

**MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING**

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

**Value added courses 2023-2024**

S.No	Dept	Name of certificate/Add-on courses	Course code if any	Number of students course completing the course in the year	Type of Add-on Course
1	CIVIL	Revit architecture	CE3405	7	VAC-AU
2	CIVIL	AutoCAD	PETRICORE	25	TCC
3	CIVIL	Primevera	PETRICORE	5	TCC
4	CSE	VAC- AU-Advanced Python with Machine Learning	IVA018	50	VAC-AU
5	CSE	Cyber Security - Palo alto		89	TCC
6	ECE	IOT Using Arduino (ODD)	IVA067	23	VAC-AU
7	ECE	VLSI Design (ODD)		9	TCC
8	ECE	Internet of Things (ODD)		13	TCC
9	ECE	Electric Vehicle (ODD)		1	TCC
10	ECE	REVIT(ODD)		1	TCC
11	EEE	Electric Vehicle (ODD)		12	TCC
12	EEE	Electric Vehicle (ODD)	EVA033	16	VAC-AU
13	IT	robotic process Automation		61	TCC
14	IT	VAC- AU-Advanced Python with Machine Learning	IVA018	53	VAC-AU
15	MECH	MV022-Introduction to Multibody dynamics	MVA022	38	VAC-AU
16	MECH	3D Modelling & Printing		28	TCC
17	CSBS	IBM-COGNOS(EVEN)		19	TCC
18	AIDS	IBM-COGNOS(EVEN)		29	TCC
19	CSE	java		76	TCC
20	MECH	TANSEM		19	TCC
21	ECE	TVS		48	TCC
22	1st year	PYTHON		277	TCC

**PRINCIPAL**  
Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
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**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that the number of course enrolled in subject related Certificate or Add-on programs during the academic year 2023-2024 is 18.

**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

# TECHNOLOGY CENTRE COURSE

## REVIT ARCHITECTURE

### Objective:

Revit Architecture course is to enable you to create a full 3D architectural project model, including walls, doors, windows, components, floors, ceilings, roofs, and stairs, using the basic tools that the majority of architectural users need.

### Unit 1: Introduction to BIM

BIM and Autodesk Revit, Overview of the Interface, Starting Projects, Viewing Commands. Basic Drawing and Modify Tools: Using General Drawing Tools, Editing Elements, Working with Basic Modify Tools, Working with Additional Modify Tools. Setting Up Levels : Setting Up Levels, Linking and Importing CAD Files, Design Development Phase

### Unit 2: Modeling Walls, Doors, Windows

Modeling Walls, Modifying Walls. Working with Doors and Windows: Inserting Doors and Windows, Loading Door and Window Types from the Library, Creating Additional Door and Window Sizes. Working with Curtain Walls: Creating Curtain Walls, Adding Curtain Grids, Working with Curtain Wall Panels, Attaching Mullions to Curtain Grids

### Unit 3: Working with Views, Adding Components, Modeling Floors

Setting the View Display, Duplicating Views, Adding Callout Views, Elevations and Sections. Adding Components: Adding Components, Modifying Components. Modeling Floors. Modeling Floors, Creating Shaft Openings, Creating Sloped Floors. Modeling Ceilings: Modeling Ceilings, Adding Ceiling Fixtures, Creating Ceiling Soffits.

### Unit 4: Modeling Roofs, Modeling Stairs, Railings, and Ramps

Modeling Roofs, Creating Roofs by Footprint, Establishing Work Planes, Creating Roofs by Extrusion. Modeling Stairs, Railings, and Ramps: Creating Component Stairs, Modifying Component Stairs, Working with Railings, Sketching Custom Stairs, Creating Ramps Construction Documents Phase

### Unit 5: Creating , Annotating Construction Documents, Adding Tags and Schedules, Creating Details.

Setting Up Sheets, Placing and Modifying Views on Sheets, Printing Sheets: Annotating Construction Documents: Working with Dimensions, Working With Text, Adding Detail Lines and Symbols, Creating Legends. Adding Tags and Schedules: Adding Tags, Adding Rooms and Tags, Working with Schedules. Creating Details: Setting Up Detail Views, Adding Detail Components, Annotating Details, Keynoting and Keynote Legends.



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# TECHNOLOGY CENTRE COURSE

## REVIT ARCHITECTURE

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# MOHAMED SATHAK A J COLLEGE OF ENGINEERING

Niruseri IT park, OMR, Chennai - 603103

## LEASON PLAN

Department of Civil Engineering

Name of the Subject	REVIT ARCHITECTURE	Name of the handling Faculty	Mrs V JANAKI
Subject Code	CE3405	Year / Sem	III / V
Acad Year	2023-2024	Batch	2023-2024

### Course Objective

Revit Architecture course is to enable you to create a full 3D architectural project model, including walls, doors, windows, components, floors, ceilings, roofs, and stairs, using the basic tools that the majority of architectural users need.

### Course Outcome

- CO1: Student will learn to Set Up Levels, Grids & Views
- CO2 Able to Develop Accurate Architectural Designs
- CO3: Student will able to Modelling Roofs, Modelling Stairs, Railings, and Ramps
- CO4 To develop higher-quality, more accurate architectural designs; use tools specifically built to support Building Information Modeling workflows.
- CO5 To capture and analyze concepts, and maintain your vision through design, documentation, and construction

### Lesson Plan

Sl No.	Topic(s)	Periods Required	Mode of Teaching (BB / PPT / NPTEL / MOOC / etc)
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#### Unit I: Introduction to BIM

1	BIM and Autodesk Revit, Overview of the Interface, Projects, Viewing Commands.	2	Software
2	Basic Drawing and Modify Tools: Using General Drawing Tools	2	Software
3	Editing Elements, Working with Basic Modify Tools, Working with Additioonal dily Tools	2	Software
4	Setting Up Levels :Setting Up Levels	2	Software
5	Linking and Importing CAD Files, Design Development Phase	1	Software

#### Unit 2: Modeling Walls, Doors, Windows

7	Modeling Walls, Modifying Walls	2	Software
8	Working with Doors and Windows: Inserting Doors and Windows, Loading Door and Window Types from the Library	2	Software

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9	Creating Additional Door and Window Sizes.	2	Software
10	Working with Curtain Walls:Creating Curtain Walls,Adding Curtain Grids,Working with Curtain Wall Panels,Attaching Mullions to Curtain Grids	3	Software

### Unit 3: Working with Views, Adding Components, Modeling Floors

14	Setting the View Display,Duplicating Views,Adding Callout Views,Elevations and Sections	3	Software
15	Adding Components:Adding Components,Modifying Components	2	Software
16	Modelling Floors,Creating Shaft Openings,Creating Sloped Floors	2	Software
17	Modelling Ceilings,Adding Ceiling Fixtures,Creating Ceiling Soffits	2	Software

### Unit 4: Modeling Roofs, Modeling Stairs, Railings, and Ramps

20	Modeling Roofs,Creating Roofs by Footprint,Establishing Work Planes,Creating Roofs by Extrusion	3	Software
21	Modeling Stairs, Railings, and Ramps:Creating Component Stairs	2	Software
22	Modifying Component Stairs,Working with Railings	2	Software
23	Sketching Custom Stairs,Creating RampsConstruction Documents Phase	2	Software

### Unit 5: Creating , Annotating Construction Documents, Adding Tags and Schedules, Creating Details.

27	Points and Crossings	2	BB/PPT
28	Design of Turnouts, Working Principle-Track Circuiting	1	BB/PPT
29	Construction & Maintenance- Conventional, Modern methods and Materials	1	BB/PPT
30	Lay outs of Railway Stations and Yards, Rolling Stock, Tractive Power, Track Resistance	2	BB/PPT
31	Role of Indian Railways in National Development	1	BB/PPT
32	Railways for Urban Transportation	1	BB/PPT
33	LRT & MRTS Feasibility study, Planning and construction.	1	BB/PPT

Name & Sign of Faculty Incharge : *J. J. (V. JANAKI)*

Name & Sign of Subject Expert : *R. Eliss Yogesh (R. Eliss Yogesh)*

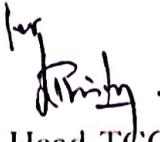
Head of the Department : *R. J. J.*

Format No :231

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 Sipcot - IT Highway Egattur,  
 Chennai - 603103.

Mohamed Sathak A.J College of Engineering		
Technology Centre Course-Academic Year-2023-2024		
Revit Architecture		
S.no	Register Number	Name
1	311821103001	Mohamed Faizal
2	311821103002	Mohamed Haroon
3	311821103003	Sandesh Kumar K
4	311821103004	Shanmugam
5	311821103301	Mohamed Kaif
6	311821104021	Laksha.D
7	311821106028	Sanjay V

  
Faculty Incharge

  
Head-TEC  
(L. THARANICUMAR)

  
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Mohamed Sathak AJ College of Engineering		
Technology Centre Course-Academic Year-2023-2024		
Revit Architecture		
S.no	Register Number	Name
1	311821103001	Mohamed Faizal
2	311821103002	Mohamed Haroon
3	311821103003	Sandesh Kumar K
4	311821103004	Shanmugam
5	311821103301	Mohamed Kaif
6	311821104021	Laksha.D
7	311821106028	Sanjay V

  
Faculty Incharge

  
Head-TEC  
(L. THARANICUMAR).

  
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**Attendance Sheet**

Date & Time: 15-07-2023 & Madurai

Name & Address Of The Assessing Body

Name Of The Training Provider

Course code

Course Name

Training Start date

S/N Student ID Aadhar ID Student Name

Father Name

Address

Training End Date

Signature

1 232400101 935835637297 SHANMUGAM.S SUDHATHIRAM.G Pilpadugai,kodhandapuram(post),sirkazhi(TK),Maityladu thurai(Dt),

2 232400102 571840706921 A.mohamed faizal Abdul kader 40/d vaithi west street cherannahadevi

3 232400103 938270184309 SANDESH KUMAR K B KAMESHWAR No. 40, Throwpathi Amman Kovil, 5th street, Velachery, Chennai- 42

4 232400104 474177865500 MOHAMED KAIF M I. Mohaideen Ali Akbar I/106 west Street Nambuthalai, Ramanathapuram District

5 232400105 364491512905 Mohamed haroon M Mohamed raifi M No: 3 mohameden street, Venus, Perambur, Chennai - 600011

232400106 457178334861 SANJAY V Vengadesan D 2/1/1 PAMMAL NALLATHAMBI STREET, MGR NAAGAR, CHENNAI- 600078.

