

CLOUD COMPUTING SERVICES

**Department of Computer Applications
Fatima College,
Madurai.**

Value Added Skill Embedded Course

COURSE CONTENT

- Private Clouds
- Cloud Services
- free cloud services
- AWS (Amazon Web Service)
- Microsoft Azure Cloud
- DropBox
- OneDrive
- iCloud

**30
HOURS**

THEORY + PRACTICAL

VALUE ADDED CRASH COURSE

1. Name of the Department: **Department of Computer Applications (UG)**

2. Name of the Course: **Skill Embedded Crash Course**

3. Title of the Course: **Cloud Computing Services**

4. Strength: **41**

5. No. of Students who haven't yet paid fees: **NIL**

6. Name of the Staffs:

Internal Staff: **Ms. P. Renganayagi**

External Staff: **Ms. M. Durga Muralidharan**

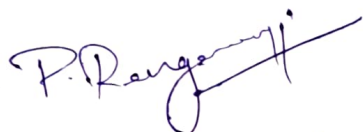
8. Date: **05.02.2024**

7. Students Name with Register No. & Marks:

S.NO.	REG. NO.	STUDENT NAME	INT	EXT	TOTAL
1	2021BC01	AASHNA ROSHINI R	29	48	77
2	2021BC03	AMALA RENITHA B	38	53	91
3	2021BC04	ASNA J	38	42	80
4	2021BC05	CAROLIN MERCY L	34	45	79
5	2021BC06	DIVYA M	35	51	86
6	2021BC07	DURGARAJESWARI R	37	45	82
7	2021BC08	DURGESHWARI S	30	49	79
8	2021BC09	FAZLINA Z	37	54	91
9	2021BC11	INDUJA P T	35	32	67
10	2021BC12	JEYA DHARSHINI J	35	52	87
11	2021BC13	JEYA PRABA T	30	53	83
12	2021BC14	JEYALAKSHMI R	33	53	86
13	2021BC15	KANIMOZHI S	33	53	86
14	2021BC16	KARTHIKA P	31	53	84
15	2021BC17	KARTHIYAYENI N	39	53	92
16	2021BC18	KAVIPRIYA M	37	55	92
17	2021BC19	KAVITHA K	36	44	80
18	2021BC20	MAHADHARSHINI R	37	46	83
19	2021BC21	MASANI MALATHI S	25	27	52
20	2021BC22	MEERA PRIYADHARSHINI S	31	38	69
21	2021BC23	MIDHUNA S	33	40	73
22	2021BC24	NAGAMEENALOKCHINI P	33	46	79

23	2021BC25	NARMADHADEVI M	36	40	76
24	2021BC26	NIROSHINI R	33	48	81
25	2021BC27	PAVITHRA J T	34	48	82
26	2021BC28	PREETHI R A	37	50	87
27	2021BC30	SAMYUKTHA J	37	53	90
28	2021BC31	SHANMUGAPRIYA S	26	46	72
29	2021BC32	SREENITHI G	37	54	91
30	2021BC33	SUBATHRA B	32	50	82
31	2021BC34	SWETHA K	37	53	90
32	2021BC35	THILLAI INDHU T	26	37	63
33	2021BC36	VINCILY MOL V	31	44	75
34	2021BC37	KEERTHI M	27	45	72
35	2021BC38	LINGA SNEHA M	35	39	74
36	2021BC40	MATHI S	30	36	66
37	2021BC41	NIVETHA R	30	46	76
38	2021BC42	SOWBARNIKA M	32	52	84
39	2021BC43	SUTHANTHIRADEVI S	33	54	87
40	2021BC44	GAYATHIRI M	30	37	67
41	2021BC45	APARNAA K	33	51	84

Internal:



(P. RENGANAYAGI)

External:


(MRS. DURGA MURALIDHARAN)

Signature of the Course Teachers


Signature of the HOD



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(Autonomous)

Affiliated to Madurai Kamaraj University
Re-Accredited with 'A++' by NAAC (Cycle - IV)

