Course: 103: Cloud Computing

Course Title Credit Credit 4 Teachingper Week A Hrs. Minimum weeks per Semester Review / Revision Purpose of Course The purpose of the course is to make student capable of implementing the concepts, methods and tools of Cloud Computing Course Objective The objective of the course is to provide comprehensive and in-depth knowledge of Cloud Computing Concepts, technologies, architecture, applications and implementation. Course Outcome CO1: Explain students about the cloud and cloud computing, History & Evolution , Properties & Characteristics, Advantages & Disadvantages of cloud computing. CO2: Explain students about various service models and deployment models (CO3: To provide students a foundation of different cloud service models IAAS,PAAS and SAAS so that they are able to use Cloud Computing Services in real world problem CO4: Understanding the concepts of cloud infrastructure security, data security and storage, Access control and authentication in cloud. CO5: Train students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students to use AWS and Microsoft Azure CO6: Explain students and authentication in cloud. CO7: Train students to use AWS and Microsoft Azure CO6: Explain stud	Course Code	103
Teaching per Week Minimum weeks per Semester Review / Revision Purpose of Course The purpose of the course is to make student capable of implementing the concepts, methods and tools of Cloud Computing Course Objective The objective of the course is to make student capable of implementing the concepts, methods and tools of Cloud Computing Course Objective The objective of the course is to provide comprehensive and in-depth knowledge of Cloud Computing Concepts, technologies, architecture, applications and implementation. Course Outcome Co1: Explain students about the cloud and cloud computing, History & Evolution / Properties & Characteristics, Advantages & Disadvantages of cloud computing. CO2: Explain students about various service models and deployment models CO3: To provide students a foundation of different cloud service models IAAS,PAAS and SAAS so that they are able to use Cloud Computing Services in real world problem CO4: Understanding the concepts of cloud infrastructure security, data security and storage, Access control and authentication in cloud. CO5: Train students to use AWS and Microsoft Azure CO6: Explain students in brief about BigTable and Firebase Mapping between COs with PSOs Mapping between COs with PSOs PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO6 PSO7 PSO8 CO6 PSO7 PSO8 CO7 PSO8 CO8 PSO7 PSO8 CO9 PSO7 PSO8	Course Title	Cloud Computing
Minimum weeks per Semester 15 (Including Class work, examination, preparation, holidays etc.)	Credit	4
Review / Revision Purpose of Course The purpose of the course is to make student capable of implementing the concepts, methods and tools of Cloud Computing Course Objective The objective of the course is to provide comprehensive and in-depth knowledge of Cloud Computing Concepts, technologies, architecture, applications and implementation. Course Outcome CO1 : Explain students about the cloud and cloud computing, History & Evolution, Properties & Characteristics, Advantages & Disadvantages of cloud computing. CO2: Explain students about various service models and deployment models CO3: To provide students a foundation of different cloud service models IAAS, PAAS and SAAS so that they are able to use Cloud Computing Services in real world problem CO4: Understanding the concepts of cloud infrastructure security, data security and storage, Access control and authentication in cloud. CO5: Train students in buse AWS and Microsoft Azure CO6: Explain students in brief about BigTable and Firebase Mapping between COs with PSOs PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO7 PSO8 CO1 PSO7 PSO8 CO3 PSO7 PSO8 CO4 PSO7 PSO8 CO5 CO6 CO5 CO6 PSO7 PSO8 CO6 PSO7 PSO8 CO7 CO7 PSO8 CO7 PSO8 CO8 PSO7 PSO8 CO9 PSO9 PSO9 PSO9 PSO9 PSO9 PSO9 PSO9 PS	Teaching per Week	4 Hrs.
The purpose of the course is to make student capable of implementing the concepts, methods and tools of Cloud Computing Course Objective The objective of the course is to provide comprehensive and in-depth knowledge of Cloud Computing Concepts, technologies, architecture, applications and implementation. Course Outcome CO1: Explain students about the cloud and cloud computing, History & Evolution ,Properties & Characteristics, Advantages & Disadvantages of cloud computing. CO2: Explain students about various service models and deployment models CO3: To provide students a foundation of different cloud service models IAAS,PAAS and SAAS so that they are able to use Cloud Computing Services in real world problem CO4: Understanding the concepts of cloud infrastructure security, data security and storage, Access control and authentication in cloud. CO5: Train students to use AWS and Microsoft Azure CO6: Explain students in briefabout BigTable and Firebase Mapping between COs with PSOS PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO6 PSO7 PSO8 CO7 PSO8 PSO6 PSO7 PSO8 CO8 PSO7 PSO8 CO9 PSO7 PS	Minimum weeks per Semester	15 (Including Class work, examination, preparation, holidays etc.)