232400107 755060251143 Laksha.D Dharmamathan M No 1 East mada street, Srinagar colony saidapet chennai

Signature of the Inspection officer

Batch ID: MSAJCE/23-24/RA/001

Mohamed Sathak AJ College of Engineering

RA/TC01

Fundamental of Revit Architecture

10/25/2023



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S. No.	Register Number	Students Name	Profile			Class	1	2	3	4	5	6	7	8	9	10	
			Arrears	CGPA	Hostel / DS / OB	Month	8	8	8	8	8	8	8	8	8	8	8
						Date	2	2	2	9	9	9	16	16	16	23	
						Period	3	4	5	3	4	5	3	4	5	3	
1	311821103001	Mohamed Faizal				a	a	a	1	1	1	1	1	1	1	1	
2	311821103002	Mohamed Haroon			DS	1	1	1	1	1	1	1	1	1	1	1	
3	311821103003	Gandesh kumar			DS	1	1	1	1	1	1	a	a	a	1	1	
4	311821103004	Banmugam.			H	1	1	1	1	1	1	1	1	1	1	1	
5	311821103301	Mohamed kaif			H	1	1	1	1	1	1	1	1	1	1	1	
6	311821104021	Laksha - D			DS	1	1	1	1	1	1	1	1	1	1	a	
7	311821106028	Banjay - V				a	a	a	a	a	a	1	1	1	1	a	
8																	
9																	
10																	
11																	
12																	
13																	
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15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
No. of absentees						2	2	2	1	1	1	1	1	1	1	2	
Signature of the faculty member																	

*[Handwritten Signature]*

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 Sipcot - IT Highway Egattur,  
 Chennai - 603103.



# MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)



From

Department of Training & Placement,

MSAJCE

To

The Principal,

MSAJCE

Respected Sir,

*Permitted*  
*Jmi*  
*18/12/23*

Sub: Permission to conduct CAD Training Program- Reg

As we have planned for CAD training program by Petricore Technologies on (20.12.23 & 21.12.23) for the Second year students of Mechanical, Civil and EEE Department, so in this regard we need to make some arrangements for the training, they are

- Tea to be provided in college at 10:30 AM
- Centre for CAD/CAM.

So kindly provide the necessaries for the same

Thank You

Date: 18.12.23

Place: Chennai

Yours faithfully

*M. Sathak A.J.*  
*18/12/23*

Head Training and Placement

**Head - Placement**  
Mohamed Sathak A.J. College of Engineering  
Siruseri IT Park, Chennai - 603 103.

*M. Sathak A.J.*

**PRINCIPAL**

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MOHAMED SATHAK A J COLLEGE OF ENGINEERING

DEPARTMENT OF TRAINING & PLACEMENT

PETRICORE CAD TRAINING [20.12.23-21.12.23]

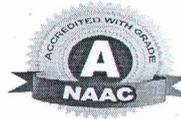
S.No	REG.NO	NAME	DEPT	20.12.23		21.12.23	
				FN	AN	FN	AN
1	311822114001	K.ABDUL RAHUMAN	MECH	<i>Rahuman</i>	<i>Rahuman</i>	<i>Rahuman</i>	<i>Rahuman</i>
2	311822114002	AHAMED SUHAIB A	MECH	<i>Suhaib</i>	<b>AB</b>	<i>Suhaib</i>	<i>Suhaib</i>
3	311822114007	BUHARI NAVEETH.M	MECH	<i>Naveeth</i>	<i>Naveeth</i>	<i>Naveeth</i>	<i>Naveeth</i>
4	311822114008	DINESH KUMAR.S	MECH	<b>AB</b>	<b>AB</b>	<b>AB</b>	<b>AB</b>
5	311822114009	FAISAL .M	MECH	<i>Faisal</i>	<i>Faisal</i>	<i>Faisal</i>	<i>Faisal</i>
6	311822114013	MOHAMED IRFAN.J	MECH	<i>Irfan</i>	<i>Irfan</i>	<i>Irfan</i>	<i>Irfan</i>
7	311822114014	MOHAMMED SARHAN. K	MECH	<i>Sarhan</i>	<i>Sarhan</i>	<i>Sarhan</i>	<i>Sarhan</i>
8	311822114015	MOHAMED UBAIS. J	MECH	<i>Ubaiss</i>	<i>Ubaiss</i>	<i>Ubaiss</i>	<i>Ubaiss</i>
9	311822114017	MOHANA SUNDARESHWAR.A	MECH	<i>Mohana Sundareswar</i>	<i>Mohana Sundareswar</i>	<i>Mohana Sundareswar</i>	<i>Mohana Sundareswar</i>
10	311822114019	G.SULTHAN MASHUD	MECH	<b>AB</b>	<b>AB</b>	<b>AB</b>	<b>AB</b>
11	311822114022	NIYAZ AHAMED. M	MECH	<i>Niyaz</i>	<i>Niyaz</i>	<i>Niyaz</i>	<i>Niyaz</i>
12	LE	MANOHAR.C	MECH	<i>Manohar</i>	<i>Manohar</i>	<i>Manohar</i>	<i>Manohar</i>
13	LE	MOHAMED AATHIF.R	MECH	<i>Aathif</i>	<i>Aathif</i>	<i>Aathif</i>	<i>Aathif</i>
14	311822105001	M.HARISHADHITYA	EEE	<i>Harishadhitya</i>	<b>AB</b>	<i>Harishadhitya</i>	<i>Harishadhitya</i>
15	311822105002	A.MOHAMED HALITH	EEE	<i>Halith</i>	<i>Halith</i>	<i>Halith</i>	<i>Halith</i>
16	311822105003	A.MOHAMED HARIS	EEE	<i>Haris</i>	<i>Haris</i>	<i>Haris</i>	<i>Haris</i>
17	311822105004	B.MOHAMED SUBAIR	EEE	<b>AB</b>	<b>AB</b>	<i>Subair</i>	<i>Subair</i>
18	311822105005	J MOHAMED SUHAIL	EEE	<i>Suhail</i>	<i>Suhail</i>	<i>Suhail</i>	<i>Suhail</i>
19	311822105007	M A UMAR FARUK	EEE	<i>Umar Faruk</i>	<i>Umar Faruk</i>	<i>Umar Faruk</i>	<i>Umar Faruk</i>
20	311822105301	MOHAMED JAFFAR M	EEE	<i>Jaffar</i>	<i>Jaffar</i>	<i>Jaffar</i>	<i>Jaffar</i>
21	311822105302	MOHAMED NADEEM M	EEE	<i>Nadeem</i>	<i>Nadeem</i>	<i>Nadeem</i>	<i>Nadeem</i>
22	311822103001	KAMALESH.J	CIVIL	<i>Kamalesh</i>	<i>Kamalesh</i>	<i>Kamalesh</i>	<i>Kamalesh</i>
23	311822103002	MOHAMED NIYAS.A	CIVIL	<i>Niyas</i>	<i>Niyas</i>	<i>Niyas</i>	<i>Niyas</i>
24	311822103003	RAHMAN KHAN.R	CIVIL	<i>Rahman Khan</i>	<i>Rahman Khan</i>	<i>Rahman Khan</i>	<i>Rahman Khan</i>
25	311822103004	SYED MASTHAN.S.A	CIVIL	<i>Masthan</i>	<i>Masthan</i>	<i>Masthan</i>	<i>Masthan</i>

