



B.P. Poddar Institute of Management and Technology
Department of Information Technology
Academic Year: 2024-2025, Sem: Odd
Lesson Plan

Stream : B.Tech/IT-4th Year
 Subject : Cloud Computing
 Subject Code : PEC IT701C
 Faculty Name: Siparna Rabi Das

L.No	Description	Reference	Pedagogy	Planned Date	Actual Date
L1	Defining a Cloud, Cloud Types – NIST model, Cloud Cube model, Deployment models (Public, Private, Hybrid and Community Clouds), Service models – Infrastructure as a Service, Platform as a Service, Software as a Service with examples of services/ service providers, Cloud Reference model	[TE1]	LCD Projector White Board	18-07-2024	18-07-2024
L2	Characteristics of Cloud Computing – a shift in paradigm	Ref 1	LCD Projector White Board	24-07-2024	24-07-2024
L3	Benefits and advantages of Cloud Computing	[TE3]	Online Meeting	25-07-	25-07-
L4	Cloud Architecture: A brief introduction on Composability, Infrastructure, Platforms, Virtual Appliances, Communication Protocols, Applications, Connecting to the Cloud by Clients	[TE3]	LCD Projector White Board	31-07-2024	31-07-2024
L5	Services and Applications by Type IaaS – Basic concept, Workload, partitioning of virtual private server instances, Pods, aggregations, silos PaaS – Basic concept, tools and development environment with examples SaaS - Basic concept and characteristics, Open SaaS and SOA, examples of SaaS platform	[TE3]	Online Meeting	01-08-2024	01-08-2024
L6	Identity as a Service (IDaaS) Compliance as a Service (CaaS)	[TE1], Ref 1	LCD Projector White Board	07-08-2024	07-08-2024
L7	Concepts of Abstraction and Virtualization Virtualization technologies: Types of virtualization (access, application, CPU, storage), Mobility patterns (P2V, V2V, V2P, P2P, D2C, C2C, C2D, D2D)	[TE1]	LCD Projector White Board	08-08-2024	08-08-2024
L8	Load Balancing and Virtualization: Basic Concepts, Network resources for load balancing, advanced load balancing (including Application Delivery Controller and Application Delivery Network), Mention of The Google Cloud as an example of use of load balancing	[TE1]	LCD Projector White Board	14-08-2024	14-08-2024
L9	Hypervisors: Virtual machine technology and types, VMware v Sphere	[TE1]	LCD Projector White Board	21-08-2024	21-08-2024
L10	Machine Imaging (including mention of Open Virtualization Format – OVF)	Ref 1, [TE3]	Online Meeting	22-08-2024	22-08-2024
L11	Porting of applications in the Cloud: The simple Cloud API and AppZero Virtual Application appliance	[TE3]	White Board	28-08-2024	28-08-2024

L12	Concepts of Platform as a Service Definition of services, Distinction between SaaS and PaaS (knowledge of Salesforce.com and Force.com)	[TE3]	LCD Projector White Board	29-08-2024	29-08-2024
L13	Application development Use of PaaS Application frameworks	[TE3]	LCD Projector White Board	04-09-2024	04-09-2024
L14	Use of Google Web Services Discussion of Google Applications Portfolio – Indexed search, Dark Web, Aggregation and disintermediation	[TE3]	LCD Projector White Board	05-09-2024	05-09-2024
L15	Productivity applications and service, Ad words, Google Analytics, Google Translate, a brief discussion on Google	[TE3]	LCD Projector White Board	11-09-2024	11-09-2024
L16	Toolkit (including introduction of Google APIs in brief), major features of Google App Engine service.	[TE3], Ref 1	Online Meeting	12-09-2024	12-09-2024
L17	Use of Amazon Web Services Amazon Web Service components and services: Amazon Elastic Cloud, Amazon Simple Storage system, Amazon	Ref 1	LCD Projector	18-09-2024	18-09-2024
L18	Elastic Block Store, Amazon Simple DB and Relational Database Service	Ref 1	LCD Projector White Board	19-09-2024	19-09-2024
L19	Types of services required in implementation – Consulting, Configuration, Customization and Support	[TE1], Ref 1	LCD Projector White Board	25-09-2024	25-09-2024
L20	Cloud Management An overview of the features of network management systems and a brief introduction of related products from large cloud vendors, Monitoring of an entire cloud computing deployment stack – an overview with mention of some products, Lifecycle management of cloud services (six stages of lifecycle)	[TE1]	Online Meeting	26-09-2024	26-09-2024
L21	Concepts of Cloud Security Cloud security concerns, Security boundary, Security service boundary	[TE1]	LCD Projector White Board	03-10-2024	03-10-2024
L22	Overview of security mapping	[TE2],	LCD Projector	23-10-	23-10-
L23	Security of data: Brokered cloud storage access, Storage location and tenancy, encryption, and auditing and compliance	[TE2]	Online Meeting	24-10-2024	24-10-2024
L24	Identity management (awareness of Identity protocol standards)	[TE3]	LCD Projector White Board	30-10-2024	30-10-2024
L25	Service Oriented Architecture: Basic concepts of message-based transactions, Protocol stack for an SOA architecture, Event-driven SOA, Enterprise Service Bus, Service catalogs	[TE2]	Online Meeting	31-10-2024	31-10-2024
L26	Applications in the Cloud: Concepts of cloud transactions, functionality mapping, Application attributes, Cloud service attributes, System abstraction and Cloud Bursting, Applications and Cloud APIs	[TE3], [TE5]	LCD Projector White Board	06-11-2024	06-11-2024
L27	Cloud-based Storage: Cloud storage definition – Manned and Unmanned	[TE4]	Online Meeting	07-11-2024	07-11-2024

L28	Webmail Services: Cloud mail services including Google Gmail, Mail2Web, Windows Live Hotmail, Yahoo mail, concepts of Syndication services	Ref 1	Online Meeting	13-11-2024	13-11-2024
-----	--	-------	----------------	------------	------------

References:

1. TE 1: Cloud Computing Bible by Barrie Sosinsky, Wiley India Pvt. Ltd, 2013
2. TE 2: Mastering Cloud Computing by Rajkumar Buyya, Christian Vecchiola, S. Thamarai Selvi, McGraw Hill Education (India) Private Limited, 2013
3. TE 3: Cloud computing: A practical approach, Anthony T. Velte, Tata Mcgraw-Hill
4. TE 4: Cloud Computing, Miller, Pearson
5. TE 5: Building applications in cloud: Concept, Patterns and Projects, Moyer, Pearson

Ref1: Cloud Computing – Second Edition by Dr. Kumar Saurabh, Wiley India

Assessment Methodologies:

1. Presentation
2. Quiz
3. Report writing
4. Assignments
5. University Examination

Faculty Sign