

COURSE TITLE	CLOUD TECHNICAL ESSENTIALS
COURSE CODE	01CT0823
COURSE CREDITS	3

Objective:

- 1 The Objective of this course is to give students a basic understanding of cloud computing, services, applications and uses. Students will build highly available, scalable, and cost-effective application step-by-step.
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Course Outcomes: After completion of this course, student will be able to:

- 1 Apply the informed decision about when and how to use core AWS services.
- 2 Use the AWS services to compute, storage, and database to different use cases.
- 3 Understand the cloud security with a review of AWS' shared responsibility mode.
- 4 Understand the AWS Identity and Access Management (IAM).
- 5 Use the AWS to optimize the cloud infrastructure.

Pre-requisite of course:NA

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
3	0	0	50	30	20	25	25

Contents : Unit	Topics	Contact Hours
1	Module AWS Overview and Security, definition of cloud computing, cloud value proposition, differentiate between workloads that run on-premises versus in the cloud, how to create an AWS account, Amazon Web Services, basic components of Amazon Elastic Compute Cloud (Amazon EC2) architecture, how to differentiate between a container and a virtual machine, features and advantages of using serverless technologies, Amazon Virtual Private Cloud (Amazon VPC), Storage & Databases on AWS, how to optimize solutions on AWS, how to differentiate between vertical scaling and horizontal scaling, Amazon EC2 Auto Scaling, Configure High Availability for your Application.	42
Total Hours		42

Textbook :

- 1 Cloud Computing: Concepts, Technology & Architecture (The Pearson Service Technology Series from Thomas Erl), Thomas Erl (Author), Ricardo Puttini (Author), Zaigham Mahmood (Author), PHI, 2013

References:

- 1 Essentials of Cloud Computing, Essentials of Cloud Computing, K. Chandrasekaran, CRC Press, 2015

Suggested Theory Distribution:

The suggested theory distribution as per Bloom’s taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking / Creative
10.00	20.00	40.00	30.00		

Instructional Method:

- 1 Students may use supplementary resources such as online videos, NPTEL videos, e-courses, Virtual Laboratory, etc.

Supplementary Resources:

- 1 MOOC Course, NPTEL, COURSERA, Udemy, Infosys, Springboot, SWYAM etc. Online learning platform