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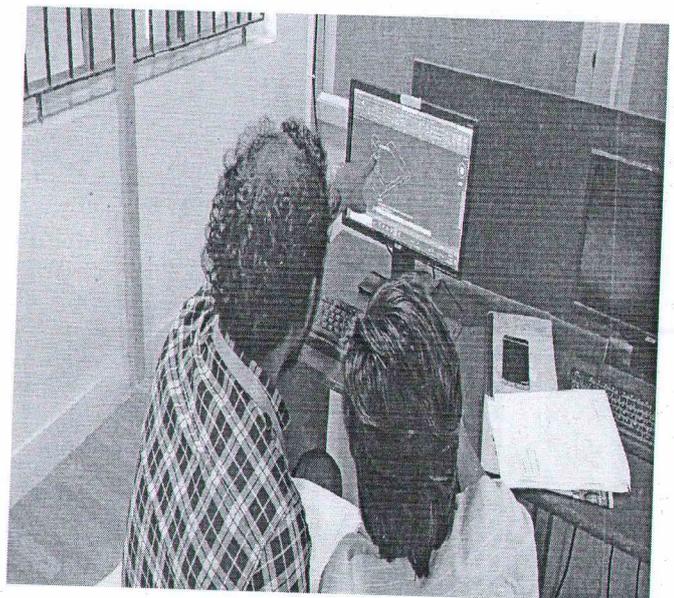
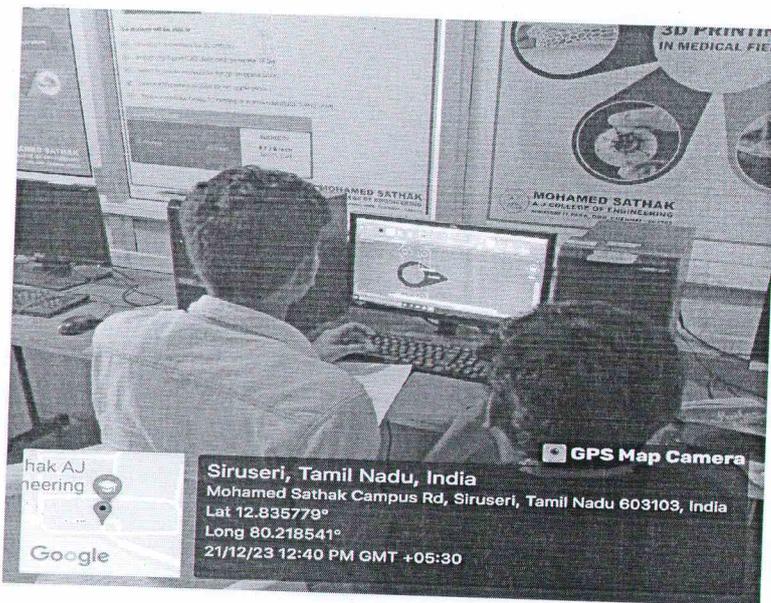
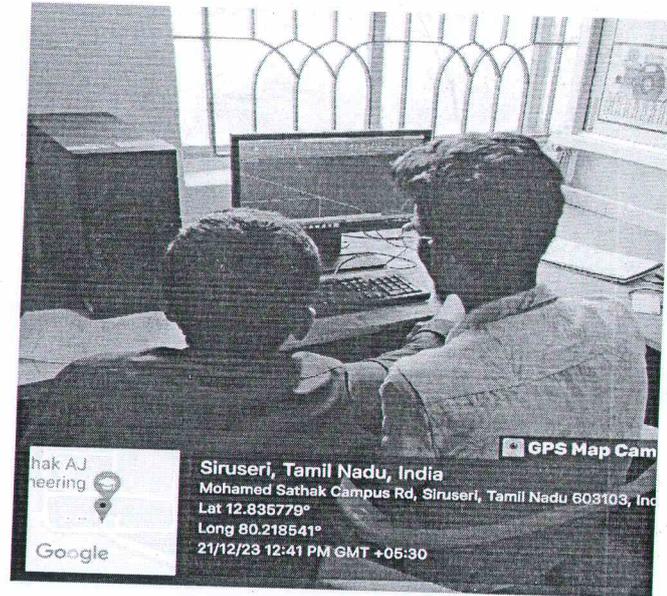
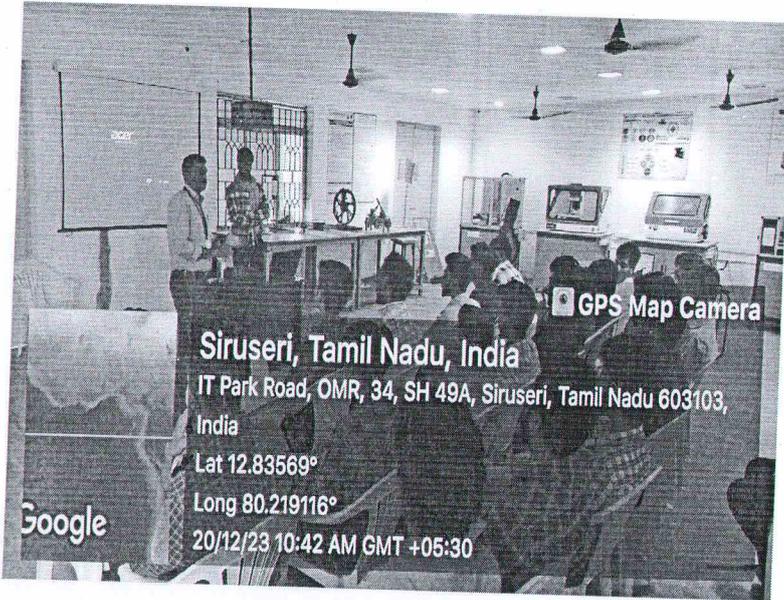
**MOHAMED SATHAK  
A.J. COLLEGE OF ENGINEERING**  
34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Chennai - 603 103.



Department of Training and Placement

Training Programs conducted AY2023-24 Odd Semester

2D Modelling using CAD – Petricore Technologies



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**MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING**

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From,

Department of Training and Placement,

MSAJCE,

To,

The Principal,

MSAJCE

Respected Sir,

Sub: Permission to conduct a Placement Training – Reg

As we planned to conduct the placement training on PRIMEVERA by Petricore Technologies Powered by AUTODESK at the Office at Velachery for our college Third Year CIVIL Placement Registered students from April 10/04/2024 – 27/04/2024. Kindly provide permission to conduct the training and Usage of CAD LAB and do the needful.

Thanking You

Chennai,

02/04/2024

Yours Faithfully,

*A. V. J. J.*  
02/04/2024

Head Training

*[Handwritten Signature]*

**PRINCIPAL**

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**Department of Training and Placement**

Ref: NO: MSAJCE/P&T/02/04

Date: 02/04/2024

**CIRCULAR**

This is to inform to placement registered students As we planned to conduct the placement training on PRIMEVERA by Petricore Technologies Powered by AUTODESK at the Office at Velachery for our college Third Year CIVIL Placement Registered students from April 10/04/2024 – 27/04/2024. All are advised to attend the training properly without fail attendance is mandatory.

Copy To,  
The Principal  
All HOD  
IQAC

Yours faithfully

Head Training

**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

# Curriculum for PRIMAVERA 6.0 (Foundation)

(2hrs Theory & 2hrs Practical per day)

Duration: 40 hrs

DAY 1	4 Hrs	Theory	Practical
<b>Introduction:</b> About Projects , Manual Solving CPM & PERT, Program, Portfolio, Project Management ,Project management Process, Project planning software's. About Primavera. Primavera Project management, Features in Primavera.			

DAY 2	4 Hrs	Theory	Practical
<b>Customer Care PPT.</b> <b>Organizational Breakdown Structure(OBS):</b> Different views TO create new OBS, Restrictions <b>Enterprise Project Structure (EPS):</b> Different views. To create new, Assigning the new Project manager, Difference between EPS&OBS. <b>Projects:</b> Overview of the Project, Creation of new Project through wizard, Creation of new project through details.			

DAY 3	4 Hrs	Theory	Practical
<b>Calendar:</b> Types of calendars (Global, Resource, Project), New calendar, Modification, Copying holiday from global calendar, Making a Project or Resource Calendar as global, Assigning a calendar as default calendar for the projects. <b>Work Breakdown Structure (WBS):</b> Defining Structure, Applying WBS for tasks. <b>Activities:</b> Entering activity through wizard, Entering activities through details, Explore the use of duration format including subunit. <b>Columns:</b> Inserting a new column, Moving the Columns.			

DAY 4	4 Hrs	Theory	Practical
<b>Scheduling a Project:</b> Different kind of relationship between tasks, Different methods of linking , estimating the Project finish date, Identifying the project critical path, Editing the task links. Applying different calendars to activities & Estimating the finish date. Relationship Types, Lag & Lead, Time scale adjustments, Gantt chart, Activity Network Diagram, Trace logic, <b>Activity Codes:</b> Code definition, Assigning Code and Organizing , <b>Project Codes:</b> Code definition, Assigning code and Organizing.			

DAY 5	4 Hrs	Theory	Practical
<b>Activity types, Activity Steps.</b> <b>Constraints:</b> constraints in a Project. Different types of Constraints. Use of Secondary Constraint. <b>Work Products &amp; Documents:</b> Defining Wps & Docs. Assigning it for activities. <b>Currency:</b> To change the currency ,To Create new currency , Setting exchange rate, To find the rate of project in another currency value			

DAY 6	4Hrs	Theory	Practical
<b>Roles:</b> Importance of Roles, Defining the roles, Giving rates for the roles. <b>Resource Sheet Preparation:</b> Defining Resource through Wizard, Defining Resource through detail, To create New unit of measure for materials. <b>Resource Assigning:</b> Through add roles, Through add resources, Giving different rate which has mentioned either in resource or role.  <u>Check students Registration status.</u>			

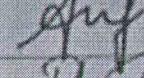
DAY 7	4Hrs	Theory	Practical
<b>Rate Types, Rate Source, Expenses.</b> <b>Resource Analysis:</b> Resource Usage Profile & Resource Usage Spread Sheet. <b>Resource Curves, Resource Leveling:</b> Concepts of Stretching, Crunching & Splitting – Manual, Automatic Leveling.			

DAY 8	4 Hrs	Theory	Practical
<b>Resource Codes:</b> Code Definition, Assigning Code and Organizing. <b>Cost Accounts, Updating Progress:</b> Entering Actual Start & Actual Finish date for Tasks, Updating through Duration, Updating through Physical, Updating through Units, Cost Updating. <b>Calculating Earned Value Analysis, Formatting Bars, Tracking.</b>			

DAY 9	4 Hrs	Theory	Practical
<b>Filter, Global Change, Layouts, Page Setup, User Defined Fields.</b> <b>Thresholds:</b> Adding a Threshold, Monitor the Threshold. <b>Issues:</b> Adding Issues. <b>Risks:</b> Adding risks, Calculate Risk Impact.			

DAY 10	4 Hrs	Theory	Practical
<b>Reports:</b> Tabular, Graphical. <b>Import / Export, Methodology Management.</b>			

Date	Student Name	Topic	Student Signature	Trainer Signature
16.04.2024	SANDESH KUNAR.K MD. HAROON S. SHANMUGAM.	Day 1	K. Sandesh M. Mohd S. Shanmugam	P. Bot
17.04.2024	SANDESH KUNAR.K. MD. HAROON S. SHANMUGAM	Day 2	K. Sandesh M. Mohd S. Shanmugam	P. Bot
18.04.2024	SANDESH KUNAR.K S. SHANMUGAM. MD. HAROON	Day 3	K. Sandesh S. Shanmugam M. Mohd	P. Bot
23.04.2024	SANDESH KUNAR.K MD. HAROON S. SHANMUGAM.	Day 4	K. Sandesh M. Mohd S. Shanmugam	P. Bot
25.04.2024	SANDESH KUNAR.K MD. HAROON S. SHANMUGAM	Day 5	K. Sandesh M. Mohd S. Shanmugam	P. Bot
26.04.2024	SANDESH KUNAR.K MD. HAROON S. SHANMUGAM.	Day 6	K. Sandesh M. Mohd S. Shanmugam	P. Bot
27.04.2024	SANDESH KUNAR.K MD. HAROON S. SHANMUGAM.	Day 7	K. Sandesh M. Mohd S. Shanmugam	P. Bot

Date	Student Name	Topic	Student Signature	Trainer Signature
16.4.2024	Mohamed Kaif.m A Mohamed Faizal	Day 1	 	P. Bot
17.04.2024	Mohamed Kaif.m A. Mohamed Faizal	Day 2	 	P. Bot
18.04.2024	Mohamed Kaif. n A. Mohamed Faizal	Day 3	 	P. Bot
23.04.2024	Mohamed Kaif.M A. MOHAMED FAIZAL	Day 4	 	P. Bot
25.04.2024	Mohamed Kaif.m A Mohamed Faizal	Day 5	 	P. Bot
26.04.2024	Mohamed Kaif.m A. Mohamed Faizal	Day 6	 	P. Bot
27.04.2024	Mohamed Kaif.m A. Mohamed Faizal.	Day 7	 	P. Bot

