Bharath
INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CIRCULAR

27.11.2017

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Cloud Application Development** for the benefit of II, III and IV year students. This course is scheduled from 01.12.2017 for 30 hours which includes theory and practical. Scheduled on Friday 1:30 PM to 4:30 PM (AN) and Saturday 9:30 AM to 4:30 PM (FN&AN).

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	**Name of the Faculty**	**Designation**
1	Dr.C.Nalini	Professor
2	Dr.C.Rajabhushanam	Professor

Head of Department

HEAD OF DEPARTMENT
Department of Computer Sci & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073. INDIA

To

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CERTIFICATE COURSE ON CLOUD APPLICATION DEVELOPMENT

Date of Introduction of the Course: 27.11.20217

COURSE SYLLABUS

1. Introduction to Cloud Computing

Defining cloud computing-Components of a computing cloud, differentiating types of clouds: public, private, hybrid Delivering services from the cloud-Categorizing service types-Comparing vendor cloud products: Amazon, Google, Microsoft and others-Adopting the Cloud

2. Key drivers of cloud computing solutions

Instantaneous provisioning of computing resources, tapping into an infinite storage capacity, Cost-effective pay-as-you-use billing models

3. Evaluating barriers to cloud computing

Handling sensitive data-Aspects of cloud security-Assessing governance solutions

4. Exploiting Software as a Service (SaaS)

Characterizing SaaS-Streamlining administration with centralized installation, Optimizing cost and performance with scale on demand

5. Comparing service scenarios

Improving collaboration with business productivity tools-Simplifying business process creation by integrating existing components

6. Inspecting SaaS technologies

Deploying web applications, implementing web services: SOAP, REST, Choosing a development platform

7. Delivering Platform as a Service (PaaS)

Exploring the technical foundation for PaaS, Specifying the components of PaaS, Analysing vendor PaaS provisions, selecting an appropriate implementation

8. Building services with solution stacks

Evaluating the architecture of vendor-specific platforms, Becoming familiar with service platform tools

9. Managing cloud storage

Controlling unstructured data in the cloud, Deploying relational databases in the cloud, improving data availability

10. Employing support services

Testing in the cloud, Monitoring cloud-based services, Analysing portability across platforms

11. Deploying Infrastructure as a Service (IaaS)

Enabling technologies-Scalable server clusters, Achieving transparency with platform virtualization, Elastic storage devices

12. Accessing IaaS

Provisioning servers on demand, handlingdynamic and static IP addresses, Tools and support for management and monitoring

13. Building a Business Case

Calculating the financial implications-Comparing in-house facilities to the cloud, Estimating economic factors downstream

14. Preserving business continuity

Selecting appropriate service-level agreements, safeguarding access to assets in the cloud, Security, availability and disaster recovery strategies

15. Migrating to the Cloud

Technical considerations-Re-architecting applications for the cloud, integrating the cloud with existing applications, avoiding vendor lock-in, planning the migration and selecting a vendor

COURSE OBJECTIVES

In this course we plan to give students an overview of the field of Cloud Computing, and an in-depth study into its enabling technologies and main building blocks. Students will gain hands-on experience solving relevant problems through projects that will utilize existing public cloud tools. It is our objective that students will develop the skills needed to become a practitioner or carry out research projects in this domain.

Specifically, the course has the following objectives:

Students will learn

1) The fundamental ideas behind Cloud Computing, the evolution of the paradigm, its applicability; Benefits, as well as current and future challenges;

2) The basic ideas and principles in data centre design; cloud management techniques and cloud

Software deployment considerations;

3) Different CPU, memory and I/O virtualization techniques that serve in offering software, computation and storage services on the cloud; Software Defined Networks (SDN) and Software Defined Storage (SDS);

4) Cloud storage technologies and relevant distributed file systems, NoSQL databases and object storage;

5) The variety of programming models and develop working experience in several of them.

