AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING

Approved by All India Council for Technical Education - New Delhi, Affiliated to Anna University, Chennai
NAAC Accredited Institution
"Nizara Educational Campus", Muthapudupet, Avadi - IAF, Chennai - 600 055.
ANNA UNIVERSITY COUNSELLING CODE : 1101

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Dated on: 23/02/2022

CIRCULAR

FACULTY MEMBERS AND STUDENTS

We have planned to conduct Value Added course in our department on the topic "CLOUD INFRASTRUCTURE AND SERVICES" from 05/03/2022 to 26/03/2022 therefore, I request all the Faculty members and students to attend the course and make utilization of the course for your future.

Resource Person:
Mr.G.V.CHANDRAKANTH.,B.E,M.B.A., LLB(HONS)
CO-FOUNDER,CTO
ICUBE ROBOTICS

Permitted to organize the above programme.

Date 23/2/2022

Prof. Dr. A.S.SALMA BANU
HoD/ECE

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PROF. DR. A.S. SALMA BANU
HEAD/ECE

Prof. Dr. S. Sathish
Principal

Alhaj. S. Segu Jamaludeen
Secretary & Correspondent

Cloud infrastructure and Services

We provide professional courses from 5th March 2022

RESOURCE PERSON :
Mr. G. V. CHANDRAKANTH.,
B.E.,M.B.A.,LLB (HONS)
CO-FOUNDER, CTO,
ICUBE ROBOTICS

GET IN TOUCH

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- 9444260079
- as.salmabanu@aalimec.ac.in
- Department of ECE

VALUE ADDED COURSE

We specialize in digital marketing strategies that are designed to grow your business, increase your online presence, and engage your target audience.

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Trust us to bring your vision to life.

DEPARTMENT OF ELECTRONICS &COMMUNICATION ENGINEERING

VALUE-ADDED COURSE-SUMMARY REPORT

COURSE NAME: CLOUD INFRASTRUCTURE AND SERVICES

Date: 05/03/2022 to 26/03/2022

Time: Week Days Timing: 4:00 pm to 6:00 pm

      Saturday's Timing:

              Morning Session: 9.30 am to 12.30 pm

              Afternoon Session: 1.30 pm & 3:30 pm

No. of Modules: 4

Course Hours: 32

Mode of Conduction: Offline

Speaker: G.V.CHANDRAKANTH

Student Certified: 33

Objective of the Course:

- The **"Cloud Infrastructure and Services"** course aims to provide participants with a comprehensive understanding of cloud computing concepts, infrastructure, and services.
- The course is designed to equip participants with the knowledge and skills required to effectively utilize cloud technologies, manage cloud resources, and integrate various cloud services.
- By the end of the course, participants will be able to design, deploy, and manage cloud-based solutions using major cloud service providers such as AWS, Azure, and Google Cloud.

Summary of the course:

- This course covers the essentials of cloud computing, focusing on the core infrastructure and services offered by leading cloud platforms.
- The course begins with an introduction to cloud computing concepts and deployment models, followed by an exploration of core cloud services including compute, storage, and networking.
- Participants will gain hands-on experience with cloud account setup, virtual machines, serverless computing, containers, and storage solutions.
- The course also delves into networking, security, service integration, and management, including cost optimization strategies.
- Advanced topics such as big data, machine learning services, and future cloud trends are also covered. Each day includes practical labs to reinforce learning and provide real-world experience.

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Course Outcomes:

By the end of the course, participants will be able to:

1. **Understand Cloud Computing Fundamentals:**
   o Define cloud computing and its benefits.
   o Describe different cloud service models (IaaS, PaaS, SaaS) and deployment models (Public, Private, Hybrid).
2. **Setup and Manage Cloud Infrastructure:**
   o Create and configure cloud accounts on major platforms (AWS, Azure, Google Cloud).
   o Launch and manage virtual machines and serverless functions.
   o Implement containerization using Docker and understand basic orchestration concepts.
3. **Utilize Cloud Storage Solutions:**
   o Set up and manage various types of cloud storage (block, object, file).
   o Implement data management, backup, and recovery solutions.
4. **Configure Cloud Networking and Security:**
   o Configure virtual networks, subnets, load balancers, and auto-scaling.
   o Implement identity and access management (IAM), encryption, and compliance measures.
5. **Integrate and Automate Cloud Services:**
   o Integrate cloud services such as databases, messaging, and analytics.
   o Use Infrastructure as Code (IaC) tools for provisioning and managing infrastructure.
   o Implement automation and CI/CD pipelines for application deployment.