VALUE ADDED COURSE - COURSE CONTENT

Department of Computer Science and Engineering

Class : IV/VII

Academic Year 2023-24

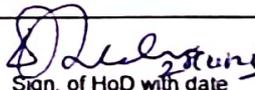
Name of the Value Added Course	Advanced Python and Introduction to Machine Learning	Name of the handling Faculty	Mr Mohideen AbdulKader M	
<b>Course Objective</b>				
1 To expose students with the basics of managing the Numpy				
2 To explore the various analysis of Pandas				
3 To examine the basic of Plotting and Visualization				
4 To understand the overview of Object Oriented Programming Concepts				
5 To understand the Machine Learning concepts				
<b>Course Outcome</b>				
1 Explain the different Numpy functions				
2 Build the app on Pandas functions				
3 show the Plotting and Visualization				
4 Develop the Object Oriented Programming				
5 judge the Machine Learning concepts				
<b>Lesson Plan for VAC</b>				
Sl. No.	Topic	T/R*	Periods Required	Mode of Teaching
		Book		
1	Creating Arrays-Numpy Data Types	T1	1	PPT
2	Array Mathematics-Array Manipulation	T1	1	PPT
3	Subsetting, slicing , Indexing-boolean	T1	1	PPT
4	Indexing-Array Manipulation	T1	1	PPT
5	Reshaping, Transposing	T1	1	PPT
6	Splitting and combining arrays	T1	1	PPT
7	Inspecting Array and aggregation array.	T1	1	PPT
8	Series-Dataframe	T1	1	PPT
9	Importing pandas- Dictionary into data frames	T1	1	PPT
10	Read and write to CSV and excel	T1	1	PPT
11	Selecting boolean indexing	T1	1	PPT
12	Setting, dropping, sorting, filling missing values	T1	1	PPT
13	Getting dataframe information and retrieving series.	T1	1	PPT
14	Summary and applying lambda function	T1	1	PPT
15	Figures-Subplot-Colors, markers	T1	1	PPT



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16	Line styles-ticks-Labels	T1	1	PPT
17	legends -drawing subplots	T1	1	PPT
18	Line Plotbarplot -Scatter plot	T1	1	PPT
19	histograms	T1	1	PPT
20	OOPS concepts	T1	1	PPT
21	creating class-Object	T1	1	PPT
22	accessing class members	T1	1	PPT
23	inheritance	T1	1	PPT
24	Abstract class	T1	1	PPT
25	Introduction to Machine Learning	T2	1	PPT
26	Kmeans Clustering	T2	1	PPT
27	Types of learning	T2	1	PPT
28	Supervised	T2	1	PPT
29	unsupervised	T2	1	PPT
30	Hierarchical Clustering.	T2	1	PPT
<b>Quiz / Mini Projects / Model Developed if any</b>				
<b>Text / Reference Books</b>				
1	Python Crash Course: A Hands-On, Project-Based Introduction to Programming (2nd Edition)			
2	Kevin Night and Elaine Rich, Nair B., "Artificial Intelligence (SIE)", McGraw Hill- 2008			
3				
<b>Website / URL References</b>				
1	Peter Jackson, "Introduction to Expert Systems", 3rd Edition, Pearson Education, 2007.			
2	Stuart Russel and Peter Norvig "AI – A Modern Approach", 2nd Edition, Pearson Education 2007			
3				

  
Sign. of Course Coordinator

  
Sign. of HoD with date      Head-TC

  
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MOHAMED SATHAK A J COLLEGE OF ENGINEERING		
Department of Computer Science and Engineering		
VALUE ADDED COURSE		
IVA018 Advanced Python and Introduction to Machine Learning		
TIMETABLE		
Sno	Date & Hr	Topic Covered
1	27.07.23 (3,4)	Creating Arrays-Numpy Data Types
2	27.07.23 (3,4)	Array Mathematics-Array Manipulation
3	03.08.23 (3,4)	Subsetting, slicing , Indexing-boolean
4	03.08.23 (3,4)	Indexing-Array Manipulation
5	10.08.23 (3,4)	Reshaping,Transposing
6	10.08.23 (3,4)	Splitting and combining arrays
7	17.08.23 (3,4)	Inspecting Array and aggregation array
8	17.08.23 (3,4)	Series-Dataframe
9	24.08.23 (3,4)	Importing pandas- Dictionary into data frames
10	24.08.23 (3,4)	Read and write to CSV and excel
11	02.09.23 (3,4)	Selecting, boolean indexing
12	02.09.23 (3,4)	Setting, dropping,soring,filling missing values
13	07.09.23 (3,4)	Getting dataframe information and retrieving series
14	07.09.23 (3,4)	Summary and applying lambda function
15	14.09.23 (3,4)	Figures-Subplot-Colors _ markers
16	14.09.23 (3,4)	Line styles-ticks-Labels
17	14.09.23 (3,4)	legends -drawing subplots,Line Plotbarplot -Scatter plot
18	21.09.23 (3,4)	Assessment I
19	28.09.23 (3,4)	Histograms
20	28.09.23 (3,4)	OOPS concepts
21	05.10.23 (3,4)	creating class-Object
22	05.10.23 (3,4)	accessing class members
23	05.10.23 (3,4)	Inheritance
24	12.10.23 (3,4)	abstract class
25	12.10.23 (3,4)	Introduction to Machine Learning
26	19.10.23 (3,4)	types of learning
27	19.10.23 (3,4)	Supervised
28	19.10.23 (3,4)	unsupervised
29	19.10.23 (3,4)	Kmeans Clustering,Hierarchical Clustering
30	26.10.23 (3,4)	Assessment II

  
Faculty In-Charge

  
HOD

  
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MOHAMED SATHAK A J COLLEGE OF ENGINEERING		
Department of Computer Science and Engineering		
VALUE ADDED COURSE		
IVA018 Advanced Python and Introduction to Machine Learning		
TIMETABLE		
Sno	Date & Hr	Topic Covered
1	27.07.23 (3,4)	Creating Arrays-Numpy Data Types
2	27.07.23 (3,4)	Array Mathematics-Array Manipulation
3	03.08.23 (3,4)	Subsetting, slicing , Indexing-boolean
4	03.08.23 (3,4)	Indexing-Array Manipulation
5	10.08.23 (3,4)	Reshaping,Transposing
6	10.08.23 (3,4)	Splitting and combining arrays
7	17.08.23 (3,4)	Inspecting Array and aggregation array
8	17.08.23 (3,4)	Series-Dataframe
9	24.08.23 (3,4)	Importing pandas- Dictionary into data frames
10	24.08.23 (3,4)	Read and write to CSV and excel
11	02.09.23 (3,4)	Selecting, boolean indexing
12	02.09.23 (3,4)	Setting, dropping,soring,filling missing values
13	07.09.23 (3,4)	Getting dataframe information and retrieving series
14	07.09.23 (3,4)	Summary and applying lambda function
15	14.09.23 (3,4)	Figures-Subplot-Colors _ markers
16	14.09.23 (3,4)	Line styles-ticks-Labels
17	14.09.23 (3,4)	legends -drawing subplots,Line Plotbarplot -Scatter plot
18	21.09.23 (3,4)	Assessment I
19	28.09.23 (3,4)	Histograms
20	28.09.23 (3,4)	OOPS concepts
21	05.10.23 (3,4)	creating class-Object
22	05.10.23 (3,4)	accessing class members
23	05.10.23 (3,4)	Inheritance
24	12.10.23 (3,4)	abstract class
25	12.10.23 (3,4)	Introduction to Machine Learning
26	19.10.23 (3,4)	types of learning
27	19.10.23 (3,4)	Supervised
28	19.10.23 (3,4)	unsupervised
29	19.10.23 (3,4)	Kmeans Clustering,Hierarchical Clustering
30	26.10.23 (3,4)	Assessment II

  
Faculty In-Charge

  
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MOHAMED SATHAK A J COLLEGE OF ENGINEERING					
Department of Computer Science and Engineering					
VALUE ADDED COURSE					
IVA018 Advanced Python and Introduction to Machine Learning					
S.No	Registration Number	Name of the Student	Assessment 1 (50)	Assessment 2 (50)	Mini Project (20)
1	311820205001	ABDULLAH	26	26	15
2	311820205002	ABDUL SHUKOOR NAFEES. M	40	39	15
3	311820205003	ABIRAMI V	43	38	16
4	311820205005	AISHWARYA. R	45	42	16
5	311820205006	ANAS AHAMED. A	30	30	16
6	311820205007	ARUNKUMAR	29	36	16
7	311820205008	BOOBALAN V	28	32	14
8	311820205010	IMAAM JAFFAR J	42	28	18
9	311820205011	JAASIR AHAMED AJ	38	36	18
10	311820205012	JAMEERUDEEN .F	39	41	18
11	311820205014	KEERTHANA S	38	35	16
12	311820205015	LAVANYA.S	36	38	18
13	311820205016	MANISH KUMAR.A	40	41	16
14	311820205017	MOHAMED AFSAR.M	38	38	16
15	311820205018	MOHAMED ASIF. H	30	31	16
16	311820205019	MOHAMED GHAZALI. P	30	34	14
17	311820205020	MOHAMED SIDIQ.I	30	30	14
18	311820205021	MOHAMMED AFRITH .R	39	38	18
19	311820205022	MOHAMMED FARHAN S M	35	40	18
20	311820205023	MOHAMMED FUYUJUR RAHMAN	30	29	16
21	311820205024	MOHAMMED HASHIR HASAN K	45	42	16
22	311820205025	MUBARAK ALI.J	39	41	15
23	311820205026	MUHAMMED MIDLAJ A.C	32	38	15
24	311820205027	NANDHINI.R	28	38	18
25	311820205028	PACKEER MOIHDEN FAHEEM . S	28	38	18
26	311820205029	PAVITHRAA S	38	29	16
27	311820205030	POOVARASAN R	35	35	16
28	311820205031	PRABHA. M	35	32	15
29	311820205032	PRAMOTH M	32	36	15
30	311820205033	PUNNIYAKOTTI. S	48	45	18
31	311820205034	RAFIQ SHERIFF S	40	35	18
32	311820205035	RAHIMUNNISA S	38	38	14
33	311820205036	RAJESH. R	42	31	14
34	311820205037	REVATHI.U	35	36	18
35	311820205040	SALAAHUDDEN FAKHRUDDIN ISMAIL	28	34	13
36	311820205041	SEYED MOHAMED BUHARY M.H	30	30	13
37	311820205042	SHALINI.M	30	34	16
38	311820205043	SIVAPRAKASAM. N	25	31	16



