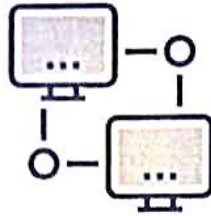
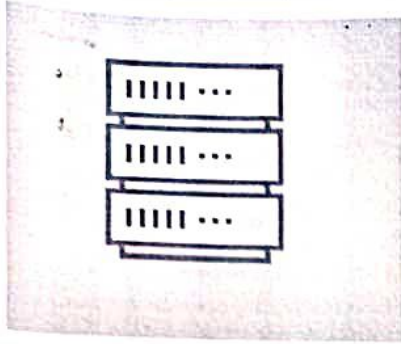


SDM College of Engineering and Technology, Dharwad - 580002

Year of Conduction: 2019-2020



ICT ACADEMY
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DELLEMC

Proposal for Training and Certification of
Final / Pre-Final year Students on

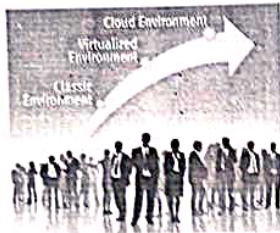
CLOUD INFRASTRUCTURE AND SERVICES (CIS)

Implemented by

ICT ACADEMY

CLOUD INFRASTRUCTURE AND SERVICES (CIS)

"Cloud essentials" course for all IT professionals responsible for server, storage, networking, and applications



COURSE OVERVIEW

The Cloud Infrastructure and Services (CIS) course educates students about cloud deployment and service models, cloud infrastructure, and the key considerations in migrating to cloud computing. For all definitions of cloud computing, the course has resorted to the U.S. National Institute of Standards and Technology as a guide. The course covers technologies required to build classic (traditional), virtualized, and cloud data center environments. These technologies

include compute, storage, networking, desktop and application virtualization. Additional areas of focus are backup/recovery, business continuity, security, and management. Students will learn about the key considerations and steps involved in transitioning from the current state of a data center to a cloud computing environment. Upon completing this course, students will have the knowledge to make informed decisions about migrating to cloud infrastructure and choosing the best deployment model for an organization.

CLOUD INFRASTRUCTURES AND SERVICES COURSE CONSISTS OF 11 MODULES:

Module 1: Journey to the Cloud

This module focuses on the business drivers, definition, essential characteristics, and phases in the journey to the cloud.

Module 2: Classic Data Center (CDC)

This module focuses on the key elements of CDC- compute, storage, and network- with focus on storage networking, business continuity, and data center management. This module covers classic compute and network at a high level, based on the assumption that students are already familiar with those technologies.

Module 3: Virtualized Data Center (VDC) - Compute

This module focuses on the compute aspect of the VDC. It explains the fundamental concepts of compute virtualization and covers compute virtualization techniques. This module also details virtual machine (VM) components and management of compute resources. Finally, it covers the process to convert physical machine to VM.

Module 4: Virtualized Data Center (VDC) - Storage

This module focuses on storage virtualization implementation, key underlying technologies, and methods for providing virtual storage to compute systems in a VDC environment.

Module 5: Virtualized Data Center (VDC) - Networking

This module focuses on networking in a VDC environment. It covers network virtualization in VDC, VDC network infrastructure and components, virtual LAN, and virtual SAN. It also covers the key network traffic management techniques.

Module 6: Virtualized Data Center (VDC) - Desktop and Application

This module focuses on the various aspects of desktop and application virtualization technologies.

Module 7: Business Continuity In VDC

This module focuses on the concepts and techniques employed for ensuring business continuity in a Virtualized Data Center (VDC) environment. It discusses the mechanisms to protect single point of failure in a VDC. Next, it covers the various technology options for backup, replication, and migration of Virtual Machines (VM) and their data in a VDC environment. Finally, it discusses the various options for recovering from total site failure due to a disaster.

Module 8: Cloud Computing Primer

This module focuses on the essential characteristics of cloud computing, the various cloud services and deployment models, and the economics of cloud.

Module 9: Cloud Infrastructure and Management

This module focuses on the cloud infrastructure components and cloud service creation processes. It also includes the cloud service management processes that ensure that the delivery of cloud services is aligned with business objectives and expectations of cloud service consumers.

