



Kot Bhalwal, Jammu



Model Institute of Engineering
& Technology (Autonomous)
Course Handout

COURSE HANDOUT

CLOUD COMPUTING (BBAMI-305(D))

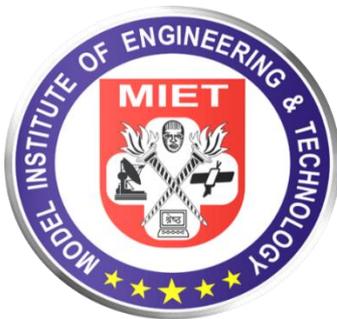
BBA (H)-3rd SEMESTER

ACADEMIC YEAR (2024-25)

Ms. Jagriti Sharma

Assistant Professor

Department of Computer Science & Engineering



UG -School of Management

Model Institute of Engineering & Technology (Autonomous)

KotBhalwal, Jammu - 181122

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Dr. Arun K. Gupta Teaching-Learning Centre

Version 1.1



Please Do Not Print Unless Necessary



Course Code	Course Name	Course Type	Cd	L	T	P	Marks		
							Sessional	Final Exam	Total
BBAMI-306(D)	Cloud Computing	Minor	4	5	0	0	40	60	100

COURSE OUTCOMES

At the end of the course the student will be able to:	
CO1	Examine the main concepts of cloud computing.
CO2	Interpret architecture and infrastructure of cloud computing.
CO3	Compile the value of cloud computing from a business perspective.
CO4	Analyze the core issues of cloud computing such as security, privacy, and risk.
CO5	Evaluate the emerging trends of cloud computing.

Detailed Syllabus Section A

Unit-I

Introduction to Cloud Computing: Introduction to Cloud Computing, History and Evolution of Cloud Computing, Grid Computing vs Cloud Computing, – Cloud components - Essential characteristics – On-demand self-service, Comparing cloud providers, pros and cons of cloud computing, Cloud applications, Cloud challenges. (10 Hrs)

Unit-II

Cloud Computing Architecture: Layers in cloud architecture, Cloud Delivery models, The SPI Framework, Cloud Software as a Service (SaaS), Cloud Platform as a Service (PaaS), Cloud Infrastructure as a Service(IaaS), Cloud deployment models-Public clouds – Private clouds – Community clouds - Hybrid clouds. (10 Hrs)

Section B

Unit-III

Cloud Business Value: Reducing Costs and Increasing Efficiency through Scalability, Reducing IT Administrative Overhead, Increasing Organizational Agility, Examining the Business Impact, Evaluating Cloud Computing Costs and Choosing the Appropriate Cloud Model. (10 Hrs)

Unit-IV

Security in the Cloud: Cloud Computing Risk Issues: The CIA Triad, Privacy and Compliance Risks, Threats to Infrastructure, Data and Cloud Access Control Issues, Cloud Service Provider Risks. Cloud Computing Security challenges. (09 Hrs)

Unit-V

Emerging trends in Cloud computing: Multi and Hybrid Cloud Deployment, Edge Computing, Cloud-Native Applications, The AI and ML-Powered Cloud, Internet of Things. (09 Hrs)



Textbooks

S.No	Name of the Books	Name of the Author	Publisher Name	Edition (Pub.Yr.)
1	Cloud Essentials	Kirk Hausman Susan L. Cook Telmo Sampaio	Wiley Publishing	1 st (2013)
2.	Cloud Computing	Judith Hurwitz, Robin Bloor, Marcia Kaufman, and Dr. Fern Halper	Wiley Publishing	2 nd (2020)

Reference Books

S.No	Name of the Books	Name of the Author	Publisher Name	Edition (Pub.Yr.)
3	Handbook of Cloud Computing	Borko Furht. Armando Escalante	Pearson Education (US)	1 st (2010)
4	Essentials of Cloud Computing	K.Chandrasekaran	Taylor & Francis group	2015