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MOHAMED SATHAK A J COLLEGE OF ENGINEERING					
Department of Computer Science and Engineering					
VALUE ADDED COURSE					
IVA018 Advanced Python and Introduction to Machine Learning					
S.No	Registration Number	Name of the Student	Assessment 1 (50)	Assessment 2 (50)	Mini Project (20)
1	311820205001	ABDULLAH	26	26	15
2	311820205002	ABDUL SHUKOOR NAFEES. M	40	39	15
3	311820205003	ABIRAMI V	43	38	16
4	311820205005	AISHWARYA. R	45	42	16
5	311820205006	ANAS AHAMED. A	30	30	16
6	311820205007	ARUNKUMAR	29	36	16
7	311820205008	BOOBALAN V	28	32	14
8	311820205010	IMAAM JAFFAR J	42	28	18
9	311820205011	JAASIR AHAMED AJ	38	36	18
10	311820205012	JAMEERUDEEN .F	39	41	18
11	311820205014	KEERTHANA S	38	35	16
12	311820205015	LAVANYA.S	36	38	18
13	311820205016	MANISH KUMAR.A	40	41	16
14	311820205017	MOHAMED AFSAR.M	38	38	16
15	311820205018	MOHAMED ASIF. H	30	31	16
16	311820205019	MOHAMED GHAZALI. P	30	34	14
17	311820205020	MOHAMED SIDIQ.I	30	30	14
18	311820205021	MOHAMMED AFRITH .R	39	38	18
19	311820205022	MOHAMMED FARHAN S M	35	40	18
20	311820205023	MOHAMMED FUYUJUR RAHMAN	30	29	16
21	311820205024	MOHAMMED HASHIR HASAN K	45	42	16
22	311820205025	MUBARAK ALIJ	39	41	15
23	311820205026	MUHAMMED MIDLAJ A.C	32	38	15
24	311820205027	NANDHINI.R	28	38	18
25	311820205028	PACKEER MOIHDEEN FAHEEM . S	28	38	18
26	311820205029	PAVITHRAA S	38	29	16
27	311820205030	POOVARASAN R	35	35	16
28	311820205031	PRABHA. M	35	32	15
29	311820205032	PRAMOTH M	32	36	15
30	311820205033	PUNNIYAKOTTI. S	48	45	18
31	311820205034	RAFIQ SHERIFF S	40	35	18
32	311820205035	RAHIMUNNISA S	38	38	14
33	311820205036	RAJESH. R	42	31	14
34	311820205037	REVATHI.U	35	36	18
35	311820205040	SALAAHUDDEEN FAKHRUDDIN ISMAIL	28	34	13
36	311820205041	SEYED MOHAMED BUHARY M.H	30	30	13
37	311820205042	SHALINI.M	30	34	16
38	311820205043	SIVAPRAKASAM. N	25	31	16



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36	UINNSIN001	SUPRAJAY	32	41	14
37	UINNSIN002	SYED ABBAS AFRIDI	40	39	14
38	UINNSIN003	SYED ABBAS ALI	48	46	16
39	UINNSIN004	SYED ABBAS ALI	30	28	16
40	UINNSIN005	SYED ALI S	44	39	18
41	UINNSIN006	SYED ANEEN A	40	38	14
42	UINNSIN007	VINHA A	38	AB	14
43	UINNSIN008	ZAMIR K	28	28	16
44	UINNSIN009	ABUL AZEEN SHAHID	30	38	15
45	UINNSIN010	ABDUL HASSAN HACHKANI SAHIB	AB	36	16
46	UINNSIN011	ALAGUNAI	36	35	16
47	UINNSIN012	HAKIMUL	28	26	13
48	UINNSIN013	KRISHNA KUMAR	35	35	15
49	UINNSIN014	MUHAMMAD RIYAZ	AB	AB	18
50	UINNSIN015	SANTOSH	AB	AB	AB
51	UINNSIN016	SANJ KUMAR	35	38	14
52	UINNSIN017	THEMOTHY U. S	28	26	14
53	UINNSIN018	VINODH			

*P. H. K.*  
Faculty - Incharge

*[Signature]*  
HOD/IT

*[Signature]*

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**ANNA UNIVERSITY :: CHENNAI - 600025.**  
**OFFICE OF THE CONTROLLER OF EXAMINATIONS**  
**Provisional Results of Nov. / Dec. Examination,2023.**

Inst.Code/Name : 3118 - MOHAMMED SATHAK A.J.COLLEGE OF ENGINEERING Semester No. : 07 DATE OF PUBLICATION :23-04-2024

Branch : 104-B.E. Computer Science and Engineering

Reg. Number	Subject Code ->	CS8079	CS8711	CS8791	CS8792	IT8761	IVA018	MG8591	OMF751	SB8049
Reg. Number	Stud. Name	Grade								
311819104017	HYDER ALI M								B+	
311819104020	MOHAMED AADIL A								B+	
311820104001	ABDUL KADAR JAILANI J	B+	A+	B	U	A+	B	B	B+	O
311820104002	ABINAYA BHARATHI M	A	O	A	U	O	B+	A	A	O
311820104003	ABISH K	U	A+	B	U	A	B	B	B+	A
311820104004	ABRAR MUSHARRAF P	A	O	A	A	O	B+	A	A	O
311820104005	ALTHAF J	B+	O	B	B	O	B+	B+	A	O
311820104006	ARSATH KHAN A	U	A+	U	U	A+	B	B	B	A+
311820104007	ARSHAD AHMED M Y	B	A+	U	B	A+	B	B+	A	A+
311820104008	ARUN G	B	O	B	B	O	B+	A	B+	O
311820104009	AYSHA THASLIM A	A	O	B+	A	O	B+	A+	A	O
311820104010	DILIPAN D G	B+	O	B	B	O	B+	A	B	B+
311820104011	ELANGO V	A	O	B+	B+	O	B+	A	A	O
311820104013	IMRAAN H	A	O	B+	B+	O	B+	B+	B+	A
311820104014	JALEEL AHAMED K	U	A+	B	U	A	B	A	B+	A
311820104015	KARAN R	B+	O	A	B	O	B	A	B	O
311820104016	LALITH ADITHYAN H	B+	O	A	B+	O	B+	A+	A	A+
311820104017	MOHAMED ABDUL KALAM S	B	A+	B	B	A+	B+	B	U	O
311820104018	MOHAMED ASIQ ALI A	A	O	B	B	O	B+	A	UA	A+
311820104019	MOHAMED HANIFA HARISH P	B+	O	B	B	O	B+	A	B	O
311820104020	MOHAMED JASHIM A	B	A+	U	B	A+	B+	B+	U	O
311820104021	MOHAMED NABEEL A	B	O	U	U	O	B+	B+	B+	A+
311820104022	MOHAMED NOWFEES A	B	A+	U	U	A+	B	B	U	A
311820104023	MOHAMED SALMAN A	B	A+	UA	UA	A	U	B+	B+	O
311820104024	MOHAMMED HASEEB RAKSHAN P	B+	O	A	U	O	B+	B+	B+	O
311820104025	MOHAMMED KHAJA NAWAZ A	B+	A+	B+	B	O	B	B	B	A+
311820104026	MOHAMMED RIZWAN K R	B	O	B+	B+	O	B+	B	B	O
311820104027	MOHAMMED SIDDIQUE C	B	O	B	B	A+	B+	B	B	O
311820104028	MUSHARAF MUBEEN A	B	O	A	B	O	B	B	A	O
311820104029	NAVEEN KUMAR S	B	O	B	U	O	B	B+	B	A+
311820104030	NITHISHKUMAR S	U	A+	B	B	O	B+	A	B+	A

**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
 No.34, Rajiv Gandhi Salai (OMR)  
 Sipcot - IT Highway Egattur,  
 Chennai - 603103.

W - Withdrawal I - Inadequate Attendance

WH1 - Withheld for Suspected Malpractice WH(others) - Withheld for want of Clarification approval etc

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**Provisional Results of Nov. / Dec. Examination,2023.**

311820104031	RASHID C K	U	A+	B	U	A+	B	B	B	A+
311820104032	RISWAN M	U	A+	B	U	A+	B	B	B	B+
311820104033	SAKTHIVEL K H	B+	O	B+	B	O	B	A+	A	O
311820104034	SATHISH S	U	O	B	U	O	B+	B	B+	O
311820104035	SHAIKH ZAITH R	B+	O	B	B+	O	B+	B	A	O
311820104036	SULTHAN NIFAN S	B+	O	A	B+	O	B+	A	A	O
311820104037	VASUMATHI A	B+	O	B+	B	O	B+	A	B	A+
311820104038	VINITH D	U	A+	B	U	A+	B+	B	U	A+
311820104039	VINITHA M	B+	O	B	U	A+	B+	A	A+	A+
311820104040	YOGARAJ S	B	O	B+	B+	O	B	A	A+	A+
311820104041	YUVAN R K	U	O	B	B	O	B+	B	B	O
311820104301	ASHAR A	U	O	B	U	O	B+	B	U	A
311820104302	BARATHWAJ M	U	A+	U	U	A+	B+	B	B+	A+
311820104303	BHUVANESHWARAN P	U	O	B	U	O	B+	B	B+	A+
311820104305	HUDA F	UA	UA	UA	UA	UA	B	UA	UA	A+
311820104306	MANISH PRASAD V	B	O	B+	U	A+	B+	B+	B	O
311820104307	MOHAMMED THAYYAB A R	B+	O	B+	U	O	B+	A	B+	A+
311820104308	MONISHWARAN ARUNACHALAM B	B+	O	B+	B	O	B+	A+	B+	O
311820104309	SURYA S	B	O	B	U	O	B+	A	U	O
311820104310	SURYAKANTH S	U	O	B	U	O	B+	A	B	A+
311820104701	SEYED AHAMED RABIUDEEN N	B	O	B+	B	O	B+	B	B+	O