Module 10: Cloud Security

This module focuses on security concerns and counter measures in a VDC and cloud environment. It discusses key security concerns and threats. It covers various infrastructure security mechanisms in VDC and cloud environments, including access control, identity management, governance, and more. Additionally, the module lists cloud security best practices.

Module 11: Cloud Migration Considerations

This module focuses on considerations for migration to the cloud. It details 'cloud models' suitable for different categories of users. Further, it covers considerations for choosing candidate application and various other considerations for migration to cloud. It also covers various phases of cloud adoption.

Faculty profile for success

Faculty who have been teaching courses on the following topics will have an added advantage in successfully teaching the CIS course:

1. Systems integration
2. Computer systems administration
3. Network administration
4. Operating systems, file systems, and data structures

**Student profile for success**

Students who have completed courses on the following topics will have an added advantage in successfully completing the CIS course:

1. Computer systems and architectures
2. Networking technologies
3. Operating system
4. Information storage and management



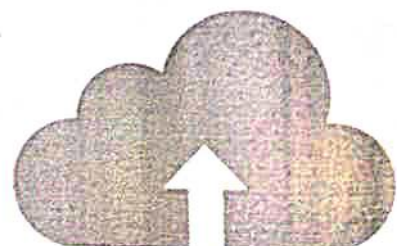
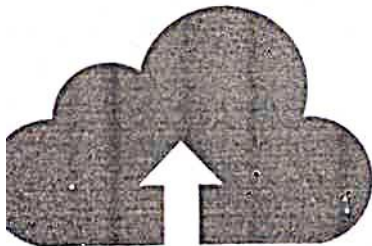
TRAINING AND CERTIFICATION DELIVERY MODEL

The inspiration behind the initiative is that, colleges shall consider making these programs compulsory for students or integrate the development of these skills into the teaching learning program by allocating credits to these programs.

This delivery model is specifically designed for EMC Academic Alliance partner institutions to enhance offerings under EAA and offer a richer learning experience, thereby creating a more employable and industry-ready workforce. These students from the institutions will be trained on the course by the EMC Proven Professional industry experts. The Standard EMC Academic Alliance Offerings include

CERTIFICATION

DellEMC Academic Associate certification is a resume-enhancing recognition that demonstrates mastery of the course topics through a comprehensive test created by industry experts. The certificate is downloadable, and can be validated online.





College of Engineering and Technology, Dharwad-580002
Department of Computer Science and Engineering

FEEDBACK

Name of the Training Program: <i>AWS Cloud Practitioner</i>	Date: <i>10 Feb - 14 Feb 2020</i>
Name of the Trainer & Affiliation: <i>Kamatchi Devi</i>	Venue: <i>CSE dept SDM CET</i>
Name of the Participant & Affiliation: <i>Adithi N. Poabhu</i>	
Mobile No: <i>9483386152</i>	Email ID: <i>adithinaps@gmail.com</i>

Dear Participants, Please provide your feedback on this training program/resource person. This will help us to provide better service in the future.

Put tick marks against each of the following questions.

Feedback perspective	Excellent/ Substantial /Yes	Moderate // To some extent	Introductory/ /Low /No/ Needs Improvement
Your knowledge about this topic <u>before</u> attending this training program/ workshop?			✓
Your knowledge about this topic <u>after</u> attending this training program/ workshop?		✓	
Objectives and expected outcomes of this event were made clear?		✓	
Was the resource person useful to you in making you to learn and meet the stated objectives?	✓		
Is the resource person knowledgeable in the area chosen?	✓		
Appropriate learning materials were provided?		✓	
Overall rating of this program?		✓	

How this event can be improved further?



College of Engineering and Technology, Dharwad-580002
Department of Computer Science and Engineering

FEEDBACK

Name of the Training Program: AWS [Amazon Web Services]	Date: 10-02-2020 to 14-02-2020
Name of the Trainer & Affiliation: Kamatchi Devi	Venue: SDM CET
Name of the Participant & Affiliation: Arpita S. Asawal	
Mobile No: 9380618985	Email ID: arpitasawal@gmail.com

Dear Participants, Please provide your feedback on this training program/resource person. This will help us to provide better service in the future.

Put tick marks against each of the following questions.

