TCET

DEPARTMENT OF INFORMATION TECHNOLOGY (IT)

Credit Based Grading Scheme(Revised - 2012) - University of Mumbai

CBGS-2012(R)

TCET/FRM/IP-02/09

Semester Plan (Theory)

Revision: A

Semester: VII

Course: IT

Subject: Cloud Computing

Class: BE IT-B

S.No.	Prerequisite/ Bridge course:	Duration (Week /Hrs)	Modes of Learning	Recommended Sources
1	Distributed System , Computer Network, advanced internet Programming	6 hours	Self Learning/ Revision	W. Stallings, "Computer Organization and Architecture" William Stallings "Data & Computer Communications"

Class Room Teaching

Sr. No	Module No.	Lesson No	Topics Planned (Technology to be used)	Teaching Aids Required	Planned /Completion Date	Resource Book Reference	Remarks
1	Module 1	L1.1	SOP-Theory Introduction to Cloud Computing	Power point presentation, Chalk & Board	11/7/2017	TB: 1 RB:1.6.1	
2	Module 1	L1.2	SOP-Practical Introduction to Cloud Computing	Power point presentation,Chalk & Board, Animation	13/7/2017	TB: 1 RB:1.6.1	
3	Module 1	L1.3	SOP-OBE Introduction & benefits of Virtualization	Chalk & Board, Animation	13/7/2017	TB: 1 RB:1.6.2	
4	Module 1	L1.4	Virtualization structure/tools and mechanisms	Chalk & Board, Animation	17/7/2017	TB: 1 RB:1.6.3	
5	Module 1	L2.1	XaaS, IaaS, PaaS-	Chalk & Board, Animation	18/07/2017	TB: 1 RB:2.6.1	
6	Module 2	L2.2	DBaaS SaaS (Software as a service)	Chalk & Board, Animation	19/07/2017	TB: 1 RB:2.6.2	
7	Module 2	L2.3	Eucalyptus and Open Stack Architecture	Chalk & Board, Animation	19/07/17	TB: 1,3 RB:2.6.3	
8	Module 2	L2.4	Features Components – Various mode of operations	Power point presentation, Chalk & Board	20/07/17	TB: 1 RB:2.6.4	
9	Module 2	L2.5	Installation and Administration configuration process	Chalk & Board, Animation	24/07/17	TB: 1 RB:2.6.5	
10	Module 2	L2.6	Cloud Administration and Management Task	Chalk & Board, Animation	26/7/2017	TB: 1 RB:2.6.6	
11	Module 2	L2.7	Creating User Interface(Web Interface) of Private cloud.	Chalk & Board, Animation	28/7/2017	TB: 1 RB:2.6.7	
12	Module 2	L2.8	Various mode of operations	Chalk & Board, Animation	31/7/2017	TB:1 RB:2.6.8	
13	Module 3	L3.1	Factors for Successful Cloud Deployment	Power point presentation, Chalk & Board	2/8/2017	TB: 1 RB:3.6.1	

14	Module 3	L3.2	Cloud Network Topologies	Chalk & Board, Animation	4/8/2017	TB: 1 RB:3.6.2	
15	Module 3	L3.3	Security for Virtualization Platform	Chalk & Board, Animation	5/8/2017	TB: 1 RB:3.6.3	
16	Module 3	L3.4	Data Security	Chalk & Board, Animation	7/8/2017	TB: 3 RB:3.6.4	
17	Module 3	L3.5	Data Confidentiality and Encryption	Chalk & Board, Animation	9/8/2017	TB: 3 RB:3.6.5	
18	Module 3	L3.6	Cloud Storage Gateways-Cloud Firewall	Power point presentation, Chalk & Board	11/8/2017	TB: 3 RB:3.6.6	
19	Module 4	L4.1	Cloud Application requirements	Chalk & Board, Animation	14/8/2017	TB: 1 RB:4.6.1	
20	Module 4	L4.2	Multi-ties Application Architecture	Chalk & Board, Animation	16/8/2017	TB: 3 RB:54.6.2	
21	Module 4	L4.3	SOA for Cloud applications	Chalk & Board, Animation	18/8/2017	TB: 3 RB:4.6.3	
22	Module 4	L4.4	Parallelization within Cloud Applications Programming Support for Google Apps engine	Chalk & Board, Animation	30/8/2017	TB: 1 RB:4.6.4	
23	Module 4	L4.5	Programming Support for Google Apps engine	Power point presentation, Chalk & Board	1/9/2017	TB: 1 ,3 RB:4.6.5	
24	Module 4	L4.6	Google Distibuted Lock Service	Chalk & Board, Animation	4/9/2017	TB: 1 RB:4.6.6	
25	Module 4	L4.7	Programming Support for Amazon EC2	Chalk & Board, Animation	6/9/2017	TB: 1 RB:4.6.7	
26	Module 4	L4.8	Googles NO SQL System	Chalk & Board, Animation	8/9/2017	TB: 1 RB:4.6.8	
27	Module 5	L5.1	Adoption of Public cloud by SMBs	Chalk & Board, Animation	11/9/2017	TB: 1 RB:5.6.1	
28	Module 5	L5.2	Adoption process of Public clouds by Enterprises,	Power point presentation, Chalk & Board	13/9/2017	TB: 1 RB:5.6.2	
29	Module 5	L5.3	Migrating Application to the cloud	Chalk & Board, Animation	15/9/2017	TB: 1 RB:5.6.3	
30	Module 5	L5.4	Resources and Multi-Tenancy on cloud Applications,	Chalk & Board, Animation	16/9/2017	TB: 1 RB:5.6.4	
31	Module 5	L5.5	Risk Assessment and Management	Chalk & Board, Animation	16/9/2017	TB: 1 RB:5.6.5	
32	Module 5	L5.6	Risk failure of cloud provider	Chalk & Board, Animation	18/9/2017	TB: 1 RB:5.6.6	
33	Module 6	L6.1	AAA model	Chalk & Board, Animation	20/9/2017	TB: 1 RB:6.6.1	