  
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only 2 sheets - IT 1.2.2

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Inst.Code/Name : 3118 - MOHAMMED SATHAK A.J.COLLEGE OF ENGINEERING Semester No. : 07 DATE OF PUBLICATION :23-04-2024  
 Branch : 205-B.Tech. Information Technology

Reg. Number	Subject Code ->	CS8079	CS8791	CS8792	IT8711	IT8761	IVA018	MG8591	OMF751	SB8049
Reg. Number	Stud. Name	Grade								
311819205031	VIGNESH S			U						
311819205301	PEERAZIMMEERAN A	UA		UA					UA	
311820205001	ABDULLAH S	U	U	U	A+	A	B	B	B	O
311820205002	ABDUL SUKHOOR NAFEES M	B	B	B	A+	A+	B+	UA	B	O
311820205003	ABIRAMI V	A	B+	B+	O	A+	B+	A	B+	O
311820205005	AISHWARYA R	B+	B+	U	O	O	B+	A	A	A+
311820205006	ANAS AHAMED A	B	B+	U	O	A+	B+	B+	A	O
311820205007	ARUN KUMAR A	B+	B+	B	O	O	B+	A	B	O
311820205008	BOOBALAN V	B+	A	B	O	O	B+	B+	B+	A+
311820205010	IMAAM JAFFAR J	A	A+	B+	O	O	B+	A+	A+	O
311820205011	JAASIR AHAMED A J	B	B+	U	O	A+	B+	B	B	O
311820205012	JAMEERUDEEN F	B	B+	U	A+	A+	B+	B	U	O
311820205014	KEERTHANA S	B	A	U	O	O	B+	B+	B+	A+
311820205015	LAVANYA S	B+	A	B	O	O	B+	B+	B+	A+
311820205016	MANISH KUMAR A	B	B+	B	O	O	B+	B+	B	O
311820205017	MOHAMED AFSAR M	B+	B+	U	A+	O	B+	A	B+	A+
311820205018	MOHAMED ASIF H	B	B+	B	A+	O	B+	B+	B	O
311820205019	MOHAMED GHAZALI P	U	U	U	A+	A+	B+	U	B	O
311820205020	MOHAMED SIDIQ I	B	B	U	A+	A+	B	B+	B	O
311820205021	MOHAMMED AFRITH R	B	U	U	A+	A+	B+	B	B+	O
311820205022	MOHAMMED FARHAN S M	B	A	B+	O	O	B+	A	A	A+
311820205023	MOHAMMED FUYUJURRAHMAN S A	U	A	B+	O	O	B+	A	A	A+
311820205024	MOHAMMED HASHIR HASAN K	U	A	B+	O	O	B+	A+	B+	O
311820205025	MUBARAK ALI J	U	B	U	A+	A	B	B	U	O
311820205026	MUHAMMED MIDLAJ A C	B	B	B	A+	A+	B+	A	B+	O
311820205027	NANTHINI R	U	U	B	O	A+	B+	B+	U	O
311820205028	PACKEER MOHIDEEN FAHEEM S	U	A	B	O	A	B	B+	B	O
311820205029	PAVITHRAA S	B	B+	B+	O	O	B+	A+	A	O
311820205030	POOVARASAN R	B	B	B	O	O	B+	A	A+	O
311820205031	PRABHA M	B+	A	B+	O	O	B+	A+	A+	O
311820205032	PRAMOTH M	B	B	B	A+	A+	B+	A	B	A

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Page 16/17

311820205033	PUNNIYAKOTTI S	B	A	U	O	O	B+	A	B+	A+
311820205034	RAFIQ SHERIFF S	B	B+	B	A	A+	B+	B+	B+	A
311820205035	RAHIMUNNISA S	B	A	B	A+	A+	B+	A	B+	O
311820205036	RAJESH R	B	B	B+	O	O	B+	B+	B	B
311820205037	REVATHI U	B	B+	A	O	O	B+	B	B+	O
311820205040	SALAAHUDDEN FAKHRUDDIN ISMAIL	B	B+	B	A+	A+	B	B	B+	O
311820205041	SEYED MOHAMED BUHARY M H									
311820205042	SHALINI M	A	A+	B	A+	O	B+	B+	B	O
311820205043	SIVAPRAKASAM N	B+	A	B	A+	A+	B	A	B+	A+
311820205044	SUPRAJA V	B	B	B	A+	O	B+	B	A	O
311820205045	SYED ABBAS AFRID M	B+	B	B	O	O	B+	A	A	O
311820205046	SYED ABBAS ALI J	A	B	B+	O	O	B+	A	A	O
311820205047	SYED ALI S	B+	U	B	O	O	B+	A	A	O
311820205048	SYED ANEES A	U	U	U	A+	A+	B	U	U	O
311820205050	VISHAL A	A	A+	B+	O	O	B+	A	A	O
311820205051	ZAMIL K	B	U	U	A+	A	B	B	B	O
311820205301	ABDUL AZEES SAHIB B	U	U	U	A+	A	B	U	U	O
311820205302	ABUL HASSAN HACKANI SAHIB S	B	U	U	A+	A	B	B+	B	O
311820205305	HARISH B	A	B	B	O	O	B+	B+	A+	O
311820205306	KRISHNAKUMAR K	A	B	B	A+	A+	B	B	B+	O
311820205307	MOHAMED RIYAZ M	U	U	U	A	A	B	U	B+	A+
311820205308	SANTHOSH	UA	UA	UA	UA	UA	B	UA	UA	U
311820205311	THEMOTHEYU S	B	B	U	O	A+	B+	B	B	O
311820205312	VINEETH BABA K B	B	B	B	A	A+	B	B+	U	O

  
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 No.34, Rajiv Gandhi Salai (OMR)  
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 Chennai - 603103.

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23-04-2024

Anna University - COE



# MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)



From

Department of Training & Placement,

MSAJCE

To

The Principal,

MSAJCE

Respected Sir,

*Permitted*  
*mi*  
*18/12/23*

Sub: Permission to conduct Cyber Security Training Program- Reg

As we have planned for Cyber Security training program by Palo Alto on (21.12.23 & 22.12.23) for the Second year students of Computer Science Engineering & Artificial Intelligence and Data Science, so in this regard we need your permission to conduct the training and to access the CISCO & RPA Lab. So kindly grant us permission for the same

Thank You

Date: 18.12.23

Place: Chennai

Yours faithfully

*A.V.H.S.*  
*18/12/23*

Head Training and Placement

**Head - Placement**  
Mohamed Sathak A.J. College of Engineering  
Singersari IT Park, Chennai - 603 103.

*[Signature]*

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Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.



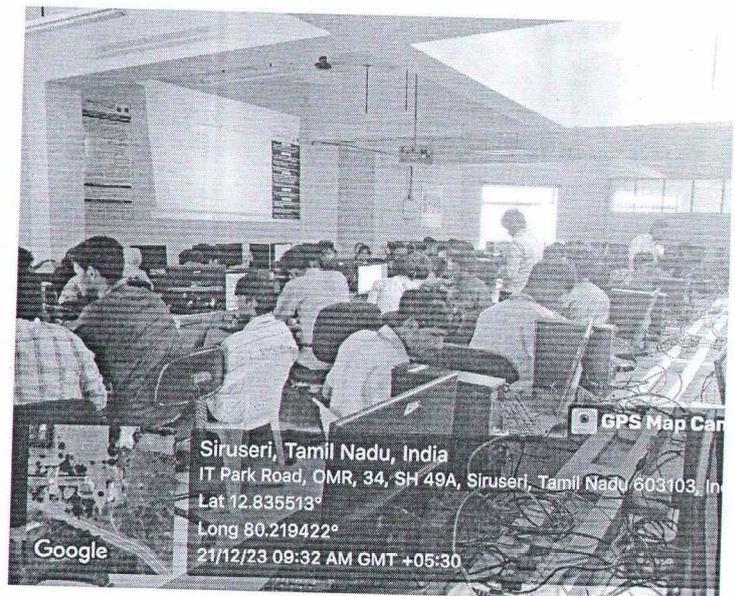
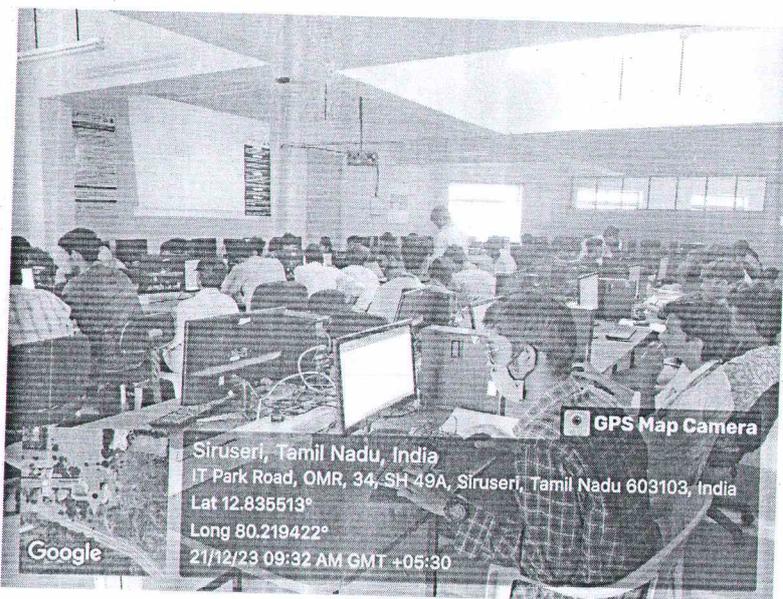
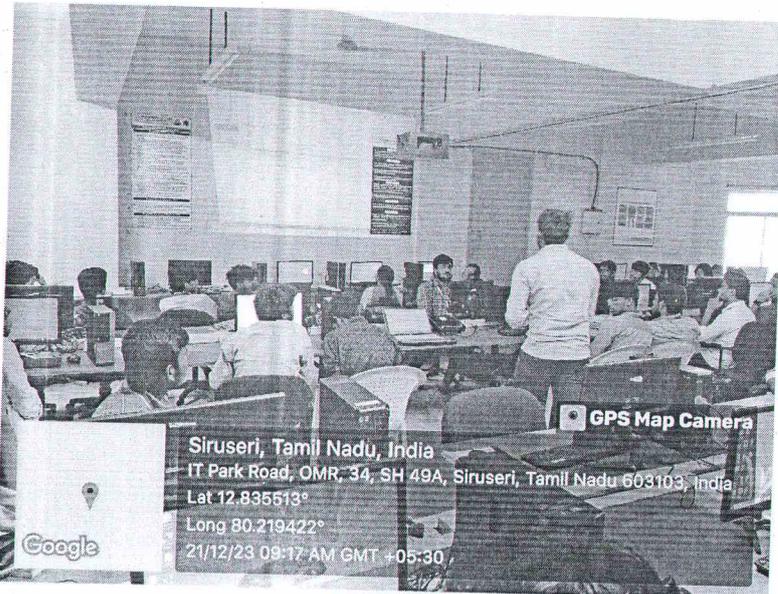
**MOHAMED SATHAK  
A.J. COLLEGE OF ENGINEERING**  
34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Chennai - 603 103.