Mary Land, Madurai - 625 018, Tamil Nadu

DEPARTMENT OF COMPUTER APPLICATIONS

Value-added Course - Students' Name list

S. No.	Register No.	Name of the Student
1.	2021BC01	AASHNA ROSHINI R
2.	2021BC03	AMALA RENITHA B
3.	2021BC04	ASNA J
4.	2021BC05	CAROLIN MERCY L
5.	2021BC06	DIVYA M
6.	2021BC07	DURGARAJESWARI R
7.	2021BC08	DURGESHWARI S
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15.	2021BC17	KARTHIYAYENI N
16.	2021BC18	SREENITHI G
17.	2021BC19	KAVITHA K
18.	2021BC20	MAHADHARSHINI R
19.	2021BC21	MASANI MALATHI S
20.	2021BC22	MEERA PRIYADHARSHINI S
21.	2021BC23	MIDHUNA S
22.	2021BC24	FAZLINA Z



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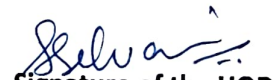
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S. No.	Register No.	Name of the Student
23.	2021BC25	NARMADHADEVI M
24.	2021BC26	NIROSHINI R
25.	2021BC27	PAVITHRA J T
26.	2021BC28	PREETHI R A
27.	2021BC30	SAMYUKTHA J
28.	2021BC31	SHANMUGAPRIYA S
29.	2021BC32	KAVIPRIYA M
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35.	2021BC38	LINGA SNEHA M
36.	2021BC40	MATHI S
37.	2021BC41	NIVETHA R
38.	2021BC42	SOWBARNIKA M
39.	2021BC43	SUTHANTHIRADEVI S
40.	2021BC44	GAYATHIRI
41.	2021BC45	APARNAA K


Course Teacher


Signature of the HOD

Head of the Department
Department of Computer Applications
Fatima College (Autonomous)
Madurai-625 018



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Mary Land, Madurai - 625 018, Tamil Nadu

DEPARTMENT OF COMPUTER APPLICATIONS

Value-added Course

Course Teacher Name list

S. No.	Course Title with Course Code	Course Teacher	No. of Hours Taken
1	Cloud Computing Services (21UVGACJ1)	Ms. P. Renganayagi	30


Signature of the HOD

Head of the Department
Department of Computer Applications
Fatima College (Autonomous)
Madurai-625 018

checked by
R. S. Smoot
16/02/24.
(Dr. R. Smoot man)

**III BCA
VALUE ADDED COURSE**

PROGRAMME CODE	COURSE CODE	COURSE TITLE	DURATION
USCA	21UVGACJ1	CLOUD COMPUTING SERVICES	30

COURSE DESCRIPTION

To enable the students to get better understanding of Cloud security, Cloud Storage Management and Cloud Services.

COURSE OBJECTIVES

1. To gain in – depth knowledge in cloud computing terminologies.
2. To acquire key concepts of virtualization.
3. To formulate various cloud strategies.
4. To become familiar with Cloud Services.

UNIT 1: CLOUD COMPUTING OVERVIEW

Module-I: Cloud Computing Overview Origins of Cloud computing – Cloud components - Essential characteristics – Creating Cloud Account Creation – Getting Access Permission on Cloud - Free Cloud Services – On demand self service - Measured service -Comparing cloud providers with traditional IT service providers.

UNIT 2: VIRTUALIZATION

Introduction – Understanding Virtualization techniques – Downloading VMware Workstation for windows/Linux - Usage of Hypervisor Software – Hypervisor Management System - Install Oracle Virtual box and create two VMs on laptop- Configure File Sharing on Virtual Box -Moving Files between Virtual Machines - Server Virtualization.

UNIT 3: INSTANCE CREATIONS AND COMMUNICATION TESTING

Install Turbo C in guest OS - Executing C program on Guest OS - Test ping command to test the communication between the guest OS and Host OS –Understanding Cloud Catalogue Services – Renting Virtual Machines (EC2) - Creating EC2 Instance in AWS – Creating a Web Server on EC2 Instance - Storing data in Virtual Drives (EBS) – Scaling Services (ASG).

UNIT 4 : AZURE PORTAL

Understanding Azure Portal – Know about Azure Market Place – Checking Virtual machines Availability – Understanding Azure Port Rules -Creating Single Virtual machine on Azure Portal – Creating Multiple Virtual Machines on Azure Portal – Azure Services.