COURSE COORDINATOR

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CERTIFICATE COURSE ON CLOUD APPLICATION DEVELOPMENT

Date of Introduction of the Course: 27.11.20217

The timings are 1:30 PM to 4:30 PM from Friday (AN) and Saturday (FN&AN).

Time Table& Lesson plan

CLASS	DATE	TOPIC
1,2	01-12-2017(AN)	**1. Introduction to Cloud Computing** Defining cloud computing-Components of a computing cloud, differentiating types of clouds: public, private, hybrid Delivering services from the cloud-Categorizing service types-Comparing vendor cloud products: Amazon, Google, Microsoft and others-Adopting the Cloud
3,4	01-12-2017 (AN) 02-12-2017(FN)	**2. Key drivers of cloud computing solutions** Instantaneous provisioning of computing resources, tapping into an infinite storage capacity, Cost-effective pay-as-you-use billing models
5,6	02-12-2017(FN)	**3. Evaluating barriers to cloud computing** Handling sensitive data-Aspects of cloud security-Assessing governance solutions
7,8	02-12-2017 (FN) 02-12-2017(AN)	**4. Exploiting Software as a Service (SaaS)** Characterizing SaaS-Streamlining administration with centralized installation, Optimizing cost and performance with scale on demand
9,10	02-12-2017 (AN)	**5. Comparing service scenarios** Improving collaboration with business productivity tools-Simplifying business process creation by integrating existing components
11,12	08-12-2017 (AN)	**6. Inspecting SaaS technologies** Deploying web applications, implementing web services: SOAP, REST, Choosing a development platform
13,14	08-12-2017 (AN) 09-12-2017 (FN)	**7. Delivering Platform as a Service (PaaS)** Exploring the technical foundation for PaaS, Specifying the components of PaaS, Analysing vendor PaaS provisions, selecting an appropriate

		implementation
15,16	**09-12-2017 (FN)**	**8. Building services with solution stacks** Evaluating the architecture of vendor-specific platforms, Becoming familiar with service platform tools
17,18	**09-12-2017 (FN) 09-12-2017 (AN)**	**9. Managing cloud storage** Controlling unstructured data in the cloud, Deploying relational databases in the cloud, improving data availability
19,20	**09-12-2017 (AN)**	**10. Employing support services** Testing in the cloud, Monitoring cloud-based services, Analysing portability across platforms
21,22	**15-12-2017 (AN)**	**11. Deploying Infrastructure as a Service (IaaS)** Enabling technologies-Scalable server clusters, Achieving transparency with platform virtualization, Elastic storage devices
23,24	**15-12-2017 (AN) 16-12-2017 (FN)**	**12. Accessing IaaS** Provisioning servers on demand, handling dynamic and static IP addresses, Tools and support for management and monitoring
25,26	**16-12-2017 (FN)**	**13. Building a Business Case** Calculating the financial implications-Comparing in-house facilities to the cloud, Estimating economic factors downstream
27,28	**16-12-2017 (FN) 16-12-2017 (AN)**	**14. Preserving business continuity** Selecting appropriate service-level agreements, safeguarding access to assets in the cloud, Security, availability and disaster recovery strategies
29,30	**16-12-2017 (AN)**	**15. Migrating to the Cloud** Technical considerations-Re-architecting applications for the cloud, integrating the cloud with existing applications, avoiding vendor lock-in, planning the migration and selecting a vendor

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CERTIFICATE COURSE ON CLOUD APPLICATION DEVELOPMENT
Date of Introduction of the Course: 27.11.2017

