

COURSE CODE	COURSE TITLE	L	T	P	C
1152IT142	CLOUD APPLICATION AND ARCHITECTURE	3	0	0	3

### Unit I

Cloud Computing Fundamental: Cloud Computing definition, private, public and hybrid cloud. Cloud types; IaaS, PaaS, SaaS. Benefits and challenges of cloud computing, public vs private clouds, role of virtualization in enabling the cloud; Business Agility: Benefits and challenges to Cloud architecture. Application availability, performance, security and disaster recovery; next generation Cloud Applications.

### Unit II

Cloud Applications: Technologies and the processes required when deploying web services; Deploying a web service from inside and outside a cloud architecture, advantages and disadvantages

### Unit III

Cloud Services Management: Reliability, availability and security of services deployed from the cloud. Performance and scalability of services, tools and technologies used to manage cloud services deployment; Cloud Economics : Cloud Computing infrastructures available for implementing cloud based services. Economics of choosing a Cloud platform for an organization, based on application requirements, economic constraints and business needs (e.g Amazon, Microsoft and Google, Salesforce.com, Ubuntu and Redhat)

### Unit IV

Application Development: Service creation environments to develop cloud based applications. Development environments for service development; Amazon, Azure, Google App.

### Unit V

Best Practice Cloud IT Model : Analysis of Case Studies when deciding to adopt cloud computing architecture. How to decide if the cloud is right for your requirements. Cloud based service, applications and development platform deployment so as to improve the total cost of ownership.

### TEXT / REFERENCES BOOKS

1. Cloud Architecture and Engineering by [Conor Suarez](#)
2. Cloud Computing Patterns: Fundamentals to Design, Build, and Manage Cloud Applications by [Christoph Fehling](#) , [Frank Leymann](#) , [Ralph Retter](#) , [Walter Schupeck](#)