Feedback perspective	Excellent/ Substantial /Yes	Moderate /To some extent	Introductory /Low/ No Needs Improvement
Your knowledge about this topic before attending this training program/ workshop?		✓	
Your knowledge about this topic after attending this training program/ workshop?	✓		
Objectives and expected outcomes of this event were made clear?	✓		
Was the resource person useful to you in making you to learn and meet the stated objectives?	✓		
Is the resource person knowledgeable in the area chosen?	✓		
Appropriate learning materials were provided?	✓		
Overall rating of this program?	✓		

How this event can be improved further?

What did you learn in this event? < Summarize all you have learnt in this program >

- 1) Cloud Computing
- 2) Advantages of Cloud computing.
- 3) Pricing of various web services.
- 4) Creation and building of EC2 instances.
- 5) Various storage classes in AWS.
- 6) Creating and building our own VPC.
- 7) Shared responsibilities of AWS and customers.
- 8) Various tools of AWS like redshift, RDS etc.
- 9) Creating security groups and firewalls.
- 10) Building a Database Server. and working in it.

Date: 14-02-2020


Signature

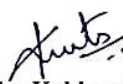
SDM College of Engineering and Technology, Dharwad – 580002

Date: 28-02-2020

Report on – 5 – Days Training and Certification Program on
Cloud Infrastructure and Services (CIS)

A 5-Days training and certification course on Cloud Infrastructure and Services (CIS) for Students was held from 10th to 14th Feb. 2020 at CSE Lab-5, CSE dept., SDMCET. The Resource person Kamachi Devi was CIS Academic Associate recognized trainer from ICT Academy – DELL EMC. The course was 40-hour program with hands-on sessions on all days, and online resources, videos and course materials were provided to the students. An online certification test was conducted after one week 21st Feb, 2020, and certification from ICT Academy – DELL EMC corporation.

All the 50 students who participated in this training and certification program cleared the online test and obtained final certificate.

 28/02/2020
Nita Kakhandaki
ICT Academy- co-ordinator
SDMCET, Dharwad.

Year of Conduction: 2018-2019

BIG DATA

Proposal for Training and Certification of Final / Pre-Final year Students on

DATA SCIENCE AND BIG DATA ANALYTICS

Implemented by

ICT ACADEMY
Innovate... Collaborate... Educate...



This exclusive proposal is applicable and valid until 31st March 2018

Data Science and Big Data Analytics

Course Description

Course Duration Overview

40 Hours

This course provides practical foundation level training that enables immediate and effective participation in big data and other analytics projects. It includes an introduction to big data and the Data Analytics Lifecycle to address business challenges that leverage big data. The course provides grounding in basic and advanced analytic methods and an introduction to big data analytics technology and tools, including MapReduce and Hadoop. Labs offer opportunities for students to understand how these methods and tools may be applied to real world business challenges by a practicing data scientist. The course takes an "Open", or technology-neutral approach, and includes a final lab which addresses a big data analytics challenge by applying the concepts taught in the course in the context of the Data Analytics Lifecycle. The course prepares the student for the Proven™ Professional Data Scientist Associate (EMCDSA) certification exam.

Audience

This course is intended for individuals seeking to develop an understanding of Data Science from the perspective of a practicing Data Scientist, including:

- Managers of teams of business intelligence, analytics, and big data professionals.
- Current Business and Data Analysts looking to add big data analytics to their skills.
- Data and database professionals looking to exploit their analytic skills in a big data environment.
- Recent college graduates and graduate students with academic experience in a related discipline looking to move into the world of Data Science and big data.
- Individuals seeking to take advantage of the EMC Proven™ Professional Data Scientist Associate (EMCDSA) certification.

Course Objectives

Upon successful completion of this course, participants should be able to:

- Immediately participate and contribute as a Data Science Team Member on big data and other analytics projects by:
 - ✓ Deploying the Data Analytics Lifecycle to address big data analytics projects
 - ✓ Reframing a business challenge as an analytics challenge
 - ✓ Applying appropriate analytic techniques and tools to analyze big data, create statistical models, and identify insights that can lead to actionable results
 - ✓ Selecting appropriate data visualizations to clearly communicate analytic insights to business sponsors and analytic audiences
 - ✓ Using tools such as: R and RStudio, MapReduce/Hadoop, in-database analytics, Window and MADlib functions
- Explain how advanced analytics can be leveraged to create competitive advantage and how the data scientist role and skills differ from those of a traditional business intelligence analyst

