborne Media.								
2	Cloud Application Architectures: Building Applications and Infrastructure in the Cloud, George Reese, O'Reilly Publication.								
3	Cloud Computing Explained: Implementation Handbook for Enterprises, John Rhoton, Recursive Press.								

ICT/MOOCs Reference	
1	https://nptel.ac.in/courses/106105167/
2	https://onlinecourses.nptel.ac.in/noc21_cs14/preview

Mapping of CO with PO and PSO:															
	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12	P S O 1	P S O 2	P S O 3
CO1	3	2	2	1	2	1	1	1	1	1	1	2	2	3	1
CO2	3	3	2	1	2	1	1	1	1	1	1	2	3	2	2
CO3	2	2	3	1	3	1	1	1	2	2	1	2	1	1	2
CO4	2	3	2	2	2	2	1	2	1	1	1	2	1	2	3
CO5	2	2	3	2	3	1	1	1	2	2	2	3	2	2	2