**Department of Training and Placement**

**Training Programs conducted AY2023-24 Odd Semester**

**Cyber Security – Palo Alto**



*Mohamed Sathak*

**PRINCIPAL**  
Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

**MOHAMED SATHAK A J COLLEGE OF ENGINEERING**  
**DEPARTMENT OF TRAINING & PLACEMENT**  
**PALOALTO- CYBER SECURITY STUDENTS ATTENDANCE**

S.No	REG.NO	DEPT	NAME	21.12.23		22.12.23	
				F.N	A.N	FN	AN
1	311822104001	CSE	Aakhil Mohamed	1	AB	AB	AB
2	311822104002	CSE	Abdalah.A	1	AB	AB	AB
3	311822104004	CSE	Afrose Rowshan.A	1	1	1	1
4	311822104005	CSE	Akash.M	1	1	1	1
5	311822104006	CSE	Anas Rahman.	1	1	AB	AB
6	311822104007	CSE	Ashwath.K	1	1	1	1
7	311822104008	CSE	Bhuvaneswari. V	1	1	1	1
8	311822104009	CSE	Brajin Sanu.S.A	1	1	1	1
9	311822104010	CSE	Charumathi.V	1	1	1	1
10	311822104011	CSE	Chitharth	AB	AB	1	1
11	311822104013	CSE	Dharnish Babu	1	1	AB	AB
12	311822104014	CSE	Gomathi.T	1	1	1	1
13	311822104015	CSE	Hamdan Ashraf.M	AB	AB	1	1
14	311822104016	CSE	Hanish.S	1	1	1	1
15	311822104017	CSE	Hanzul Mahrifa.M	1	1	1	1
16	311822104018	CSE	Hariharan .G	1	1	1	1
17	311822104019	CSE	Harinisri.M	1	1	AB	AB

18	311822104020	CSE	Ibrahim Shafeeq	1	1	1	1
19	311822104021	CSE	Irfan Ahamed.S.S	1	1	AB	AB
20	311822104022	CSE	Jazeer Ahamed.J	AB	AB	AB	AB
21	311822104023	CSE	Jeevesh . R	1	1	1	1
22	311822104024	CSE	Joshwa.T	1	1	1	1
23	311822104025	CSE	Kathija Shameema.A	1	1	1	1
24	311822104026	CSE	Manigandan	1	1	1	1
25	311822104027	CSE	Marwan Ali.M	1	1	1	1
26	311822104028	CSE	karthikeyan M	1	1	1	1
27	311822104029	CSE	Mohamed Ashraf.M	1	1	1	1
28	311822104030	CSE	Mohamed Idrees.N	1	1	1	1
29	311822104031	CSE	Mohamed Jamees	1	1	AB	AB
30	311822104032	CSE	Mohamed Kamil Ameen	1	AB	AB	AB
31	311822104033	CSE	Mohamed MufEEK.M	AB	AB	AB	AB
32	311822104034	CSE	Mohamed Tharik M.M	1	1	1	1
33	311822104035	CSE	Mohamed Buhari.A	1	1	1	1
34	311822104036	CSE	Mohamed Nazmi.A	1	1	1	1
35	311822104037	CSE	Mugesh.K	AB	AB	1	1
36	311822104038	CSE	Muthuraman.G	OD	OD	OD	OD
37	311822104039	CSE	Nivethitha.A.S	1	1	AB	AB

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 No.34, Rajiv Gandhi Salai (OMR)  
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38	311822104040	CSE	Pradeep.J	/	/	/	/
39	311822104041	CSE	Rajebul Ali	/	/	/	/
40	311822104042	CSE	Sakthivel . V	/	/	/	/
41	311822104043	CSE	Sankara Narayanan.S	/	/	/	/
42	311822104044	CSE	Santhosh Mahara.S	/	/	/	/
43	311822104045	CSE	Sathis Kumar . V	/	/	/	/
44	311822104046	CSE	Shahid Sharif.B	/	/	/	/
45	311822104047	CSE	Shajaneshwar.M.S	/	/	/	/
46	311822104048	CSE	Suhaib.I	/	/	AB	AB
47	311822104049	CSE	Suhail Ahamed.T	/	/	/	/
48	311822104050	CSE	Surya S	/	/	/	AB
49	311822104051	CSE	Syed Aahil R	/	/	/	/
50	311822104052	CSE	Syed Aahkil R	/	/	/	/
51	311822104053	CSE	Vignesh.V	/	/	/	/
52	311822104054	CSE	Vinoth.P	/	/	/	/
53	311822104055	CSE	Yogeshwari A	/	/	/	/
54	311822104056	CSE	Zakir Hussain.A	/	/	/	/
55	LE	CSE	Aafia banu.A	/	/	/	/
56	LE	CSE	Hari shakthi kumar	/	/	AB	AB
57	LE	CSE	Mohamed yusuf	/	/	/	AB

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58	LE	CSE	Ganesh	1	1	AB	AB
59	LE	CSE	Mohamed Kamaludeen Irfan	1	1	1	1
60	LE	CSE	Naveenkumar L	AB	AB	1	1
61	311822243001	AIDS	H. Aadil Mohamed	1	AB.	1	1
62	311822243002	AIDS	Y. Abul Faize	1	1	1	1
63	311822243003	AIDS	A.B. Ahamed Raasim	1	AB.	1	1
64	311822243004	AIDS	A. Akram Bilal	1	1	1	1
65	311822243005	AIDS	Ayesha	1	1	1	1
66	311822243006	AIDS	R. Balaji	1	1	1	1
67	311822243007	AIDS	M. Darvesh Ahamed	1	1	AB	AB
68	311822243008	AIDS	P. Dhiyya	1	1	1	1
69	311822243009	AIDS	S. Hari Ragavendra	1	1	1	1
70	311822243010	AIDS	R.S. Jessica Charlet	1	1	1	1
71	311822243011	AIDS	R. Kartika	1	1	1	1
72	311822243012	AIDS	S. Kaviyazhagan	1	1	1	1
73	311822243013	AIDS	A. Kevin Fannex	1	1	1	1
74	311822243014	AIDS	U.S. Mithran	1	1	1	1
75	311822243015	AIDS	A. Mohamed Asif	1	1	1	1
76	311822243016	AIDS	A. Mohamed Ibrahim	1	1	1	1
77	311822243017	AIDS	C. Mohamed Siddiq	1	1	1	1

  
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78	311822243018	AIDS	V. Mohamed Hamza	1	1	1	1
79	311822243019	AIDS	M. Mohamed Irfan	AB	AB	1	1
80	311822243020	AIDS	A. Mohamed Jaffar Saadiq	AB	AB	1	1
81	311822243021	AIDS	J. Mohamed Riyaz	1	1	1	1
82	311822243022	AIDS	D.N. Naleem Ahamed	AB	AB	1	AB
83	311822243023	AIDS	M.R. Shah Nawas	AB	AB	AB	AB
84	311822243024	AIDS	K.A. Sham	AB	AB	1	1
85	311822243025	AIDS	P. Shrivarsa	AB	AB	1	1
86	311822243026	AIDS	B. Umar Ali	1	1	AB	AB
87	311822243027	AIDS	T. Yasinraj	1	1	1	1
88	311822243301	AIDS	Mohammed Thahir m	1	1	1	1
89	311822243302	AIDS	Varshini m	AB	AB	1	1

Date: 15/8/20  
 AIDS = 6  
 CSF = 9  
 CSF = 14  
 CSF = 3  
 CSF = 50  
 CSF = 14  
 CSF = 3  
 CSF = 50

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**Nikesh Arora**  
Chairman and CEO  
Palo Alto Networks

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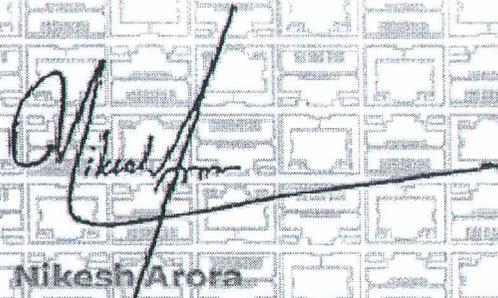
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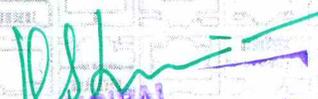
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*Nikesh Arora*

