Diploma in Cloud Computing - 6-Month Curriculum

Overview:
The Diploma in Cloud Computing is a comprehensive program designed to equip students with the skills and knowledge necessary to excel in the rapidly evolving field of cloud technology. The curriculum combines theoretical concepts with hands-on practical experience, preparing students for careers in cloud architecture, deployment, and management.

Class Schedule: Twice a week

Module 1: Introduction to Cloud Computing
Understanding Cloud Computing Concepts
Types of Cloud Services (IaaS, PaaS, SaaS)
Cloud Service Models (Public, Private, Hybrid)
Cloud Deployment Models (AWS, Azure, Google Cloud)

Module 2: Virtualization and Containers
Fundamentals of Virtualization
Introduction to Hypervisors (e.g., VMware, Hyper-V)
Docker Containers and Orchestration (Kubernetes)

Module 3: Cloud Infrastructure
Infrastructure as a Service (IaaS) Overview
Setting up Virtual Machines in the Cloud
Cloud Storage Solutions

Module 4: Networking in the Cloud
Cloud Networking Basics
Virtual Private Clouds (VPC)
Networking Services in Cloud Platforms

Module 5: Cloud Security
Security Challenges in the Cloud
Identity and Access Management (IAM)
Data Encryption and Compliance

Module 6: Platform as a Service (PaaS)
Introduction to PaaS
Building Applications with Cloud Platforms
Serverless Computing

Module 7: Cloud DevOps
Introduction to DevOps
Continuous Integration and Deployment (CI/CD) in the Cloud
Monitoring and Logging in Cloud Environments

Module 8: Cloud Migration and Management
Strategies for Cloud Migration
Cost Management in the Cloud
Cloud Resource Optimization