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AVADI - IAF, MUTHAPUDUPE"
CHENNAI 600 055

Place: Chennai
Date: 16 /02/2022

From,

Head of the Department
Department of ECE
Aalim Muhammed Salegh College of Engineering
Avadi IAF, Muthapudupet
Chennai - 600055

To,

The Principal
Aalim Muhammed Salegh College of Engineering
Avadi IAF, Muthapudupet
Chennai - 600055

Respected Sir,

Sub: Requisition for the approval to conduct Value Added course in our ECE department – Reg.

      We wish to conduct Value Added course in our ECE department on the topic "CLOUD INFRASTRUCTURE & SERVICES" a Guest Lecture Series From 05/03/2022 to 26/03/2022.

Resource Person:
Mr. GV. CHANDRAKANTH,B.E.M.B.A.LLB(HONS)
Co-Founder, CTO
ICUBE ROBOTICS

    The objective of conducting this Value Added course will give the industry focus in developing skills required by using latest technology advancement in "CLOUD INFRASTRUCTURE & SERVICES". This effort will benefit our Student's community and bring core strength in engineering field.

Thank you,

Yours truly,

Permitted to organize the above Programm

Date 16/2/2022

Professor Dr. A. S. SALMABANU
Head of the Department/ECE

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DEPARTMENT OF ELECTRONICS &COMMUNICATION ENGINEERING

CERTIFICATE COURSE-CLOUD INFRASTRUCTURE AND SERVICES
Academic Year: (2021-2022)

COURSE CONTENT:

MODULE NO.	CONTENT	DURATION(Hrs)

MODULE 1	**Introduction to Cloud Computing and Infrastructure**
	• **Introduction to Cloud Computing**
	  • Definition and Characteristics of Cloud Computing
	  • Cloud Computing Models: IaaS, PaaS, SaaS
	  • Benefits and Challenges of Cloud Computing
	  • Major Cloud Service Providers Overview (AWS, Azure, Google Cloud, etc.)
	• **Cloud Deployment Models**
	  • Public, Private, and Hybrid Clouds
	  • Community Clouds and Multi-cloud Strategies
	  • Comparing Deployment Models and Choosing the Right On
	Cloud Architecture Fundamentals
	  • Understanding Cloud Infrastructure Components
	  • Virtualization and Containerization Basics
	  • Overview of Cloud Storage Solution.
		6

MODULE 2	• **Compute Services**
	  • Introduction to Virtual Machines and Instances
	  • Overview of Serverless Computing (AWS Lambda, Azure Functions, Google Cloud Functions)
	  • Containers and Orchestration (Docker, Kubernetes)
	• **Hands-On Lab: Compute Services**
	  • Launching and Configuring Virtual Machines
	  • Deploying a Simple Serverless Function
	  • Introduction to Docker and Deploying a Basic Container
		6

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	Cloud Storage Solutions • Types of Cloud Storage: Block, Object, File Storage • Data Management and Backup Solutions • Understanding Storage Services (AWS S3, Azure Blob Storage, Google Cloud Storage)	

MODULE 3	**Networking and Security in the Cloud**
	• **Cloud Networking Basics**
	  • Virtual Networks and Subnets
	  • Load Balancers and Auto-Scaling
	  • Content Delivery Networks (CDNs)
	• **Cloud Security Fundamentals**
	  • Identity and Access Management (IAM)
	  • Encryption and Key Management
	  • Compliance and Best Practices
		10

MODULE 4	**Cloud Services Integration and Management**
	
	• **Service Integration and Automation**
	  • Integration of Cloud Services (Databases, Messaging, Analytics)
	  • Introduction to Infrastructure as Code (IaC) Tools (AWS CloudFormation, Azure Resource Manager, Terraform)
	  • Automation and Orchestration (CI/CD Pipelines)
	• **Cost Management and Optimization**
	  • Understanding Cloud Pricing Models
	  • Monitoring and Cost Management Tools
	  • Cost Optimization Strategies
		10

TOTAL :32 Hrs

<u>Value Added Course Tentative Time Table And Schedule</u>

Value Added Course Name: CLOUD INFRASTRUCTURE AND SERVICES

Date of Commencement: From 05/03/2022

Week Days Timing: 4:00 pm to 6:00 pm

Saturday's Timing:

>Morning Session: 9.30 am to 12.30 pm
>
>Afternoon Session: 1.30 pm & 3:30 pm

Tentative Date of Exam- 26/03/2022

Tentative Course Schedule - 05/03/2022 to 26/03/2022 (As per following)