Course Objective The objective of the course is to provide comprehensive and in-depth knowledge of Cloud Computing Concepts, technologies, architecture, applications and implementation. Course Outcome Course Content Course Outcome Course Content Course Content Course Outcome Course Outcome Course Content Course Outcome Course Content Co	Review / Revision	June 2020
The objective of the course is to provide comprehensive and in-depth knowledge of Cloud Computing Concepts, technologies, architecture, applications and implementation. Course Outcome CO1: Explain students about the cloud and cloud computing, History & Evolution , Properties & Characteristics, Advantages & Disadvantages of cloud computing. CO2: Explain students about various service models and deployment models CO3: To provide students a foundation of different cloud service models IAAS, PAAS and SAAS so that they are able to use Cloud Computing Services in real world problem CO4: Understanding the concepts of cloud infrastructure security, data security and storage, Access control and authentication in cloud. CO5: Train students to use AWS and Microsoft Azure CO6: Explain students in briefabout BigTable and Firebase Mapping between COs with PSOS PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO6 PSO7 PSO8 CO6 PSO7 PSO8 CO7 PSO8 CO8 PSO7 PSO8 CO9 PSO7	Purpose of Course	The purpose of the course is to make student capable of implementing the
knowledge of Cloud Computing Concepts, technologies, architecture, applications and implementation. CO1: Explain students about the cloud and cloud computing, History & Evolution, Properties & Characteristics, Advantages & Disadvantages of cloud computing. CO2: Explain students about various service models and deployment models CO3: To provide students a foundation of different cloud service models IAAS,PAAS and SAAS so that they are able to use Cloud Computing Services in real world problem CO4: Understanding the concepts of cloud infrastructure security, data security and storage, Access control and authentication in cloud. CO5: Train students to use AWS and Microsoft Azure CO6: Explain students in brief about BigTable and Firebase Mapping between COs with PSOs PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO3 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO6 PSO7 PSO8 CO6 PSO7 PSO8 CO7 PSO8 CO8 PSO7 PSO8 CO9 PSO8 PSO9 PSO9 PSO9 PSO9 PSO9 PSO9 PSO9 PSO9		concepts, methods and tools of Cloud Computing
applications and implementation. Course Outcome CO1 : Explain students about the cloud and cloud computing, History & Evolution , Properties & Characteristics, Advantages & Disadvantages of cloud computing. CO2: Explain students about various service models and deployment models CO3: To provide students a foundation of different cloud service models IAAS, PAAS and SAAS so that they are able to use Cloud Computing Services in real world problem CO4: Understanding the concepts of cloud infrastructure security, data security and storage, Access control and authentication in cloud. CO5: Train students to use AWS and Microsoft Azure CO6: Explain students in briefabout BigTable and Firebase Mapping between COs with PSOs PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO6 PSO7 PSO8	Course Objective	The objective of the course is to provide comprehensive and in-depth
Course Outcome Course Content Course Content Course Outcome Course Content Course Outcome Course Content Course Content Course Content Course Content Course Outcome Course Content Course Course Course Content Course Content Course Content Course Course Course Course Course Course Course Course Cou		knowledge of Cloud Computing Concepts, technologies, architecture,
Evolution ,Properties & Characteristics, Advantages & Disadvantages of cloud computing. CO2: Explain students about various service models and deployment models CO3: To provide students a foundation of different cloud service models IAAS,PAAS and SAAS so that they are able to use Cloud Computing Services in real world problem CO4: Understanding the concepts of cloud infrastructure security, data security and storage, Access control and authentication in cloud. CO5: Train students to use AWS and Microsoft Azure CO6: Explain students in briefabout BigTable and Firebase Mapping between COs with PSOS PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO6 PSO7 PSO8 CO6 PSO7 PSO8 CO7 PSO8 CO8 PSO7 PSO8 CO9 PSO7 PSO8 CO9 PSO7 PSO8 CO9 PSO7 PSO8 CO9 PSO7 PSO8 CO1 PSO7 P		applications and implementation.
