



COURSE PLAN

1.Course Outline			
Course Title	Cloud Computing		
Course Code	CA733		
Department	Computer Applications	No. of Credits	3
Programme	MCA	Learning Hours	3 Per Week
Pre-requisites Course	Operating Systems, Computer Networks, Distributed Technology	Faculty Name	Ms. Jenie Arock X
E-mail	jenie@nitt.edu	Telephone No.	9442864208
Course Type	Core	Office	Lyceum 109
Course Materials	http://www.readorrefer.in/article/		

2. Course Overview

As such the emphasis of the course would be on the underlying infrastructure and architecture of clouds, techniques for enabling services and the quality of such services, as well as issues in designing clouds. Specific research issues in performance, security, and management would also be addressed. Programming on the cloud would be encouraged but not taught in class. Students are expected to learn and understand tools and techniques for using, designing, and implementing clouds as well as services

3. Course Objectives

To learn the various concept of Distributed and Cloud computing and to study the Architecture and service models in Cloud computing.

4. Course Outcomes (CO)

Students will be able to:

1. Acquire Knowledge on the features and development of Cloud Computing.
2. Define the principles of virtualization
3. Use various performance criteria to evaluate the quality of the cloud architecture
4. Identify the Service-Oriented Architecture for Distributed Computing workflow.

5. Course Aligned Programme Outcome (PO)

Outcome

(CO)	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12
CO-1	H	H		L				M		M		
CO-2		H	H		M					L		
CO-3	H			H			M					
CO-4		M	H		H							

6. Course Teaching and Learning Activities

Week	Mode of Delivery	Topics
1.	Chalk and Talk, PPT	Introduction to Cloud Computing
		Scalable Computing
		Technologies for Network-Based Systems
2.	Chalk and Talk, PPT	System Models for Distributed and Cloud Computing
		Software Environments for Distributed and Clouds
		Memory Management and Process Management
3.	Chalk and Talk, PPT	Performance, Security and Energy Efficiency
		Implementation Levels of Virtualization
		Virtualization Structures - Tools and Mechanisms
4.	Chalk and Talk, PPT	Virtualization of CPU, Memory and I/O Devices
		Virtual Clusters and Resource Management
		Virtualization for Data-Center Automation
5.	Chalk and Talk, PPT	Introduction to Various Virtualization OS - Vmware, KVM, Xen
		Services and SOA
		Message-Oriented Middleware
6.	Chalk and Talk, PPT	Portals and Science Gateways
		Discovery-Registries-Metadata
		Workflow in SOA
7.	Chalk and Talk, PPT	Cloud Computing and Service Models
		Data-center Design and Interconnection Networks
		Architectural Design of Compute and Storage Clouds
8.	Chalk and Talk, PPT	Public cloud Platforms
		Inter-cloud Resource Management
		Cloud Security and Trust Management
9.	Chalk and Talk, PPT	Features of Cloud and Grid Platforms
		Parallel and Distributed Paradigms
		Programming Support of Google App Engine
10.	Chalk and Talk, PPT	Amazon AWS and Microsoft Azure
		Emerging Cloud Software Environments
		Conclusion

- All the relevant material will be available in the course material website.

8. Course Assessment Methods

Sl. No.	Mode of Assessment	Week/Date	Duration	Weightage (%)
1.	Cycle Test – 1	4th week	60 Mins	20
2.	Cycle Test – 2	8th week	60 Mins	20
3.	Assignment test/Seminar	9th week	15 Mins	10
4.	End Semester Exam	-	180 Mins	50
Total				100

9. Essential Readings (Textbooks, Reference books, Websites, Journals, etc.)

1. Kai Hwang, Geoffrey C.Fox, and Jack J. Dongarra, "Distributed and Cloud Computing", Elsevier India Private Limited, 2012.
2. Foster and Kesselman, "The Grid : Blueprint for a New Computing Infrastructure", Morgan Kauffman publishers Inc.2004
3. Michael Miller, "Cloud Computing", Dorling Kindersley India,2009.
4. Anthony T. Velte, Toby J. Velte and Robert Elsenpeter, "Cloud computing: A practical Approach", McGraw Hill,2010.

10. Course Exit Survey

1. The students through the class rep may give their feedback at any time to the course HOD which will be duly addressed.
2. The students may also give their feedback during Class Committee meeting.
3. 'Course Outcome Survey' form will be distributed on the last working day to all the students and the feedback on various rubrics will be analyzed.
4. The COs will be computed after arriving at the final marks.

11. Course Policy

1. Attendance

100% is a must. However, relaxation up to 25% will be given for leave on emergency requirements (medical, death, etc.) and representing institute events.

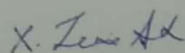
2. Academic Honesty

- i) Possession of any electronic device, if any, found during the test or exam, the student will be debarred for 3 years from appearing for the exam and this will be printed in the Grade statement/Transcript.
- ii) Tampering of MIS records, if any, found, then the results of the student will be withheld and the student will not be allowed to appear for the Placement interviews conducted by the Office of Training & Placement, besides (i).

12. Additional Course Information

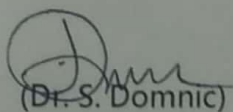
The students can get their doubts clarified at any time with their faculty member.

For Senate's Consideration



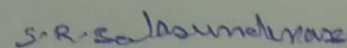
(Ms. Jenie Arock X)

Course faculty



(Dr. S. Dominic)

Class Committee Chairperson



(Dr. S.R. Balasundaram)

Head of the Department