

Week#	Module	Sub-Module	Digital Course	Live Lecture	Communities	Industry Assignment
			(Go to My Dashboard -> Digital Course) Learners are advised to search the module name in the Digital Course			
1	Introduction to the Cloud Computing	Recent trends in Computing: Grid, Cluster, Distributed, Utility, ad Cloud Computing Evolution of cloud computing Cloud Computing (NIST Model): Introduction to Cloud Computing, History, CSPs Properties, Characteristics & Disadvantages Benefits, risks, and challenges of cloud computing Cloud computing vs. Cluster computing vs. Grid computing Open Standards	Cloud Computing Fundamentals: Overview	Live Lecture # 1: “Introduction to Cloud Computing”	Academic Connect	
				Live Lecture # 2:	Academic Connect	
2	Cloud Computing Architecture	Cloud computing stack: Client-server architecture, services at various levels, How cloud computing works, Role of networks in cloud computing and Role of web services Service Models (XaaS) Deployment Models	Cloud System Architecture – Concepts and Design	“Cloud computing Architecture” Live Lecture # 3: Hands On Deployment Models	Academic Connect Industry Connect	
3	Services	Infrastructure as a Service (IaaS)	Introduction to IaaS IaaS definition, Introduction to virtualization, Different approaches to virtualization, Hypervisors, Machine Image, Virtual Machine(VM) Resource Virtualization: Server, Storage and Network Virtual Machine(resource) provisioning and manageability, storage as a service, Data storage in cloud computing (storage as a service), SAN, iSCSI, Network Virtualization – VLAN Examples Amazon EC2, S3 and virtual network Renting, EC2 Compute Unit, Platform and Storage, pricing, customers	Live Lecture # 4: “Introduction to Infrastructure as Service”	Academic Connect	
				Live Lecture # 5	Indstry Connect	
				Hands On Amazon EC2, S3 and Virtual Network		
4	Services	Platform as a Service (PaaS)	Introduction to PaaS What is PaaS, Service Oriented Architecture (SOA) Web 2.0 Cloud Platform and Management: Computation and Storge Examples: Google App Engine, Microsoft Azure and Salesforce.com’s Force.com platform	Live Lecture # 6: “Concepts of Platform as a service”	Academic Connect	Industry Assignment Start
				Live Lecture # 7:	Industry Connect	
				Hands On Paas Topics		
4	Services	Software as a Service (SaaS)	Introduction to SaaS Web Services Web 2.0 Web OS API and API Gateway Microservices	Live Lecture # 8: “Concepts of Software as a service”	Academic Connect	Industry Assignment Start
				Live Lecture # 9:	Academic Connect	
				Live Lecture # 10:	Academic Connect	
				Hands On SaaS		
5	Service Management in Cloud Computing	Service Management	Service Level Agreements (SLAs) Billing & Accounting Comparing Scaling Hardware: Traditional vs. Cloud Economics of scaling: Benefitting enormously Managing Data: Looking at Data, Scalability & Cloud Services, Database & Data Stores in Cloud and Large-Scale Data Processing	Live Lecture # 11: Service Management in Cloud Computing	Academic Connect	Industry Assignment Implementation
				Live Lecture # 12:	Industry Connect	
				Service Management	Hands On Service Management	
	Cloud Security	Cloud Security	Infrastructure Security, Network Level Security, Host Level Security,	Live Lecture # 13: “Introduction to Cloud Security”	Academic Connect	
			Data security and Storage Data privacy and security Issues, Jurisdictional issues raised by Data location			
				Live Lecture # 14:	Academic Connect	
			Identity & Access Management			
			Access Control			
			Trust, Reputation, Risk Authentication in cloud computing, Client access in cloud, Cloud contracting Model, Commercial and business considerations			
				Live Lecture # 15:	Indstry Connect	
				Hands On Data Security and Storage		
				Live Lecture # 16:	Academic Connect	
11	Case Studies	Kubernetes (K8s) - Amazon Web Services (AWS) Database Migration	AWS: Storage			Industry Assignment Implementation
		Service - Cloud Extract Transform Load (ETL), Amazon SageMaker -	AWS: Lambda	“Working with Cloud Migration and ETL”		
		Cloud-based analytic databases	AWS: Networking	Live Lecture # 17:	Academic Connect	
			AWS: Management Tools			
			AWS: Serverless Architecture			
			AWS: Serverless Storage			
				Live Lecture # 18:	Indstry Connect	
12	Case Studies	Cloud-based analytic databases - Amazon Redshift, Snowflake and Google BigQuery	AWS Associate Solution Architect: AWS Storage Solution	“Working with Cloud based databases with AWS”		Industry Assignment Submission End Date