computing. CO2: Explain students about various service models and deployment models CO3: To provide students a foundation of different cloud service models IAAS,PAAS and SAAS so that they are able to use Cloud Computing Services in real world problem CO4: Understanding the concepts of cloud infrastructure security, data security and storage, Access control and authentication in cloud. CO5: Train students to use AWS and Microsoft Azure CO6: Explain students in brief about BigTable and Firebase Mapping between COs with PSOS PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8	Course Outcome	CO1: Explain students about the cloud and cloud computing, History &
CO2: Explain students about various service models and deployment models CO3: To provide students a foundation of different cloud service models IAAS,PAAS and SAAS so that they are able to use Cloud Computing Services in real world problem CO4: Understanding the concepts of cloud infrastructure security, data security and storage, Access control and authentication in cloud. CO5: Train students to use AWS and Microsoft Azure CO6: Explain students in briefabout BigTable and Firebase Mapping between COs with PSOs PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO6 PSO7 PSO8 CO6 PSO7 PSO8 CO6 PSO7 PSO8 CO7 PSO8 CO8 PSO9 PSO9 PSO9 PSO9 PSO9 PSO9 PSO9 PSO9		Evolution , Properties & Characteristics, Advantages & Disadvantages of cloud
CO3: To provide students a foundation of different cloud service models IAAS,PAAS and SAAS so that they are able to use Cloud Computing Services in real world problem CO4: Understanding the concepts of cloud infrastructure security, data security and storage, Access control and authentication in cloud. CO5: Train students to use AWS and Microsoft Azure CO6: Explain students in brief about BigTable and Firebase Mapping between COs with PSOS PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO3 PSO6 PSO7 PSO8 CO4 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO6 PSO7 PSO8 CO6 PSO7 PSO8 CO7 PSO8 PSO6 PSO7 PSO8 CO8 PSO7 PSO8 CO9 PSO8 PSO6 PSO7 PSO8 CO9 PSO7 PSO8 CO1 PSO7 PSO8 CO1 PSO8 PSO6 PSO7 PSO8 CO1 PSO7 PSO8 CO2 PSO7 PSO8 CO3 PSO6 PSO7 PSO8 CO4 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO6 PSO7 PSO8 CO7 PSO8 CO8 PSO7 PSO8 CO9 PSO7 PSO8 CO9 PSO7 PSO8 CO1 PSO7 PSO8 CO2 PSO7 PSO8 CO2 PSO7 PSO8 CO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO6 PS		· · · ·
IAAS,PAAS and SAAS so that they are able to use Cloud Computing Services in real world problem CO4: Understanding the concepts of cloud infrastructure security, data security and storage, Access control and authentication in cloud. CO5: Train students to use AWS and Microsoft Azure CO6: Explain students in brief about BigTable and Firebase Mapping between COs with PSOs PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO3 PSO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO6 PSO7 PSO8 CO6 PSO7 PSO8 CO7 PSO8 CO8 PSO7 PSO8 CO9 PS		
real world problem CO4:Understanding the concepts of cloud infrastructure security, data security and storage, Access control and authentication in cloud. CO5: Train students to use AWS and Microsoft Azure CO6: Explain students in briefabout BigTable and Firebase Mapping between COs with PSOs PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO6 PSO7 PSO6 CO6 PSO7 PSO6 CO6 PSO7 PSO6 CO6 PSO7 PSO6		· ·
CO4: Understanding the concepts of cloud infrastructure security, data security and storage, Access control and authentication in cloud. CO5: Train students to use AWS and Microsoft Azure CO6: Explain students in briefabout BigTable and Firebase Mapping between COs with PSOs PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO6 PSO7 PSO8 CO2 PSO8 CO6 PSO7 PSO6 CO6 PSO7 PSO6 CO6 PSO7 PSO6 CO6 PSO7 PSO6 C		•