School of Computing
Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT
1	U14CS001	AADHITYA MALLIKA ARJUN
2	U14CS002	AAVULA DIXITH REDDY
3	U14CS003	ABDUL RAHIM.M
4	U14CS004	ABDUL RAZVI .M.K
5	U14CS005	ABDUR RASEED
6	U14CS006	ABHIKAMALI .A
7	U14CS007	ABHISHEK MANDURI
8	U14CS008	AJAY.D
9	U14CS009	AKASH CHANDRA AMBASTHA
10	U14CS010	AKHIL REDDY.G
11	U14CS011	AKSHAY.R
12	U14CS012	AMAR BASUMATARY
13	U14CS013	ANDREW JOSEPH.V
14	U14CS014	ANGELIN .R
15	U14CS015	ANKITA
16	U14CS016	ANNILKRISHNAN .K
17	U14CS017	ASHUTOSH SRIVASTAVA
18	U14CS019	ARAMBAKAM,YASWANTH
19	U14CS021	AREEF SYED
20	U14CS022	ARUN KUMAR SINGH
21	U14CS023	ASIF NAZIR WANI
22	U14CS024	ATUL ANAND
23	U14CS025	BACHU HARISH
24	U14CS026	BALA MURUGAN .P
25	U14CS027	BALAJI SINGH. T

26	U14CS028	BALAJI.S
27	U14CS029	BALAKRISHNAN.T
28	U14CS031	BISHAL BANIK
29	U14CS032	BODA VEERA VENKATA RAVI TEJA
30	U14CS033	BOORAGADDA VAMSI KRISHNA
31	U14CS034	BOYAPATI VINAY
32	U14CS035	BYSANI VENKAT SANDEEP
33	U14CS036	CHARAN.G
34	U14CS038	CHIDIRALA.SAI SHANKAR
35	U14CS039	CHINTAGUNTA MARUTHI VENKATESWARA REDDY
36	U14CS040	CHINTAPANTI SRIKANTH
37	U14CS041	CHINTLA VENKATESH
38	U14CS042	CHUDAAMANI.V
39	U14CS044	DARA DEEPTHI
40	U14CS045	DEEPAKSANKAR REDDY.M
41	U14CS046	DEVARAPALLI HIMAKAR
42	U14CS047	DEVULAPALLY NAGARAJU
43	U14CS048	DIVYA RUPINI.B
44	U14CS049	EVELIN JUGI.R
45	U14CS050	FAZIL AHAMED.J

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COURSE FEEDBACK FORM

Academic Year		2017- 2018					
Term		Add-on Course					
Course Number		-					
Course Title		Cloud Application Development					
Number of Credits		-					
Type of Course	Regular		Elective		Add-on	✓	

I. Information on the Respondent: (Tick (√) Appropriately)

1. **Percentage of classes attended**

0-20		20-40		40-60		60-80	✓	80-100	

2. **Number of hours per week spent on the course (Other than lecture hours)**

0-2		2-4		4-6	✓	6-8		8-10	

3. **Preparation for the course by the student:**

(i)	Have done part of this course earlier
(ii)	Has adequate prior exposure to the prerequisites
(iii)	Had to pickup relevant additional topics through concurrent study ✓
(iv)	Have no exposure to the background material

4. **The expectations for taking the course by the student are:**

(a)	Enhance by skill base in the area of specializations
(b)	Get exposed to a relevant subject
(c)	Curiosity
(d)	Better Employment Opportunity ✓
(e)	Complete Course requirements
(f)	To Improve CGPA ✓

About the Instructor: Information on the Respondent: (Tick (√) Appropriately)

		A	B	C	D	E
1.	Pace of the Teaching/lecture		✓			
2.	Comment of the Subject		✓			
3.	Clarity of expression					
4.	Level of preparation	✓				
5.	Level of interaction		✓			
6.	Accessibility outside the class		✓			
7.	Others (please specify	Good.				

A: Excellent		B: Very Good		C: Good		D: Satisfactory		E: Poor	

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CERTIFICATE OF PARTICIPATION

This certificate is presented to

AKHIL REDDY.G

For actively participating in the value added course "Cloud Application Development" Conducted by School of Computing, BIHER from 01.12.2017 to 16.12.2017.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR