

## CLOUD COMPUTING

Semester	Subject Code	Category	Lecture Hrs		Theory Hrs		Practical		Credits
			Per week	Per Sem	Per week	Per Sem	Per week	Per Sem	
VI	21CCS6B	Core VIII	6	90	6	90	0	0	4

### COURSE OBJECTIVES

- To understand the working concept of cloud computing.
- To familiarize themselves with the lead players in cloud.
- To appreciate the emergence of cloud as the next generation computing paradigm.

### COURSE OUTCOME

On successful completion of this course, students will be able to

CO Number	CO Statement	Knowledge Level(K1-K4)
CO1	Identify the architecture, infrastructure and delivery models of cloud computing	K1
CO2	Articulate the main concepts, key technologies, strengths and limitations of cloud computing	K3
CO3	The core issues of cloud computing such as security, privacy and interoperability	K3
CO4	Evaluating Web tools	K4
CO5	Applying the cloud Services to real time	K3

*K1-Remember; K2 –Understand; K3-Apply; K4-Analyze.*

### MAPPING WITH PROGRAMME OUTCOMES

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	M	M	S
CO2	S	S	S	S	L	M
CO3	S	S	S	S	L	S
CO4	S	S	S	M	S	S
CO5	S	S	S	S	S	S

*S-Strong; M-Medium; L-Low*

## **UNIT –I: CLOUD COMPUTING BASICS**

**18 Hours**

Fundamentals –Introduction to Cloud Computing, Definition, Characteristics, Components, Cloud provider, SAAS, PAAS, IAAS and Others- Organizational scenarios of clouds, Administering & Monitoring cloud services-benefits and limitations- Deploy application over cloud- Comparison among SAAS, PAAS, IAAS -Cloud computing platforms -Infrastructure as service(Amazon EC2,Platform as Service: Google App Engine, Microsoft Azure, Utility Computing, Elastic Computing )

## **UNIT- II : VIRTUALIZATION**

**17 Hours**

Web-Based Application – Pros and Cons of Cloud Service Development – Web services: SOAP and REST, SOAP versus REST, AJAX- Virtual machine technology- virtualization applications in enterprises, Pitfalls of virtualization Multitenant .

**SOFTWARE:** Multi-entity support, Multi-schema approach- Multitenance using cloud data stores -Data access control for enterprise applications.

## **UNIT -III CLOUD INFRASTRUCTURE**

**17 Hours**

Centralizing Email communications –collaborating on Schedules – Collaborating on To-Do Lists – Collaborating Contact Lists – Cloud computing for the Community – Collaborating on Group Projects and Events – Cloud Computing for the Corporation.

## **UNIT -IV CLOUD COMPUTING TECHNOLOGY**

**19 Hours**

Collaborating on Calendars, Schedules and Task Management – Exploring Online Scheduling Applications–Exploring Online Planning and Task Management – Collaborating on Event Management – Collaborating on Contact Management – Collaborating on Project Management – Collaborating on Word Processing – Collaborating on Databases – Storing and Sharing Files – Evaluating Web Mail Services – Evaluating Web Conference Tools – Collaborating via Social Networks and Groupware – Collaborating via Blogs and Wikis.

## **UNIT -V CLOUD APPLICATION DEVELOPMENT**

**19 Hours**

OGSA – Sample Use Cases – OGSA Platform Components – OGSI – OGSA Basic Services. Globus Toolkit – Architecture – Programming Model – High Level Services – OGSI.Net. Middleware Solutions- Issues in cloud computing-Implementing real time application over cloud platform Issues in Intercloud environments- QOS Issues in Cloud- Dependability-Datamigration - Streaming in Cloud.

**Distribution of Marks: Theory 75% and Applications: 25%**

## TEXT BOOKS

S.No	Authors	Title	Publishers	Year of Publication
1	Judith Hurwitz, Bloor.R, Kanfman.M, Halper.F	Cloud Computing	Wiley India Edition	2010

## REFERENCE BOOK

S.No	Authors	Title	Publishers	Year of Publication
1	Arshdeep Bahga, Vijay Madisetti.	Cloud Computing	Universities Press	August 2014.
2	Haley Bear	IBM Business analytics and cloud computing	Que Publishing	2009
3	Thomas Erl, Zaigham Mahmood and Ricardo Puttini	Cloud Computing, Concepts, Technology, Architecture	Prentice hall	2013
4	Dan C. Marinesco	Cloud Computing - Theory and Practice	Elsevier	2013
5	Barrie Sosinsky	Cloud Computing Bible	Wiley Publishers	2011
6	GautamShroff	Enterprise Cloud Computing	CambridgeUniversity press	2010
7.	Rajkumar Buyya, James Broberg,, Andrzej Goscinski. p	Cloud Computing: Principles and Paradigms	Wiley-Blackwell	2011
8	K. Chandrasekaran	Essentials of Cloud Computing	Chapman and Hall/CRC;	2014

## WEB RESOURCES

1. <http://www.geektonight.com/cloud-computing-notes/>
2. [https://www.researchgate.net/publication/255994786\\_CLOUD\\_COMPUTING\\_BASICS](https://www.researchgate.net/publication/255994786_CLOUD_COMPUTING_BASICS)

## TEACHING METHODOLOGY

- Power point presentation
- Seminar by students
- Assignment to students
- Lecture through video.
- Discussion and interaction in class room

## SYLLABUS DESIGNER

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