and storage, Access control and authentication in cloud. CO5: Train students to use AWS and Microsoft Azure CO6: Explain students in briefabout BigTable and Firebase Mapping between COs with PSOS PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO3 PSO6 PSO7 PSO8 CO3 PSO6 PSO7 PSO8 CO4 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO6 PSO7 PSO8 CO6 PSO7 PSO8 CO7 PSO8 CO8 PSO7 PSO8 CO9 P		·
CO5: Train students to use AWS and Microsoft Azure CO6: Explain students in briefabout BigTable and Firebase Mapping between COs with PSOS Mapping between COs with PSOS PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO3 PSO5 PSO6 PSO7 PSO8 CO3 PSO5 PSO6 PSO7 PSO8 PSO6 PSO7 PSO8 CO3 PSO6 PSO7 PSO8 CO4 PSO6 PSO7 PSO8 CO4 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO4 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO6 PSO6 PSO7 PSO6 CO6 PSO6 PSO7 PSO6 CO6 PSO6 PSO6 PSO6 CO6 PSO6 PSO6 PSO6 CO6 PSO6 PSO6 PSO		
Mapping between COs with PSOs Mapping between COs with PSOs PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO4 PSO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO5 PSO6 PSO7 PSO8 CO6 PSO7 PSO6 CO6 PSO6 PSO7 PSO6 CO6 PSO7 PSO6 CO6 PSO7 PSO6 CO6 PSO6 PSO6 CO6 PSO7 PSO6 CO6 PSO6 PSO6 CO6 PSO6 PSO6 CO6 PSO6 PSO6 CO6 PSO6 PSO7 PSO6 CO6 PSO6		1
Mapping between COs with PSOS PSO1 PSO2 PSO3 PSO4 PSO5 PSO6 PSO7 PSO8 CO1 CO2 CO2 CO3 CO4 CO5 CO6		
CO1 CO2 CO3 CO4 CO5 CO6 CO6 CO6 CO6 CO6 COBBMS, Web Development & HTML, Networking To give basic knowledge of cloud computing, its architecture and its benefits and how to deploy applications on well-known cloud platforms Course Content Unit 1: Introduction to Cloud & its architecture 1.1 Introduction & Definitions 1.2 Cloud Computing (NIST) 1.2.1 History & Evolution 1.2.2 Properties & Characteristics 1.2.3 Advantages & Disadvantages	Mapping between COs with PSOs	
CO2 CO3 CO4 CO5 CO6	mapping settleen ees man ees	
CO3 CO4 CO5 CO6		
CO4 CO5 CO6		
CO5 CO6 Basics of DBMS, Web Development & HTML, Networking Course Out come To give basic knowledge of cloud computing, its architecture and its benefits and how to deploy applications on well-known cloud platforms Course Content Unit 1: Introduction to Cloud & its architecture 1.1 Introduction & Definitions 1.2 Cloud Computing (NIST) 1.2.1 History & Evolution 1.2.2 Properties & Characteristics 1.2.3 Advantages & Disadvantages		CO3
Pre-requisite Basics of DBMS, Web Development & HTML, Networking To give basic knowledge of cloud computing, its architecture and its benefits and how to deploy applications on well-known cloud platforms Course Content Unit 1: Introduction to Cloud & its architecture 1.1 Introduction & Definitions 1.2 Cloud Computing (NIST) 1.2.1 History & Evolution 1.2.2 Properties & Characteristics 1.2.3 Advantages & Disadvantages		CO4
Pre-requisite Basics of DBMS, Web Development & HTML, Networking To give basic knowledge of cloud computing, its architecture and its benefits and how to deploy applications on well-known cloud platforms Course Content Unit 1: Introduction to Cloud & its architecture 1.1 Introduction & Definitions 1.2 Cloud Computing (NIST) 1.2.1 History & Evolution 1.2.2 Properties & Characteristics 1.2.3 Advantages & Disadvantages		CO5
Pre-requisite Basics of DBMS, Web Development & HTML, Networking To give basic knowledge of cloud computing, its architecture and its benefits and how to deploy applications on well-known cloud platforms Course Content Unit 1: Introduction to Cloud & its architecture 1.1 Introduction & Definitions 1.2 Cloud Computing (NIST) 1.2.1 History & Evolution 1.2.2 Properties & Characteristics 1.2.3 Advantages & Disadvantages		CO6
Course Out come To give basic knowledge of cloud computing, its architecture and its benefits and how to deploy applications on well-known cloud platforms Unit 1: Introduction to Cloud & its architecture 1.1 Introduction & Definitions 1.2 Cloud Computing (NIST) 1.2.1 History & Evolution 1.2.2 Properties & Characteristics 1.2.3 Advantages & Disadvantages	Pre-requisite	