Training and Certification Delivery Model

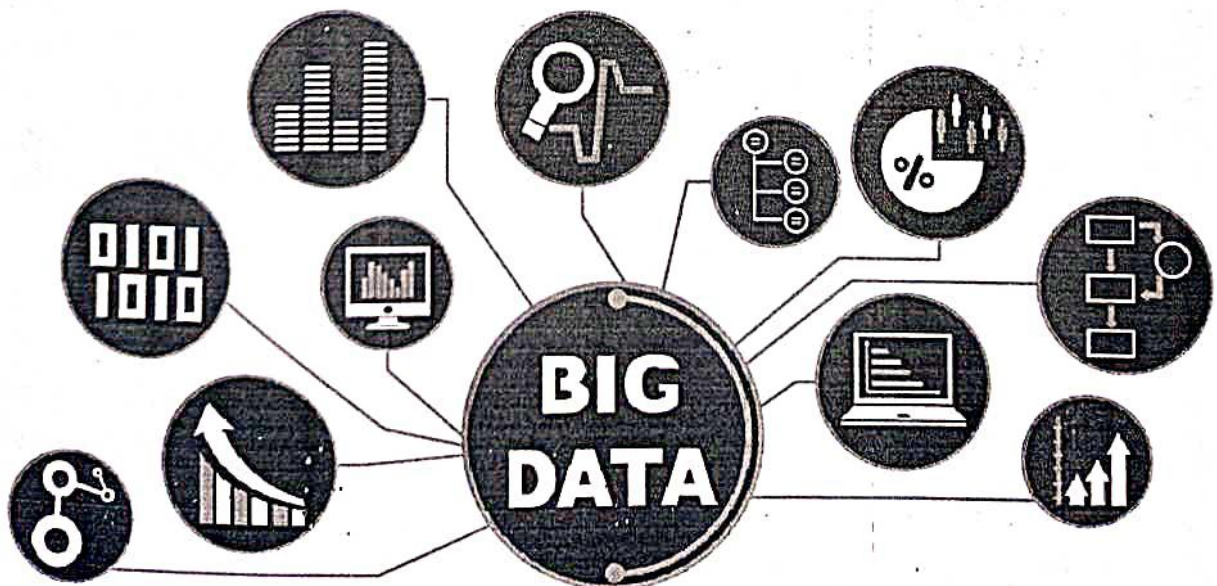
The inspiration behind the initiative is that, colleges shall consider making these programs compulsory for students or integrate the development of these skills into the teaching learning program by allocating credits to these programs..

This delivery model is specifically designed for EMC Academic Alliance partner institutions to enhance offerings under EAA and offer a richer learning experience, thereby creating a more employable and industry-ready workforce. The Standard EMC Academic Alliance Offerings include

- **Comprehensive instructor materials including:**
 - Course Slides
 - Student Exercises
 - Case Studies
- Student Resource Portal

Certification

EMC Data Science Associate(EMCDSA) is a resume-enhancing recognition that demonstrates mastery of the course topics through a comprehensive test created by industry experts. The certificate is downloadable, and can be validated online.



Data Science and Big Data Analytics

An 'open' course to unleash the power of Big Data



"We live in a data-driven world. Increasingly, the efficient operation of organizations across sectors relies on the effective use of vast amounts of data. Making sense of big data is a combination of organizations having the tools, skills and more importantly, the mindset to see data as the new "oil" fueling a company. Unfortunately, the technology has evolved faster than the workforce skills to make sense of it and organizations across sectors must adapt to this new reality or perish."

Andreas Weigend, Ph.D Stanford, Head of the Social Data Lab at Stanford, former Chief Scientist, Amazon.com

