

Detailed Syllabus
Lecture-wise Breakup

Subject Code	15B22CI521	Semester Even (specify Odd/Even)	Semester Even Session 2021 - 22 Month from January to June
Subject Name	Cloud based Enterprise Systems		
Credits	3	Contact Hours	3

Faculty (Names)	Coordinator(s)	Bharat Gupta
	Teacher(s)	Bharat Gupta

COURSE OUTCOMES		COGNITIVE LEVELS
CO1	Differentiate between Public, Private, and Hybrid Clouds	Understand Level (Level 2)
CO2	Develop Enterprise applications based on XML, JavaScript, Java Servlets, Java Server Pages, etc.	Apply Level(Level 3)
CO3	Develop web service based solutions by using REST, JSON, SOAP, etc.	Apply Level(Level 3)
CO4	Examine emerging technologies in cloud environment.	Analyse Level(Level 4)
CO5	Evaluate the performance of different Public Cloud Platforms e.g., GAE, AWS and Azure.	Evaluate Level(Level 5)
CO6	Design and deploy Enterprise applications on one of the Cloud Service Providers, i.e., Amazon AWS or Microsoft Azure.	Create Level(Level 6)

Module No.	Subtitle of the Module	Topics in the module	No. of Lectures for the module
1	XML Programming	XML, DTD, XML schema, XPath, XQuery	6
2	Web services	REST, JSON, SOAP	6
3	JavaScript	Basic constructs, Conditional statements, Loop, External linking with .js, Browser related events	6
4.	Server Side programming	Java servlet, Java server pages	8
5.	Introduction to Cloud Computing	Public, private, and Hybrid clouds; Features of cloud platforms	4
6.	Public Cloud Platforms	Introduction to GAE, AWS and Azure; Programming support of Google App Engines, Amazon AWS, and Microsoft Azure; Emerging cloud software environments	7
7.	Apache Hadoop	Introduction to distributed computing, Map Reduce	3

8.	Virtualization	Virtualization structures/tools and mechanism, Virtualization of CPU, Memory and I/O devices	2
Total number of Lectures			42
Evaluation Criteria			
Components		Maximum Marks	
T1		20	
T2		20	
End Semester Examination		35	
TA		25	
		<ul style="list-style-type: none">• Attendance/Tutorial Assessment/Quiz:10• Mini-project in PBL mode:15	
Total		100	
Recommended Reading material: Author(s), Title, Edition, Publisher, Year of Publication etc. (Text books, Reference Books, Journals, Reports, Websites etc.)			
Text Book			
1.	Arshdeep Bahga, Vijay Madiseti, “Cloud Computing:A Hands-on Approach”, Universities Press, 2014		
References			
1.	David Clinton, “Learn Amazon Web Services in a Month of Lunches”, MANNING, 2017		
2.	https://www.w3.org/XML/		
3.	https://aws.amazon.com/		
4.	https://azure.microsoft.com/en-in/		
5.	https://cloud.google.com/appengine/docs/		
6.	John Pollock, JavaScript, 3rd Edition, Mc Graw Hill, 2011		
7.	https://docs.oracle.com/javase/tutorial/jaxp/		
8.	Elliotte Harold, W. Means,XML in a Nutshell, 3rd Edition, O'Reilly Media, 2009		
9.	http://www.oracle.com/technetwork/java/javaee/jsp/index.html (JSP)		
10.	https://docs.oracle.com/javaee/6/tutorial/doc/bnafdf.html (Java Servlet Technology)		
11.	https://www.heroku.com/		