and how to deploy applications on well-known cloud platforms Unit 1: Introduction to Cloud & its architecture 1.1 Introduction & Definitions 1.2 Cloud Computing (NIST) 1.2.1 History & Evolution 1.2.2 Properties & Characteristics 1.2.3 Advantages & Disadvantages		
Course Content Unit 1: Introduction to Cloud & its architecture 1.1 Introduction & Definitions 1.2 Cloud Computing (NIST) 1.2.1 History & Evolution 1.2.2 Properties & Characteristics 1.2.3 Advantages & Disadvantages		
1.1 Introduction & Definitions 1.2 Cloud Computing (NIST) 1.2.1 History & Evolution 1.2.2 Properties & Characteristics 1.2.3 Advantages & Disadvantages	Course Content	
1.2 Cloud Computing (NIST) 1.2.1 History & Evolution 1.2.2 Properties & Characteristics 1.2.3 Advantages & Disadvantages		
1.2.2 Properties & Characteristics 1.2.3 Advantages & Disadvantages		1.2 Cloud Computing (NIST)
1.2.3 Advantages & Disadvantages		1.2.1 History & Evolution
<u> </u>		1.2.2 Properties & Characteristics
1.3 Cloud Architecture overview		1.2.3 Advantages & Disadvantages
		1.3 Cloud Architecture overview
Unit 2: Cloud Computing Models		Unit 2: Cloud Computing Models
2.1 Cloud computing Stack		2.1 Cloud computing Stack
2.1.1 Comparison with traditional architecture		2.1.1 Comparison with traditional architecture
2.2 Service Models		2.2 Service Models
2.2.1 Infrastructure as a Service (laaS)		2.2.1 Infrastructure as a Service (laaS)
2.2.2 Platform as a Service (PaaS)		2.2.2 Platform as a Service (PaaS)
2.2.3 Software as a Service (SaaS)		2.2.3 Software as a Service (SaaS)
2.3 Deployment Models		2.3 Deployment Models
2.3.1 Public Cloud		2.3.1 Public Cloud

	2.2.2 Dutinata Claud
	2.3.2 Private Cloud
	2.3.3 Hybrid Cloud
	2.3.4 Community Cloud
	Unit 3: Cloud Service Models
	3.1 Infrastructure as a Service (IAAS)
	3.1.1 Introduction to Virtualization
	3.1.1.1 Hypervisors, Virtual Machine, Machine Image
	3.1.2 Resource Virtualization
	3.1.2.1 Server, Storage, Network
	3.1.3 Amazon EC2, Eucalyptus
	3.2 Platform as a Service (PAAS)
	3.2.1 Introduction to SOA
	3.2.2 Cloud Platform
	3.2.2.1 Computing
	3.2.2.2 Storage
	3.2.3 Introduction to Microsoft Azure
	3.2.4 Introduction to Salesforce's Force.com
	3.3 Software as a Service (SAAS)
	3.3.1 Introduction
	3.3.2 Web Service & Web OS
	3.3.2 Web service & Web os
	Unit 4: Cloud Security
	4.1 Infrastructure Security
	4.2 Data Security and Storage
	4.3 Identity and Access Management (IAM)
	4.4 Access Control
	4.5 Authentication in Cloud
	Unit 5: Cloud Databases (DBaaS)
	5.1 AWS SimpleDB & RDS
	5.2 AzureTable Service & SQL Azure
	5.3 Introduction to BigTable
	5.4 Introduction to Firebase
Reference Books	Cloud Computing Principles and Paradigms (Wiley)
	Rajkumar Buyya, James Broberg, Andrzej M. Goscinski
	2. Cloud Computing: Principles, Systems and Applications
	Nikos Antonopoulos, Lee Gillam (Springer)
	3. Enterprise Cloud Computing: Technology, Architecture, Applications
	Gautam Shroff - Cambridge University Press
	4. Cloud and Virtual Data Storage Networking
	Greg Schulz - Auerbach
	5. Cloud Security: A Comprehensive Guide to Secure Cloud Computing
	Ronald L Krutz, Russel Dean Vines (John Wiley & Sons)
	6. Cloud Computing
	(David Crookes - TMH Education)
	7. Cloud Computing Bible
	Barrie Sosinsky (Wiley India)
	8. Cloud Computing: Implementation, Management and Security

	9. Amazon Cloud Computing with Java
	(Aditya Yadav - Lulu.com)
	10. Grid and Cloud Database Management
	Fiore, Sandro, Aloisio, Giovanni - Springer
	11. Building a Database Cloud for Dummies
	Michael Wessler John Wiley & Sons
Teaching Methodology	Class work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	30 % internal assessment and 70% external assessment