DATA SCIENCE AND BIG DATA ANALYTICS COURSE

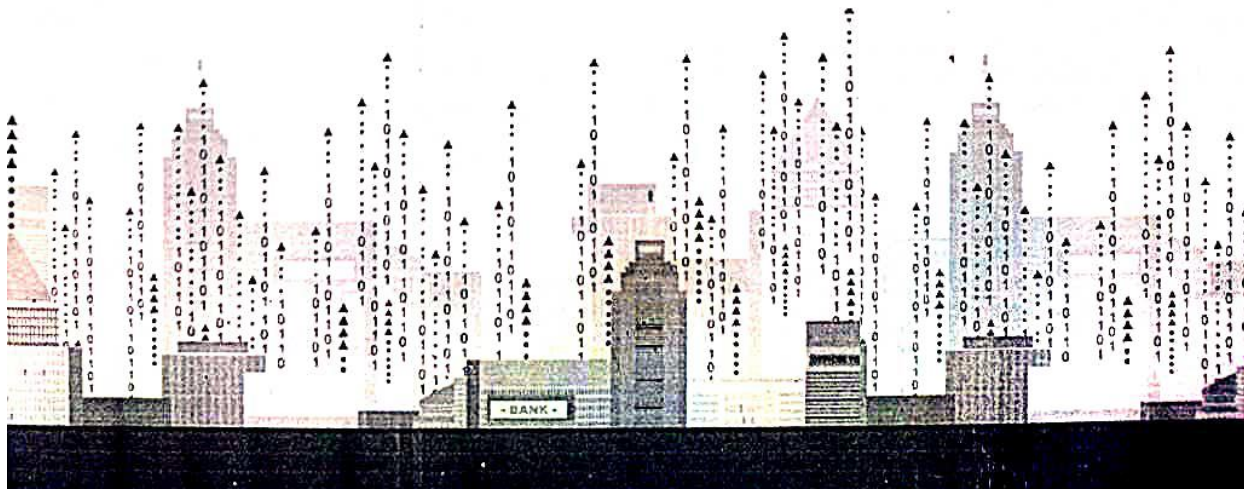
An 'open' course and certification focused on concepts and principles applicable to any technology environment and industry.

This course is intended for:

- Business and data analysts looking to add big data analytics skills
- Managers of business intelligence, analytics, or big data groups
- Database professionals looking to enrich their analytic skills
- College graduates considering data science as a career field

The course is designed to enable students to:

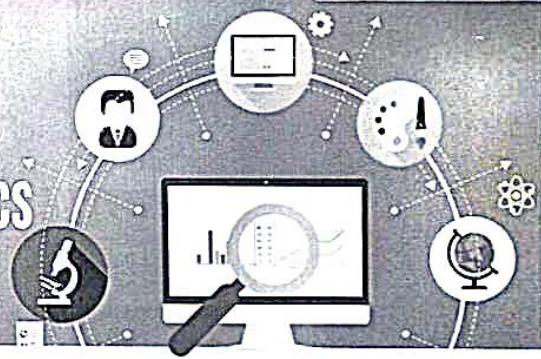
- Become an immediate contributor on a data science team
- Assist reframing a business challenge as an analytics challenge
- Deploy a structured lifecycle approach to data analytics problems
- Apply appropriate analytic techniques and tools to analyze Big Data
- Tell a compelling story with the data to drive business action
- Use open source tools such as R, Hadoop, and Postgres
- Prepare for EMC Proven Professional Data Scientist certification




In Association with
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ANNIVERSARY
of
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DELLEMC
EXTERNAL RESEARCH & ACADEMIC ALLIANCE

Students Certification Programme
on
Data Science & Big Data Analytics
9th to 13th April 2019



Organised by
Department of CSE



**Shri Dharmasthala Manjunatheshwara
College of Engineering and Technology
Dhavalagiri Dharwad**

[Signature]
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COLLEGE OF ENGINEERING AND TECHNOLOGY
DHARWAD-580002, KARNATAKA


SDM College of Engineering and Technology, Dharwad – 580002

Date: 19-08-2019

Report on – 5 – Days Training and Certification Program on
Data Science and Big Data Analytics

A 5-Days training and certification course on Data Science and Big Data Analytics for Students was held from 09th to 13th April, 2019 at CSE Lab-1, CSE dept., SDMCET. The Resource person Kamachi Devi was Academic Associate recognized trainer from ICT Academy – DELL EMC. The course was 40-hour program with hands-on sessions on all days, and online resources, videos and course materials were provided to the students. An online certification test was conducted on 17th Aug, 2019, and certification from ICT Academy – DELL EMC corporation.

All the 37 students who participated in this training and certification program cleared the online test and obtained final certificate.


19/08/2019
Nita Kakhandaki
ICT Academy- co-ordinator
SDMCET, Dharwad.