20IT6301-CLOUD COMPUTING

Course Category:	**Program Core**	**Credits:**	3
Course Type:	**Theory**	**Lecture-Tutorial-Practice:**	2-0-2
Prerequisites:	**Computer networks**	**Continuous Evaluation:**	30
		Semester end Evaluation:	70
		Total Marks:	100

Course Outcomes	Upon successful completion of the course, the student will be able to:	
	CO1	Interpret the concepts of cloud computing and its standards.
	CO2	Analyze cloud models, security and storage accessibility in different cloud ecosystems
	CO3	Illustrate cloud services offered by various cloud vendors for an enterprise
	CO4	Implement cloud environment for various real time applications.

Contribution of Course Outcomes towards achievement of Program Outcomes (1-Low, 2-Medium, 3- High)

	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
CO1	1	2											1	
CO2		2									2			1
CO3		1			3						2		2	1
CO4		2			2								3	

Course Content

UNIT I:

Cloud Computing Basics: Cloud Computing Overview – Cloud Components, Infrastructure, Cloud Services, and Applications – Storage, Database services.

Organizing the Cloud computing: When You can use Cloud Computing, Benefits, Limitations and Security Concerns.

Hardware and Infrastructure: Clients, Security, Network.

UNIT II:

Accessing the Cloud: Platforms, Web Applications, Web APIs, and Web Browsers.

Cloud Storage: Overview, Cloud Storage Providers – Amazon S3, Google BigtableDatastore, MobileMe, LiveMesh.

Standards: Application, Client, Infrastructure, Service.

UNIT III:

Software as a service : Overview, Advantages, Driving Forces, Company Offerings – Intuit, Google, Microsoft

Software plus services : Overview, Pros, Cons, Vendors, Mobile Device Integration, Providers-Adobe AIR, Microsoft Online

Developing Applications: Google, Microsoft

UNIT IV:

Local clouds and Thin Clients: Virtualization in an organization, Server Solutions- Microsoft HyperV, VMWare,

	Cloud Applications: Scientific applications: Healthcare, Business and consumer applications: CRM, Salesforce.com, Productivity: Drop box and icloud, Social Networking: Facebook. **Cloud Security Mechanisms** - Encryption, Hashing, Digital Signature, IAM
Text books and Reference books	**Text Book(s):** [1]. Velte T. Antony, Velte J. Toby., Elsenpeter Robert, "Cloud Computing: A Practical Approach", Tata McGraw- Hill , 2010 [2] Rajkumar Buyya, Christian Vecchiola, S Tamarai Selvi "Mastering Cloud Computing Foundations And Applications Programming" , McGraw Hill Education, 2016. [3] Thomas Erl and RicardoPuttini Cloud Computing-Concepts, Technology And Architecture, Pearson, 2014. **Reference Books:** [1]. Barrie Sosinsky, "Cloud Computing Bible", Wiley Publishers, 2012 [2]. Miller Michael, "Cloud Computing: Web-Based Applications That Change the Way You Work and Collaborate Online", Que Publishing, 2008.
E-resources and other digital material	[1].John R Williams, Abel Sanchez , MIT Professional Education, "Cloud DevOps", 2022 https://professional.mit.edu/course-catalog/cloud-devops-continuous-transformation [2]. Courseera, "Cloud Application Security", 2021, https://www.mooc-list.com/course/cloud-application-security-coursera [3].Suresh S, Udemy, "Server Virtualization", 2021 https://www.udemy.com/tutorial/cloud-computing-the-technical-essentials/basics-of-virtualization/ [4] Prof.SowmyaKantiGhosh,IITKharagpur, "Cloud Computing"2022 https://nptel.ac.in/courses/106/105/106105167/

Designation	Name in Capitals	Signature with Date
Course Coordinator	M.RAMESH	
Module Coordinator	Dr.S.SUHASINI	
Program Coordinator	Dr.G.KALYANI	
Head of the Department	Dr.M.SUNEETHA	