No. Of Days: (4 Weekend class) (4 Days Week days)

Course Hours: 32

Speaker: Mr. G.V.CHANDRAKANTH., B.E, M.B.A., LLB (HONS)

1. Module -1: Introduction to Cloud Computing & Infrastructure– 05-03-2022 – 6 Hours

2. Module -2:Compute Services – 12-03-2022 – 6 Hours

3. Module -3:Networking & Security in the Cloud – 19-03-2022 to 22-03-2022 –3 days (10 Hrs)

4. Module -4:Cloud Services Integration & Management – 23-03-2022 to 26-03-2022 – (3 days) (10 Hrs)

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Department of Electronics and Communication Engineering

Value Added Course : Cloud Infrastructure and Services(2021-2022)

S.NO	REG NO	Student Name	5/3/22	12/3/22	19/3/22	21/3/22	22/3/22	23/3/22	25/3/22	26/3/22
1	110119106001	ABDUR RAHMAN M Y								
2	110119106002	AFFAN NABEEL A								
3	110119106003	AMEENA S								
4	110119106004	ARUN KUMAR B								
5	110119106005	KISHORE ARAVIND M								
6	110119106006	MATEEN AHMED N								
7	110119106007	MD TAHIR PR								
8	110119106008	MOHAMED ABDULLAH I								
9	110119106009	MOHAMED ABUSALIH K								
10	110119106010	MOHAMED FUZAIL A								
11	110119106011	MOHAMED HASSAN S								
12	110119106012	MOHAMED IRFAN A								
13	110119106013	MOHAMED ISHAQ R								
14	110119106014	MOHAMED ISMAIL J								
15	110119106016	MOHAMED JAVITH NAZEEM N								
16	110119106017	MOHAMED KALIFATHULLAH M								
17	110119106018	MOHAMMED FAZIL A								
18	110119106019	MOHAMMED RAHIM A								
19	110119106020	NADAVALA SASI VADHAN								
20	110119106021	NITHIN A								
21	110119106022	PRASANNA KUMAR S								
22	110119106023	RAHAMAAN A R								
23	110119106024	SADHU BALA SAI KRISHNA								
24	110119106025	SEENI HABEBU MOHAMED A								
25	110119106026	SHAHID HUSSAIN N								
26	110119106029	SYED ALI NOVFAL								
27	110119106030	SYED IRFAN K								
28	110119106031	THANGARANI K								
29	110119106032	TOUHEED KHAN S								
30	110119106301	MOHAMED ASWERDEEN M								
31	110119106302	MOHAMED YASEEN								
32	110119106501	P. V. KRISHVA KESAV								
33	110119106701	H.MUBEENA								

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AALIM MUHAMMED SALEGH

COLLEGE OF ENGINEERING

C.ID-6ae34f01

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CERTIFICATE

OF COMPLETION

THIS IS TO CERTIFY THAT

AMEENA S

Has successfully completed 5days of valued Added Course in"**Cloud InfrastructureAndservices**"from05/03/2022to26/03/2022.We appreciate your hard work & Sincerity towards your course and wish you good luck for your future endeavor.

MARTINSCHROETERthe
Chairman and Chief
ExecutiveOfficerofKyndryl.

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OF ENGINEERING

G.V.CHANDRAKANTH
CO-Founder

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CERTIFICATE

OF COMPLETION

THIS IS TO CERTIFY THAT

AFFAN NABEEL A

Has successfully completed 5days of valued Added Course in"**Cloud InfrastructureAndservices**"from05/03/2022to26/03/2022.We appreciate your hard work & Sincerity towards your course and wish you good luck for your future endeavor.

MARTIN SCHROETER the
Chairman and Chief
Executive Office of Kyndryl

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G.V.CHANDRAKANTH
CO-Founder

C.ID-6ae34f01

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CERTIFICATE

OF COMPLETION

THIS IS TO CERTIFY THAT

MATEEN AHMED N

has successfully completed 5days of valued Added Course in"**Cloud InfrastructureAndservices**"from05/03/2022to26/03/2022.Weappreciateyour hard work & Sincerity towards your course and wish you good luck for your future endeavor.

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CO-Founder

C.ID-6ae34f01

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CERTIFICATE

OF COMPLETION

THIS IS TO CERTIFY THAT

KISHORE ARAVIND M

hassuccessfullycompleted5daysofvaluedAddedCoursein"**Cloud InfrastructureAndservices**"from05/03/2022to26/03/2022.Weappreciateyour hard work & Sincerity towards your course and wish you good luck for your future endeavor.

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