



COLLEGE OF ENGINEERING BHUBANESWAR (COEB)
Plot No.1 (A), CNI Complex, Patia, Bhubaneswar – 751024, Odisha, India.
[AFFILIATED TO BPUT, ODISHA]
www.coeb.ac.in

PG DEPARTMENT OF MASTER OF COMPUTER APPLICATION

ADD-ON COURSE : Cloud Deployment
[Programme: MCA]

Course Objectives:

- introduction to the basic concepts and terminology of cloud computing;
- acquaintance with the concept of cloud computing in relation to business;
- evaluate the efficiency of, long-term perspective, the study of economics of cloud computing;
- feasibility study to migrate existing applications to a cloud environment from both a technical and an economic point of view;
- introduction of cloud computing infrastructure and cloud programming;
- development of system administration skills for the development and maintenance of applications deployed in the cloud

SYLLABUS

Total Lecture Hours : 40

MODULE-I: Introduction

[8 periods]

History of Centralized and Distributed Computing – Overview of Distributed Computing, Cluster computing, Grid computing. Technologies for Network-based systems- System models for Distributed and cloud computing, Software environments for distributed systems and clouds.

MODULE-II Virtualization

[8 periods]

Introduction to Cloud Computing- Cloud issues and challenges – Properties –Characteristics – Service models, Deployment models. Cloud resources: Network and API – Virtual and Physical computational resources – Data-storage. Virtualization concepts – Types of Virtualization- Introduction to Various Hypervisors – High Availability (HA)/Disaster Recovery (DR) using Virtualization, Moving VMs.

MODULE-III Service Models

[8 periods]

Infrastructure as a Service (IaaS) – Resource Virtualization: Server, Storage, Network – Case studies. Platform as a Service (PaaS) – Cloud platform & Management: Computation, Storage – Case studies. Software as a Service(SaaS) – Web services – Web 2.0 – Web OS – Case studies – Anything as a service (XaaS) – Microservices.

MODULE-IV Cloud Programming and Software Environments

[5 periods]

Cloud Programming and Software Environments – Parallel and Distributed Programming paradigms – Current technologies – Programming support of App Engines – Emerging Cloud software Environment.

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MODULE-V Cloud Access

[11 periods]

Authentication, authorization and accounting – Cloud Provenance and meta-data – Cloud Reliability and fault-tolerance – Cloud Security, privacy, policy and compliance- Cloud federation, interoperability and standards. The term is generally used to describe data centres available to many users over the Internet. Large clouds, predominant today, often have functions distributed over multiple locations from central servers. If the connection to the user is relatively close, it may be designated an edge server.

Course Outcomes: After completion of the course, the students will be able to

CO1: Articulate the main concepts, key technologies, strengths, limitations of cloud computing and the possible applications for state-of-the-art cloud computing.

CO2: Identify the architecture and infrastructure of cloud computing, including cloud delivery and deployment models.

CO3: Analyze the core issues of cloud computing such as security, privacy, and interoperability.

CO4: Identify problems, analyze, and evaluate various cloud computing solutions.

CO5: Analyze appropriate cloud computing solutions and recommendations according to the applications used.

Evaluation Process:

1. Attendance for the course is 75%, which is mandatory.
2. Minimum qualifying marks percentage for the course is 50.
3. Certificate will be issued after successful completion of course and assessment processes.

Learning resources:

Suggested Books:


1. Cloud computing a practical approach - Anthony T.Velte, Toby J. Velte Robert Elsenpeter, TATA McGraw-Hill, New Delhi - 2010
2. Cloud Computing: Web-Based Applications That Change the Way You Work and Collaborate Online - Michael Miller - Que 2008.
3. Cloud computing for dummies- Judith Hurwitz, Robin Bloor, Marcia Kaufman „Fern Halper, Wiley Publishing, Inc, 2010
4. Cloud Computing (Principles and Paradigms), Edited by Rajkumar Buyya, James Broberg, Andrzej Goscinski, John Wiley & Sons, Inc. 2011

Other Sources:

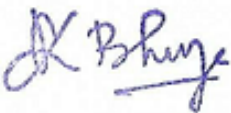
e-Learning Resources:

<https://cloud.google.com/docs/tutorials>


Design and Developed by: Prof. Chitta Ranjan Behera & Prof. Parimal Giri



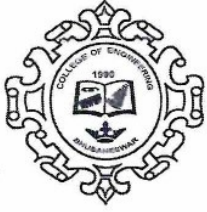
Principal



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H.O.D, MCA
HOU MCA
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NOTICE

ADD-ON/CERTIFICATE COURSE

Ref No: COEB/MCA/2020/21

Date: 05/09/2020

It is for the information of all the students of **1st/ 3rd** semester that the classes for the Add-On/Certificate Courses for the **Academic Year 2020-21** will commence as per the time table given below in **ONLINE** Mode. The registration process for the course will start from **06/09/2020**. The interested students to enroll themselves for the course are advised to contact the concerned Course Coordinators for the details.

Semester	Course Title	Course Coordinator	Date of Commencement
1st	Streaming Data: Concepts, Applications, and Technologies	Dr. Parimal Giri	14/09/2020
3rd	Cloud Deployment	Dr. Sanjay Kumar Sarangi	14/09/2020

The class timing will be from 5.30 pm to 7.30 pm.

Head of the Department
HOD MCA
COLLEGE OF ENGINEERING BHUBANESWAR

Copy to:

1. Office of the Chairman/ Vice-Chairman for kind information.
2. Office of the Executive Director for kind Information.
3. Office of the Registrar for kind Information.
3. Office of the Principal for kind information.
4. Departmental Notice Board
5. Guard File

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Head of the Department
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**COLLEGE OF ENGINEERING BHUBANESWAR (COEB)****ADD-ON COURSE ENROLLMENT SHEET****ON-LINE MODE****Name of the Department: MCA****Course Title: Cloud Deployment****Semester : 3rd****Academic Year: 2020-21****Duration: 14/09/2020 to 16/10/2020**Student's Declaration/Undertaking

1. I do hereby undertake to participate in the above mentioned add on course.
2. I do hereby, promise to abide by the admissible rules and regulations, concerning discipline, attendance, etc. of the department, and also to follow the Code of Conduct prescribed for the students of the Institute, as in force from time to time.

Sl. No.	Registration No.	Name of the Student	Remarks by the Course Coordinator
1	1905219001	BIBHUDATTA SAHOO	Certified that the Enrollment Sheet is prepared by taking the consents of the students to enroll themselves in this Certificate Course (Add-On) to be conducted in Virtual Mode (ON-LINE) during the Pandemic COVID'19 through the link provided by the Department. They have also gone through the declaration/undertaking to be strictly abided by them during the course period.
2	1905219002	CHEYTANA SHARMA	
3	1905219003	DAMAYANTI PRADHAN	
4	1905219004	JAGAT NARAYAN ROUT	
5	1905219005	JAYASHREE SAHOO	
6	1905219006	LIPIKA BEHERA	
7	1905219007	LOPAMUDRA PRADHAN	
8	1905219008	PAYAL BEHERA	
9	1905219009	PRASANT HUIKA	
10	1905219010	RAJESH SWAIN	
11	1905219011	SAROJ PANDA	
12	1905219012	SASHIKANTA PANDA	
13	1905219013	SATYARANJAN DASH	
14	1905219014	SUCHITRA MALIK	
15	1905219015	ABHISHIKTA SAMAL	
16	1905219016	ADITYA PRASAD SARANGI	
17	1905219017	AMIT KUMAR BISWAL	
18	1905219018	AMRITA SARANGI	
19	1905219019	ANUSRITI MAHATA	
20	1905219020	ASHOK KUMAR PAL	
21	1905219021	BIBHUDATTA PARIDA	
22	1905219022	GIRISH CHANDRA BEHERA	
23	1905219023	KANHU CHARAN MALLICK	
24	1905219024	MANISHA LENKA	
25	1905219025	MAYURISINI BESRA	
26	1905219026	NARAHARI HARAMANI	
27	1905219027	NIKHAT ZAMAL YASMIN	
28	1905219028	POOJARANI ROUT	
29	1905219029	PRAVAT RANJAN PANDA	
30	1905219030	RINKU NAHAK	
31	1905219031	SAMBIT KUMAR KAR	
32	1905219032	SASMITA MOHANTY	
33	1905219033	SOUBHAGYABATI SAHOO	
34	1905219034	SUBRAT KUMAR PANIGRAHI	
35	1905219035	SUCHISMITA DEHURY	
36	1905219036	SURAJRAM PARIDA	
37	1905219037	TWINKLE KAR	

Course Coordinator
(Signature with Seal)**PRINCIPAL**
College of Engineering Bhubaneswar

**COLLEGE OF ENGINEERING BHUBANESWAR (COEB)****DEPARTMENT OF MCA**

ADD ON/CERTIFICATE COURSE

STUDENT ATTENDANCE SHEET**ON-LINE MODE**Programme: **MCA**Semester: **3rd**

Academic Year: 2020-21

Name of the Course: **Cloud Deployment** Course Code :PG-2

Duration : 40 Hours			Remarks by the Course Coordinator (P-Present, A-Absent)										Remarks
SL. NO.	Reg. No./ Enrollment No.	NAME OF THE STUDENT	Date 14/09/20	Date 15/9/20	Date 16/9/20	Date 18/9/20	Date 21/9/20	Date 22/9/20	Date 23/9/20	Date 24/9/20	Date 25/9/20	Date 28/9/20	
1	1905219001	BIBHUDATTA SAHOO	P	P	P	P	P	P	P	P	P	P	Certified that this Certificate course is conducted in virtual mode (ON-LINE) because of the Pandemic COVID-19. The attendance is taken with the remarks P-Present and A-Absent for the students.
2	1905219002	CHETANA SHARMA	P	P	P	P	A	P	P	P	P	P	
3	1905219003	DAMAYANTI PRADHAN	P	P	P	P	P	P	P	P	A	P	
4	1905219004	JAGAT NARAYAN ROUT	P	P	P	P	P	A	P	P	P	P	
5	1905219005	JAYASHREE SAHOO	P	P	P	P	P	P	P	P	A	P	
6	1905219006	LIPIKA BEHERA	P	P	P	P	A	P	P	P	P	P	
7	1905219007	LOPAMUDRA PRADHAN	P	P	P	P	P	P	P	P	P	P	
8	1905219008	PAYAL BEHERA	P	P	A	P	P	P	P	P	P	P	
9	1905219009	PRASANT HUIKA	P	P	P	P	P	P	P	P	P	P	
10	1905219010	RAJESH SWAIN	P	P	P	A	P	P	P	P	P	P	
11	1905219011	SAROJ PANDA	P	P	P	P	P	P	P	P	P	P	
12	1905219012	SASHIKANTA PANDA	P	P	P	P	P	A	P	P	P	P	
13	1905219013	SATYARANJAN DASH	P	P	P	P	P	P	P	A	P	P	
14	1905219014	SUCHITRA MALIK	P	P	A	P	P	P	P	P	P	P	
15	1905219015	ABHISHIKTA SAMAL	P	P	P	P	P	P	A	P	P	P	
16	1905219016	ADITYA PRASAD SARANGI	P	P	P	P	P	P	P	P	P	P	
17	1905219017	AMIT KUMAR BISWAL	P	P	P	P	P	A	P	P	P	P	
18	1905219018	AMRITA SARANGI	P	P	P	P	P	P	P	P	P	P	
19	1905219019	ANUSRITI MAHATA	P	A	P	P	P	P	P	P	P	P	
20	1905219020	ASHOK KUMAR PAL	P	P	P	P	P	P	A	P	P	P	
21	1905219021	BIBHUDATTA PARIDA	P	P	P	P	P	P	P	P	P	P	
22	1905219022	GIRISH CHANDRA BEHERA	P	P	P	A	P	P	P	P	P	P	
23	1905219023	KANHU CHARAN MALLICK	P	P	P	P	P	P	P	P	P	A	
Signature of the Course Coordinator			Sajay	Sajay	Sajay	Sajay	Sajay	Sajay	Sajay	Sajay	Sajay	Sajay	

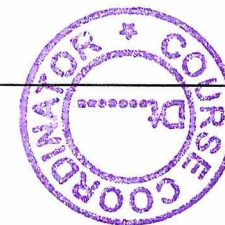
Sajay
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Sajay
Course Coordinator
 (Signature with Seal)



SL. NO.	Reg. No./ Enrollment No.	NAME OF THE STUDENT	Date 14/9/20	Date 15/9/20	Date 16/9/20	Date 18/9/20	Date 21/09/20	Date 22/09/20	Date 23/09/20	Date 24/9/20	Date 25/9/20	Date 28/9/20	Remarks	
24	1905219024	MANISHA LENKA	P	A	P	P	P	P	P	P	P	P	Certified that this Certificate course is conducted in virtual mode (ON-LINE) because of the Pandemic COVID-19. The attendance is taken with the remarks P-Present and A-Absent for the students.	
25	1905219025	MAYURISINI BESRA	P	P	P	P	A	P	P	P	P	P		
26	1905219026	NARAHARI HARAMANI	P	P	P	P	P	P	P	P	A	P		
27	1905219027	NIKHAT ZAMAL YASMIN	P	P	P	P	P	P	P	A	P	P		
28	1905219028	POOJARANI ROUT	P	P	P	A	P	P	P	P	P	P		
29	1905219029	PRAVAT RANJAN PANDA	P	P	P	P	P	A	P	P	P	P		
30	1905219030	RINKU NAHAK	P	P	P	P	P	P	P	A	P	P		
31	1905219031	SAMBIT KUMAR KAR	P	A	P	P	P	P	P	P	P	P		
32	1905219032	SASMITA MOHANTY	A	P	A	P	A	P	A	P	A	P		
33	1905219033	SOUBHAGYABATI SAHOO	P	P	P	A	P	P	P	P	P	P		
34	1905219034	SUBRAT KUMAR	P	P	P	P	P	A	P	P	P	P		
35	1905219035	SUCHISMITA DEHURY	P	P	P	P	P	P	P	A	P	P		
36	1905219036	SURAJRAM PARIDA	P	A	P	P	P	P	P	P	P	P		
37	1905219037	TWINKLE KAR	P	P	P	P	P	P	A	P	P	P		
Signature of the Course Coordinator			Sajay	Sajay	Sajay	Sajay	Sajay	Sajay	Sajay	Sajay	Sajay	Sajay		

Sajay
Course Coordinator
(Signature with Seal)



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COLLEGE OF ENGINEERING BHUBANESWAR (COEB)

DEPARTMENT OF MCA

ADD ON/CERTIFICATE COURSE

STUDENT ATTENDANCE SHEET

ON-LINE MODE

Programme: MCA

Semester: 3rd

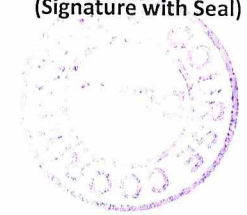
Academic Year: 2020-21

Name of the Course: Cloud Deployment Course Code :PG-2

Duration : 40 Hours			Remarks by the Course Coordinator (P-Present, A-Absent)										Remarks
SL. NO.	Reg. No./ Enrollment No.	NAME OF THE STUDENT	Date 29/9/20	Date 30/9/20	Date 05/10/20	Date 07/10/20	Date 08/10/20	Date 09/10/20	Date 12/10/20	Date 13/10/20	Date 16/10/20		
1	1905219001	BIBHUDATTA SAHOO	P	P	A	P	P	P	P	P	P	P	Certified that this Certificate course is conducted in virtual mode (ON-LINE) because of the Pandemic COVID-19. The attendance is taken with the remarks P-Present and A-Absent for the students.
2	1905219002	CHETANA SHARMA	P	P	P	P	P	P	P	P	P	P	
3	1905219003	DAMAYANTI PRADHAN	P	P	P	P	P	P	P	P	P	P	
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9	1905219009	PRASANT HUIKA	P	P	P	A	P	P	P	P	P	P	
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23	1905219023	KANHU CHARAN MALLICK	P	P	P	P	P	P	P	P	P	P	
Signature of the Course Coordinator			Sanjay	Sanjay	Sanjay	Sanjay	Sanjay	Sanjay	Sanjay	Sanjay	Sanjay	Sanjay	

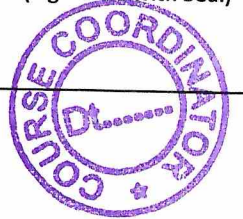
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Sanjay
Course Coordinator
(Signature with Seal)



SL. NO.	Reg. No./ Enrollment No.	NAME OF THE STUDENT	Date 29/9/20	Date 30/9/20	Date 5/10/20	Date 6/10/20	Date 7/10/20	Date 8/10/20	Date 9/10/20	Date 12/10/20	Date 13/10/20	Date 16/10/20	Remarks
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37	1905219037	TWINKLE KAR	P	P	P	P	P	P	P	P	P	P	
Signature of the Course Coordinator			Sanjay	Sanjay	Sanjay	Sanjay	Sanjay	Sanjay	Sanjay	Sanjay	Sanjay	Sanjay	

Sanjay
Course Coordinator
(Signature with Seal)



A. Bhuje
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PLOT NO-1(A), CNI COMPLEX, PATIA, BHUBANESWAR, KHORDHA, ODISHA-751024



Certificate of Completion

This is to certify that Mr./Ms. CHETANA SHARMA, student of the Department

of MCA semester Third bearing registration number 1905219002

has successfully completed the ADD-ON Course titled Cloud Deployment

conducted at College of Engineering Bhubaneswar in the academic year 2020-21

TRUE COPY

Sanjay

Course-Coordinator

[Signature]

Principal

[Signature]
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College of Engineering Bhubaneswar



COLLEGE OF ENGINEERING BHUBANESWAR

PLOT NO-1(A), CNI COMPLEX, PATIA, BHUBANESWAR, KHORDHA, ODISHA-751024



Certificate of Completion

This is to certify that Mr./Ms. DAMAYANTI PRADHAN, student of the Department

of MCA semester Third bearing registration number 1905219003

has successfully completed the ADD-ON Course titled Cloud Deployment

conducted at College of Engineering Bhubaneswar in the academic year 2020-21

TRUE COPY

Sanjay

Course-Coordinator

[Signature]

Principal

[Signature]

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COLLEGE OF ENGINEERING BHUBANESWAR

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Certificate of Completion

This is to certify that Mr./Ms. JAGAT NARAYAN ROUT, student of the Department

of MCA semester Third bearing registration number 1905219004

has successfully completed the ADD-ON Course titled Cloud Deployment

conducted at College of Engineering Bhubaneswar in the academic year 2020-21

TRUE COPY

Sanjay

Course-Cordinator

[Signature]

Principal

[Signature]

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COLLEGE OF ENGINEERING BHUBANESWAR

PLOT NO-1(A), CNI COMPLEX, PATIA, BHUBANESWAR, KHORDHA, ODISHA-751024



Certificate of Completion

This is to certify that Mr./Ms. JAYASHREE SAHOO, student of the Department

of MCA semester Third bearing registration number 1905219005

has successfully completed the ADD-ON Course titled Cloud Deployment

conducted at College of Engineering Bhubaneswar in the academic year 2020-21

TRUE COPY

Sanjay

Course-Cordinator

[Signature]

Principal

[Signature]

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COLLEGE OF ENGINEERING BHUBANESWAR

PLOT NO-1(A), CNI COMPLEX, PATIA, BHUBANESWAR, KHORDHA, ODISHA-751024



Certificate of Completion

This is to certify that Mr./Ms. LIPIKA BEHERA, student of the Department

of MCA semester Third bearing registration number 1905219006

has successfully completed the ADD-ON Course titled Cloud Deployment

conducted at College of Engineering Bhubaneswar in the academic year 2020-21

TRUE COPY

Sanjay

Course-Coordinator

[Signature]

Principal

[Signature]

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