34	Module 6	L6.2	Authorization management in clouds	Power point presentation, Chalk & Board	22/09/2017	TB: 1 RB:6.6.2	
35	Module 6	L6.3	Mobile Cloud Architecture, Benefits	Chalk & Board, Animation	25/9/2017	TB: 1,3 RB:6.6.3	
36	Module 5	L6.4	Mobile Cloud Challenges	Chalk & Board, Animation	4/10/2017	TB: 1,3 RB:6.6.4	
37	Module 5		Revison / Practice Session	Chalk & Board, Animation	6/10/2017		
38	Module 6		University Paper Discussion	Chalk & Board, Animation	6/10/2017		
Remark: Course:		Syllabus Coverage:		Practice Session: 2		**Content Beyond Syllabus:** Metal as a Service(MaaS), big data and cloud file systems such as HDFS	
No. of (lectures planned)/(lecture taken): 38							

Advanced course: Cloud Computing Specialization	20 Hours	Online NPTEL videos with Hands on Training in Laboratory	**Web sources:** 1. NPTEL-https://onlinecourses.nptel.ac.in 2. www.coursera.org **Textbook reference:** 1. Cloud Computing: Concepts, Technology & Architecture by Thomas Erl

Text Books:

1. Cloud Computing Principles and Paradigms, Rajkumar Buyya Wiley

2. Distributed and Cloud Computing, Kai Hwang, Mk Publication

3. Cloud computing Black Book Dreamtech Publication

Reference Books:

1. Using Goolgle Apps engine O'reilly Publication

2. Programming Amazon EC2, O'reilly Publication

3. Cloud security, Ronald L. Wiley Publication

Digital Reference:

3.1 www.nptel.ac.in

3.2 www.coursera.org/specializations/cloud-computing

sd/-	sd/-	sd/-
Ms. Ratna Nayak	Dr. Rajesh Bansode	Dr. R.R. Sedamkar
Name & Signature of Faculty	Signature of HOD	Signature of Principal /Dean (Academics)
Date:	Date:	Date:

Note:

1.Plan date and completion date should be in compliance

2.Courses are required to be taught with emphasis on resource book, course file, text books, reference books, digital references etc.

3. Planning is to be done for 15 weeks where 1st week will be AOP, 2nd -13th for effective teaching and 14th -15th week for effective university examination oriented teaching, mock practice session and semester consolidation.

4. According to university syllabus where lecture of 4 hrs/per week is mentioned minimum 55 hrs and in case of 3 lectures per week minimum 45 lectures are to be engaged are required to be engaged during the semester and therefore accordingly semester planning for delivery of theory lectures shall be planned.

5.In order to improve score in NBA, faculty members are also required to focus course teaching beyond university prescribed syllabus and measuring the outcomes w.r.t learning course and programme objectives.

6. Text books and reference books are available in syllabus. Here only additional references w.r.t. non –digital/ digital sources can be written (if applicable)

7. Technology to be used in class room during lecture shall be written below the topic planned within the bracket.