Government P.G. College, AmbalaCantt
Course File(Session 2023-24)
Name of Instructor: Ms. Bhupinder Kaur
Class: B.A. 2nd Semester
Subject Code:B23-SEC-201
Subject Name:Cloud Computing Skills

Session:2023-24			
Part A-Introduction			
Subject	COMPUTER SCIENCE		
Semester	II		
Name of the Course	**Cloud Computing Skills**		
Course Code	B23-SEC-201		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/ VAC)	SEC		
Credits	Theory	Practical	Total
	2	1	3
Contact Hours	2	2	4
Max.Marks:75(50(T)+25(P)) **Internal Assessment Marks:20(15(T)+5(P)) End Term Exam Marks: 55(35(T)+20(P))**	**Time:3Hrs.(T),3Hrs.(P)**		
PartB-ContentsoftheCourse			

Instructions for Paper-Setter

Examiner will set a total of nine questions. Out of which first question will be compulsory. Remaining eight questions will be set from four unit selecting two questions from each unit. Examination will be of three-hour duration. All questions will carry equal marks. First question will comprise of short answer type questions covering entire syllabus.

Candidate will have to attempt five questions in all, selecting one question from each unit. First question will be compulsory.

Practicum will be evaluated by an external and an internal examiner.Examination will be of

three-hour duration.

Unit	Topics	Contact Hours

I	Basic Concepts of Cloud Computing Computer Network Basics. Concepts of Distributed Systems. Concepts of Cloud Computing and its Necessity. Cloud Service Providers in use and their Significance.	6
II	Cloud Infrastructure Cloud Pros and Cons. Cloud Delivery Models. Cloud Deployment Models.	6
III	Cloud Storage Management Concept of Virtualization and Load Balancing. Overview on Virtualization used for Enterprise Solutions. Key Challenges in managing Information. Identifying the problems of scale and management in big data.	6
IV	Building Cloud Networks Designing and Implementing a Data Center-Based Cloud Installing Open Source Cloud service. Amazon Web Services (AWS). Google Cloud Platform.	6
V*	Practicum: • Creating & using Amazon(AWS) Account • Creating & using Google Account	25

Suggested Evaluation Methods

InternalAssessment: ➢ **Theory** • Class Participation:4 • Seminar/presentation/assignment/quiz/classtestetc.:4 • Mid-Term Exam:7 ➢ **Practicum** • Class Participation:2 • Seminar/Demonstration/Viva-voce/Labrecordsetc.:3 • Mid-Term Exam: NA	**EndTermEx-amination:** A three hour exam for both theory and practicum.

PartC-Learning Resources

RecommendedBooks/e-resources/LMS:
• Cloud Computing:Concepts,Technology & Architecture By Thomas Erl,Ricardo
• Cloud Computing a practical approach Anthony T.Velte,Toby J.Velte Robert Elsenpeter, TATA McGraw-Hill, New Delhi– 2010
• Cloud Computing:Web-Based Applications That Change the Way You Work and Collaborate Online -Michael Miller-Que2008
• Moving to Cloud by Dinkar Sitaram,Geetha Manjunath,Publication:Syngress Elsevier Inc, 2014(2ndEdition)
• Cloud Computing Second Edition by Dr Kumar Saurabh,Publication Willy INDIA (2013)
• Cloud Computing Bible by Barrie Sosinsky,Publisher Willy INDAI(2014)
• Cloud Computing for Dummies-Judith Hurwitz,Robin Bloor,Marcia Kaufman,Fern Halper, Wiley Publishing, Inc, 2010
• Cloud Computing(Principles and Paradigms),Edited by Rajkumar Buyya,James Broberg, Andrzej Goscinski, John Wiley & Sons, Inc. 2011

Course Objective

- To provide students with the fundamentals and essentials of Cloud Computing.

- To provide students a sound foundation of the Cloud computing so that they are able to start using and adopting Cloud Computing services and tools in their real life scenarios.

- To enable students exploring some important cloud computing driven commercial systems and applications.

- To expose the students to frontier areas of Cloud Computing and information systems, while providing sufficient foundations to enable further study and research.

COURSEOUTCOMES

After the successful completion of the course, students will be able:

- Explain the core concepts of the cloud computing paradigm: how and why this paradigm shift came about, the characteristics, advantages and challenges brought about by the various models and services in cloud computing.
- Apply the fundamental concepts in data centers to understand the tradeoffs in power, efficiency and cost.
- Identify resource management fundamentals, i.e. resource abstraction, sharing and sandboxing and outline their role in managing infrastructure in cloud computing.
- Analyze various cloud programming models and apply them to solve problems on the cloud.
- Get acquainted with the term Cloud Computing.
- Understand various types of free and commercial clouds.
- Understands various types of cloud services like SaaS. PaaS and IaaS.
- Know how the Cloud Computing is changing software industry.

Lesson Plan

Week No	Scheduled Dates	Topics to be covered
1	15-17 February	Basic Concepts of Cloud Computing Computer Network Basics.
2	19-24 February	Concepts of Distributed Systems.
3	26-29 February	Concepts of Cloud Computing and its Necessity. Cloud Service Providers in use and their Significance.
4	1-2 March	Revision and Practice;
5	4-9 March	Cloud Infrastructure Cloud Pros and Cons. Cloud Delivery Models.
6	11-16 March	I/O Devices, Input – Output parts of Desktop Computers,
7	18-23 March	Device Controller, Device Driver, Input Devices- Classification and Use
8	1-6 April	Cloud Deployment Models.
9	8-13April	Revision and Practice;
10	15-20April	Cloud Storage Management Concept of Virtualization and Load Balancing.
11	22-29April	Overview on Virtualization used for Enterprise Solutions.
12	1-4 May	Key Challenges in managing Information. Identifying the problemsof scale and management in big data.
13	6-11 May	Building Cloud Networks Designing and Implementing a Data Center-Based Cloud Installing Open Source Cloud service
14	13-18 May	Electronic mail- introduction , advantages and disadvantages
15	20-25 May	User ids, password, email addresses, message composition
16	27-31 May	Amazon Web Services (AWS). Google Cloud Platform.
17	1-5 June	Revision and Practice;