



FACULTY OF COMPUTER APPLICATIONS

Bachelor of Computer Applications (Hons.) – Cloud Computing

- **Sem.** : 8
- **Subject Code** : 05BH0801
- **Subject** : Major Project

- **Course Objectives:**
 1. Design and implement a cloud-based system such as a web application, data storage system, or distributed computing solution.
 2. Apply security techniques like authentication, encryption, and firewall configurations to protect cloud applications.
 3. Utilize cloud service features like auto-scaling, load balancing, and containerization for performance efficiency.
 4. Work with cloud-based services such as AWS Lambda, Azure Functions, or Google Cloud AI to enhance application functionality.
 5. Deploy applications on cloud platforms like AWS, Azure, or Google Cloud while managing databases and networking.

- **Prerequisites:** Knowledge of cloud computing fundamentals, networking and security, programming (Python/JavaScript/Java), databases, cloud platforms (AWS/Azure/GCP) and DevOps tools.

Course Outcomes:

1. Students will be able to build and deploy a cloud-based application with real-world use cases.
2. Students will implement best practices for securing cloud infrastructure and data.
3. Students will demonstrate the ability to manage cloud resources effectively, reducing operational costs.
4. Students will gain hands-on experience working with cloud APIs, storage, and computing resources.
5. Students will develop analytical skills to solve cloud-related challenges, including scalability, security, and performance issues.

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Guidelines for Major Project (Industry Defined Project):

1. BCA (Hons. – Cloud Computing) 8th semester is completely devoted for the internship. Students have to perform a major project in the industry/in the institution during this entire semester.
2. Students require to approach the industry for the major project in their specialization.
3. Department allocates one of the Faculty members as Guide to the student.
4. After getting the confirmation from the industry, students require to submit the offer letter to the guide.
5. Students on joining Internship at the concerned Industry/Organization, submit the Joining Report/Letter/Email.
6. Students undergo Internship at the concerned Industry/Organization.
7. The candidates should regularly submit this/her progress report to their respective Faculty guide as per project milestones.
8. In-between Guide/Panel evaluate(s) the performance of Students at the mid of Internship and at the end of Internship period in consultation with Guide/Concerned person in the Industry.
9. Students will submit Internship report i.e. project report with project completion certificate from the industry after completion of major project.
10. The project report to be compiled in standard format prescribed by Marwadi University.

Assessment of Industry Defined Project (Internship) Project:

I) Termwork (50 Marks):

1. The progress of the Major Project (Industry Defined Project) to be evaluated on a continuous basis.

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2. The performance is measured based on the skills applied, presented during the project reporting.
3. Performance is also based on the submission of requisite documents on time (e.g. Offer letter, joining letter, project completion certificate, project details) during project reporting.
4. Distribution of Termwork marks shall be as below:
 - a. Project Presentation during project reporting (2 reporting's): 50

II) Viva (250 Marks):

1. Reports should be prepared as per the guidelines issued by the Marwadi University.
2. Major Project (Industry Defined Project) shall be evaluated through a presentation and demonstration of working model by the student to a panel of examiners nominated by the university.
3. Major Project (Industry Defined Project) shall be assessed based on following points during viva:
 - a. Originality
 - b. Adequacy and purposeful write-up
 - c. Organization, format, charts/images/diagrams/models, language, style etc.
 - d. Variety and relevance of learning experience.
 - e. Practical applications, relationships with basic theory and concepts taught in the Course.
 - f. Clarity in written and oral communication.
 - g. Project report as per the format prescribed by the University.
 - h. Viva-Voce



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CourseOutcomes–ProgramOutcomesMappingTable:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	M	H	H		H		H	H	M	L	H
CO2		H	H		H	H		H	M		M
CO3	M	H	H			H	H	H	H	L	
CO4	H	H	H	M		H	H	H		H	L
CO5		H	H	M	H	H	H	H	H	L	H

Web References:

1. <https://www.geeksforgeeks.org/10-best-cloud-computing-project-ideas/>
2. <https://www.coursera.org/specializations/cloud-computing>
3. <https://www.edx.org/learn/cloud-computing>
4. <https://www.udacity.com/course/cloud-developer-nanodegree--nd9990>
5. <https://aws.amazon.com/training/>
6. <https://docs.microsoft.com/en-us/learn/azure/>

App References:

1. Learn Cloud Computing
2. Learn AWS
3. Learn Azure
4. Great Learning : Online Courses