UNIT 5: IMPLEMENTATION

Creating Amazon Console Applications - Creating Online Google Forms – Practical Implementation of Cloud Sim - Gmail Storage implementation -Implementing Amazon Simple storage Service (S3) - Creating Pair Keys - Deploying End to End Website on AWS.

TEXT BOOKS :

1. Dr Kumar Saurabh, Cloud Computing Insights into New Era Infrastructure, An Emm International,2014, III Edition.

REFERENCE BOOKS:

1. John Rhoton, Cloud Computing Explained - Implementation Handbook for Enterprises, Amazon.com
2. David S. Linthicum, Cloud Computing and SOA Convergence in Your Enterprise - A Step-by-Step Guide

WEB REFERENCES:

1. https://en.wikipedia.org/wiki/Cloud_computing
2. <https://searchcloudcomputing.techtarget.com/definition/cloud-computing>.

OER REFERENCE:

https://onlinecourses.nptel.ac.in/noc21_cs14/preview

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT 1: CLOUD COMPUTING OVERVIEW				
1.1	Module-I: Cloud Computing Overview Origins of Cloud computing	1	Chalk & Talk	Black Board
1.2	Cloud components - Essential characteristics	1	Chalk & Talk	LCD
1.3	Creating Cloud Account Creation	1	Lecture	PPT & White board
1.4	Getting Access Permission on Cloud - Free Cloud Services	1	Lecture	Smart Board
1.5	On demand self service - Measured service	1	Lecture	Smart Board
1.6	Comparing cloud providers with traditional IT service providers.	1	Lecture	Smart Board
UNIT 2: VIRTUALIZATION				
2.1	Introduction – Understanding Virtualization techniques	1	Chalk & Talk	Black Board
2.2	Downloading VMware Workstation for windows/Linux	1	Chalk & Talk	LCD
2.3	Usage of Hypervisor Software	1	Lecture	PPT
2.4	Hypervisor Management System - Install Oracle Virtual box and create two VMs on laptop	1	Lecture	Smart Board
2.5	Configure File Sharing on Virtual Box	1	Lecture	Smart Board
2.6	Moving Files between Virtual Machines	1	Lecture	Smart Board

2.7	Server Virtualization.	1		
UNIT -3 INSTANCE CREATIONS AND COMMUNICATION TESTING				
3.1	Install Turbo C in guest OS	1	Chalk & Talk	Black Board
3.2	Executing C program on Guest OS - Test ping command to test the communication between the guest OS and Host OS	1	Chalk & Talk	LCD
3.3	Understanding Cloud Catalogue Services	1	Lecture	PPT & White board
3.4	Renting Virtual Machines (EC2)	1	Lecture	Smart Board
3.5	Creating EC2 Instance in AWS – Creating a Web Server on EC2 Instance	1	Chalk & Talk	Black Board
3.6	Storing data in Virtual Drives (EBS)	1	Lecture	Smart Board
3.7	Scaling Services (ASG).	1	Chalk & Talk	LCD
UNIT -4 AZURE PORTAL				
4.1	Understanding Azure Portal	1	Chalk & Talk	Black Board
4.2	Know about Azure Market Place	1	Chalk & Talk	LCD
4.3	Checking Virtual machines Availability	1	Lecture	PPT & White board
4.4	Understanding Azure Port Rules	1	Lecture	Smart Board
4.5	Creating Single Virtual machine on Azure Portal	1	Lecture	Black Board
4.6	Creating Multiple Virtual Machines on Azure Portal	1	Discussion	Google classroom

4.7	Azure Services.	1	Lecture	Black Board
UNIT -5 IMPLEMENTATION				
5.1	Creating Amazon Console Applications - Creating Online Google Forms- Practical Implementation of Cloud Sim	1	Chalk & Talk	Black Board
5.2	Gmail Storage implementation- Implementing Amazon Simple storage Service (S3)	1	Chalk & Talk	LCD
5.3	Creating Pair Keys - Deploying End to End Website on AWS	1	Lecture	PPT & White board

COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Outline problems and evaluate various cloud computing solutions	K1	PSO1, PSO2
CO 2	Outline Cloud service and deployment models	K1 & K2	PSO1, PSO2, PSO3
CO 3	Identify the architecture and infrastructure of cloud computing including SaaS, PaaS, IaaS, public cloud, private cloud, hybrid cloud and community cloud	K1 & K2	PSO3, PSO4
CO 4	Predict security issues and formulate recovery mechanisms	K1, K2, K3 & K4	PSO4, PSO5

CO 5	Understand the concept of virtualization	K2, K3 & K4	PSO5, PSO6
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Mapping COs Consistency with PSOs

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO10
CO1	3	3	1	2	1	1	2	2	1	1
CO2	3	3	3	2	1	2	1	2	1	1
CO3	2	1	3	3	2	1	2	2	2	1
CO4	2	1	2	3	3	1	2	2	2	2
CO5	2	2	2	3	3	1	2	2	1	3

Mapping of COs with POs

CO/ PSO	PO1	PO2	PO3	PO4	PO5
CO1	3	1	1	3	1
CO2	3	1	3	1	2
CO3	1	2	1	3	1
CO4	1	1	1	1	1
CO5	1	3	1	3	1

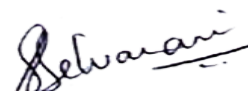
Note:

- ♦ Strongly Correlated – 3
- ♦ Moderately Correlated – 2
- ♦ Weakly Correlated -1

COURSE DESIGNER:

1. Staff Name : Ms. P. Renganayagi

Forwarded By



(S.Selvarani)

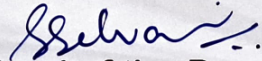


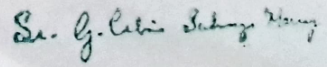
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AFFILIATED TO MADURAI KAMARAJ UNIVERSITY
RE-ACCREDITED WITH 'A++' BY NAAC (CYCLE-IV)
MARY LAND, MADURAI- 625 018

This is to certify that Ms. AASHNA ROSHINI R [2021BC01]
has successfully completed the Skill Embedded Crash
Course on Cloud Computing Services offered by
Department of Computer Applications during the academic year
2023 - 2024 and has been awarded Distinction / ~~First~~ / ~~Second~~ class.


Co-ordinator


Head of the Department


Principal



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MARY LAND, MADURAI- 625 018

This is to certify that Ms. AMALA RENITHA B [2021BC03]
has successfully completed the Skill Embedded Crash
Course on Cloud Computing Services offered by
Department of Computer Applications during the academic year
2023-2024 and has been awarded Distinction / ~~First~~ / ~~Second class~~.

Rathy
Co-ordinator

Sheela
Head of the Department

S. G. Lina Subbinga Manj
Principal



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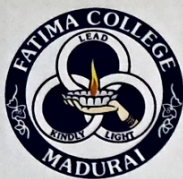
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This is to certify that Ms. ASNA J [2021BC04]
has successfully completed the Skill Embedded Crash
Course on Cloud Computing Services offered by
Department of Computer Applications during the academic year
2023-2024 and has been awarded Distinction / First / ~~Second~~ class.

B. H. H.
Co-ordinator

S. S. S.
Head of the Department

S. G. G. G. G.
Principal



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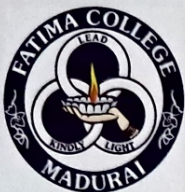
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MARY LAND, MADURAI- 625 018

This is to certify that Ms. CAROLIN MERCY L. [2021BC05]
has successfully completed the Skill Embedded Crash
Course on Cloud Computing Services offered by
Department of Computer Applications during the academic year
2023-2024 and has been awarded Distinction / ~~First~~ / ~~Second class~~.

Bethy
Co-ordinator

Selvarani
Head of the Department

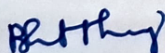
S. G. L. Selvarani
Principal

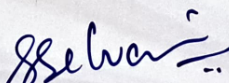


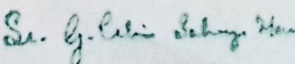
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MARY LAND, MADURAI- 625 018

This is to certify that Ms. DIVYA . M [2021BC06]
has successfully completed the Skill Embedded Crash
Course on Cloud Computing Services offered by
Department of Computer Applications during the academic year
2023-2024 and has been awarded Distinction / ~~First~~ / ~~Second class~~.


Co-ordinator


Head of the Department


Principal