COURSE PLAN		
Unit-I Introduction to Cloud Computing		
S.No	Topics	Recommended Books
1	Introduction to Cloud Computing,	Book 4, Ch 1 https://www.comp.nus.edu.sg/~seer/book/2e/Ch01.%20Cloud%20Computing.pdf
2	History and Evolution of Cloud Computing,	Book 1, Ch 1 https://www.geeksforgeeks.org/history-of-cloud-computing/
3	Grid Computing vs Cloud Computing, Cloud components	Book 3, Ch 5 https://data-flair.training/blogs/grid-computing-vs-cloud-computing/#google_vignette
4	Essential characteristics- On-demand self-service, Comparing cloud providers,	https://www.synopsys.com/blogs/chip-design/essential-cloud-computing-characteristics.html https://www.javatpoint.com/cloud-service-provider-companies
5	Pros and cons of cloud computing, Cloud applications	https://morefield.com/blog/pros-and-cons-of-cloud-computing/
6	Cloud challenges.	Book 1, Ch 8 https://www.knowledgehut.com/blog/cloud-computing/cloud-computing-challenges
Unit-II Cloud Computing Architecture		
7	Layers in cloud architecture	Book 3, Ch 1 https://onlinecourses.nptel.ac.in/noc23_cs89/unit?unit=18&lesson=22
8	Cloud Delivery models	Book 2, Ch 9
9	The SPI Framework	Book 2, Ch 9
10	Cloud Software as a Service (SaaS), Cloud Platform as a Service (PaaS), Cloud Infrastructure as a Service(IaaS)	Book 2, Ch 10 Book4, Ch5
11	Cloud deployment models-Public clouds – Private clouds – Community clouds - Hybrid clouds.	Book 2, Ch 9 Book4, Ch4
Unit-III Cloud Business Value		
12	Reducing Costs and Increasing Efficiency through Scalability	Book 1, Ch 5
13	Reducing IT Administrative Overhead	Book 1, Ch 5
14	Increasing Organizational Agility	Book 1, Ch 5
15	Examining the Business Impact	Book 1, Ch 5
16	Evaluating Cloud Computing Costs and Choosing the Appropriate Cloud Model.	Book 1, Ch 5
Unit-IV Security in the Cloud		
17	Cloud Computing Risk Issues	Book 1, Ch 11



18	The CIA Triad	Book 1, Ch 11
19	Privacy and Compliance Risks	Book 2, Ch 8
20	Threats to Infrastructure	Book 2, Ch 8
21	Data and Cloud Access Control Issues	Book 2, Ch 8
22	Cloud Service Provider Risks	https://www.aquasec.com/cloud-native-academy/cspm/top-7-risks-of-cloud-computing/ https://www.javatpoint.com/security-risks-of-cloud-computing
23	Cloud Computing Security challenges	https://biztechnologysolutions.com/cloud-computing-security-challenges/
Unit-V Emerging trends in cloud computing		
24	Multi and Hybrid Cloud Deployment	https://www.cloudflare.com/learning/cloud/multicloud-vs-hybrid-cloud/#:~:text=Both%20%22multi-cloud%22%20and%20%22hybrid%20cloud%22%20refer%20to%20cloud,multi-cloud%20blends%20different%20clouds%20of%20the%20same%20type.
25	Edge Computing	https://azure.microsoft.com/en-in/resources/cloud-computing-dictionary/what-is-edge-computing/
26	Cloud-Native Applications	https://aws.amazon.com/what-is/cloud-native/
27	The AI and ML-Powered Cloud	https://venturebeat.com/ai/10-top-artificial-intelligence-solutions-in-2022/
28	Internet of Things	https://www.coursera.org/in/articles/internet-of-things

ADDITIONAL WEB RESOURCES

1.	NPTEL Video Lecture--Cloud Computing By Prof. Soumya Kanti Ghosh IIT Kharagpur https://onlinecourses.nptel.ac.in/noc23_cs89/preview
2.	https://www.coursera.org/learn/cloud-computing-basics/

GRADING AND ASSESSMENT

- **Sessional Test:** 20 marks
- **Assignment:** 10 marks
- **Attendance:** 10 marks
- **Final Examination:** 60 marks



COURSE POLICIES

- **Attendance:** Minimum 75% attendance is mandatory to appear in the final examination of the course.
- **Academic Integrity:** MIET's academic integrity policies apply. Plagiarism will not be tolerated.
- **Late Submissions:** Assignments and projects must be submitted by the specified timelines.

FACULTY INFORMATION

- **Office Hours**
Tuesday (1:05 PM - 2:00 PM)
Friday (1:05 PM - 2:00 PM)
- **Contact Information**
jagriti.cse@mietjammu.in