

CLOUD COMPUTING (Professional Elective-I)

B Tech III Year I Sem

Course Code	Category	Hours/ Week			Credits	Maximum Marks		
23CY508	Professional Elective	L	T	P	3	CIE	SEE	TOTAL
		3	0	0		40	60	100
Contact Classes:48	Tutorial Classes: Nil	Practical Classes: -			Total Classes: 48			

Pre-requisites:

1. A course on “Computer Networks”.
2. A course on “Operating System”.

Course Objectives:

- This course provides an insight into cloud computing
- Topics covered include-Cloud Computing Architecture, Deployment Models, Service Models, Technological Drivers for Cloud Computing, Networking for Cloud Computing and Security in Cloud Computing

Course Outcomes:

- Understand different computing paradigms and potential of the paradigms and specifically cloud computing
- Understand cloud service types, cloud deployment models and technologies supporting and driving the cloud
- Acquire the knowledge of programming models for cloud and development of software application that runs the cloud and various services available from major cloud providers
- Understand the security concerns and issues in cloud computing
- Acquire the knowledge of advances in cloud computing.

UNIT-I

Computing Paradigms, Cloud Computing Fundamentals, Cloud Computing Architecture and Management

UNIT- II

Cloud Deployment Models, Cloud Service Models, Technological Drivers for Cloud Computing: SOA and Cloud, Multicore Technology, Web 2.0 and Web 3.0, Pervasive Computing, Operating System, Application Environment

UNIT- III

Virtualization, Programming Models for Cloud Computing: Map Reduce, Cloud Haskell, Software Development in Cloud

UNIT-IV

Networking for Cloud Computing: Introduction, Overview of Data Center Environment, Networking Issues in Data Centers, Transport Layer Issues in DCNs, Cloud Service Providers

UNIT-V

Security in Cloud Computing, and Advanced Concepts in Cloud Computing

TEXTBOOK:

1. Chandra sekaran, K. *Essentials of cloud computing*. CRC Press, 2014

REFERENCE BOOKS:

1. Cloud Computing: Principles and Paradigms, Editors: Rajkumar Buyya, James Broberg, Andrzej M. Goscinski, Wiley, 2011
2. Enterprise Cloud Computing-Technology, Architecture, Applications, Gautam Shroff, Cambridge University Press, 2010
3. Cloud Computing Bible, Barrie Sosinsky, Wiley-India, 2010