**Nikesh Arora**  
Chairman and CEO  
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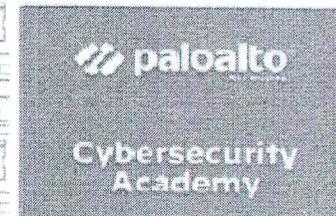
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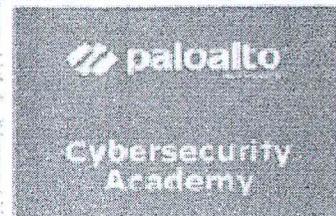
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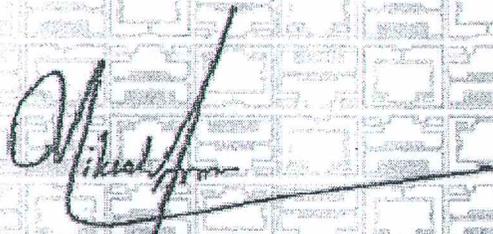
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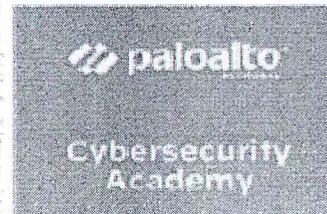
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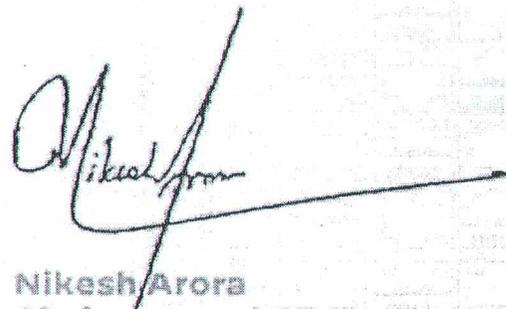
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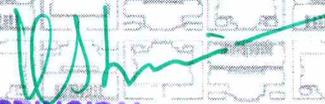
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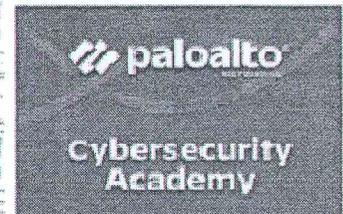


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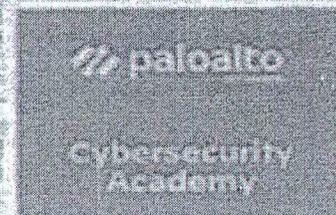
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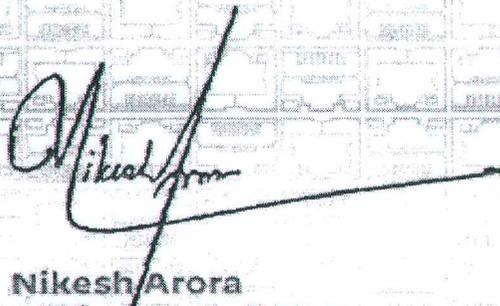
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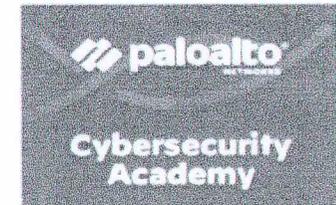
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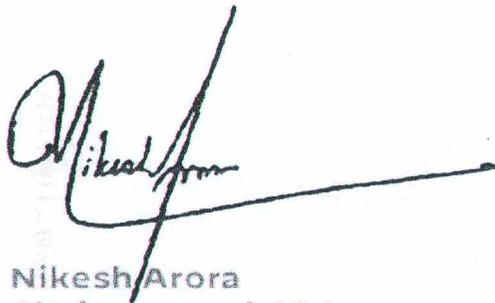
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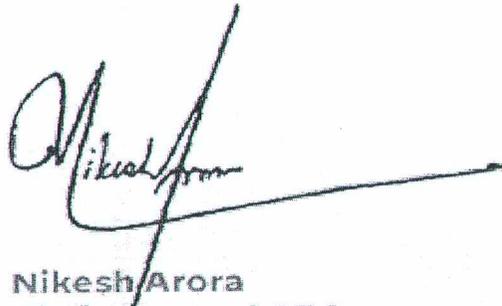
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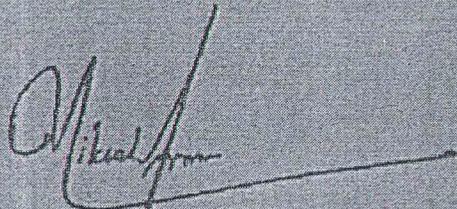
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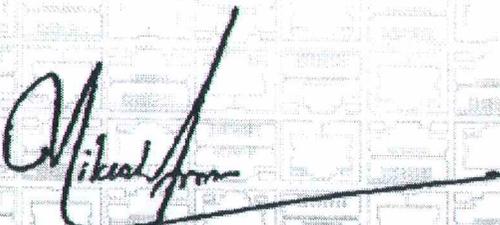
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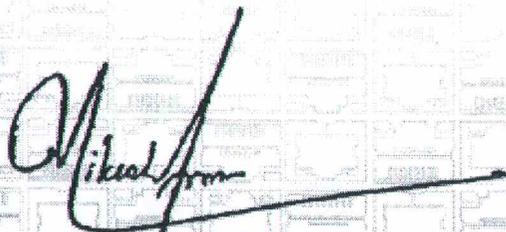
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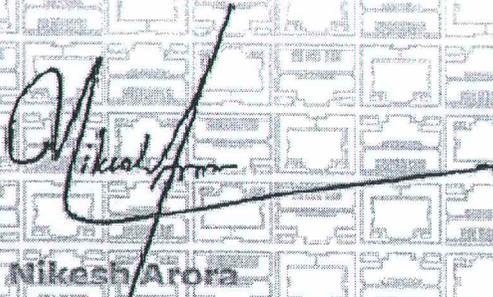
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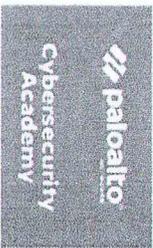
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SIPCOT - IT Highway Egattur,  
Chennai - 603103.

# Palo Alto Networks Cybersecurity Academy

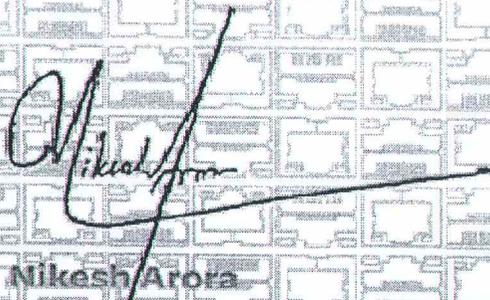
## Student Certificate of Completion

THIS CERTIFICATE OF ACKNOWLEDGEMENT CONFIRMS THAT

**Marwan Ali**

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**Nilesh Arora**  
Chairman and CEO  
Palo Alto Networks

**dOFJfHkmxX**

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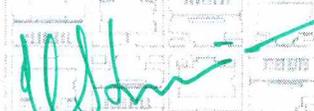
**Sakthivel V**

has successfully completed

**Cybersecurity Foundation**



**Nikesh Arora**  
Chairman and CEO  
Palo Alto Networks



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No.34, Rajiv Gandhi Salai (GMR)  
Sipcot - IT Highway, Egattur,  
Chennai - 603103.

**8X9DrAg4lw**  
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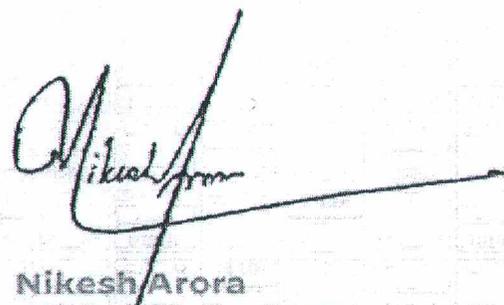
## Student Certificate of Completion

THIS CERTIFICATE OF ACKNOWLEDGEMENT CONFIRMS THAT

**Shahid Sharif B**

has successfully completed

**Cybersecurity Foundation**



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Chairman and CEO  
Palo Alto Networks

**3A1XHhykTP**

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Sipcot - IT Highway Egattur,  
Chennai - 603103.



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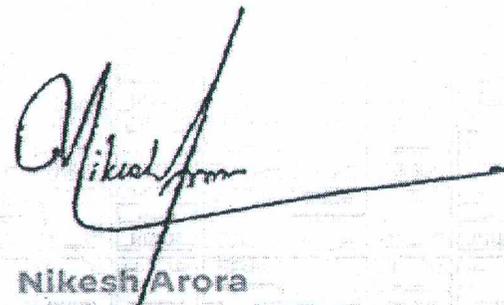
## Student Certificate of Completion

THIS CERTIFICATE OF ACKNOWLEDGEMENT CONFIRMS THAT

**Suhail Ahamed**

has successfully completed

**Cybersecurity Foundation**



**Nikesh Arora**  
Chairman and CEO  
Palo Alto Networks

**CcP42r4pP6**  
Authorization Number

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Authorization Date

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Chennai - 603103.



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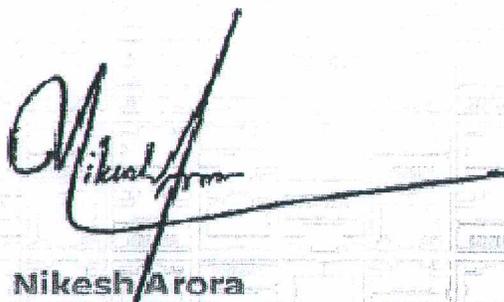
## Student Certificate of Completion

THIS CERTIFICATE OF ACKNOWLEDGEMENT CONFIRMS THAT

**Mohamed Irfan**

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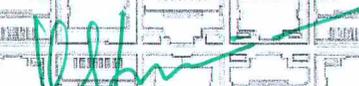
**Nikesh Arora**  
Chairman and CEO  
Palo Alto Networks

**Et00PNuWA1**  
Authorization Number

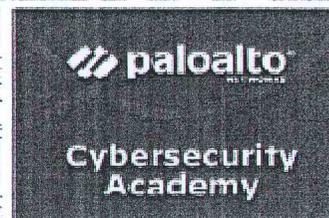
**December 21, 2023**  
Authorization Date

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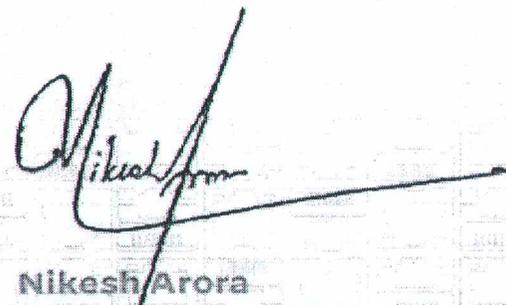
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**Mohamed Kaamil Ameen**

has successfully completed

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Authorization Number

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Authorization Date

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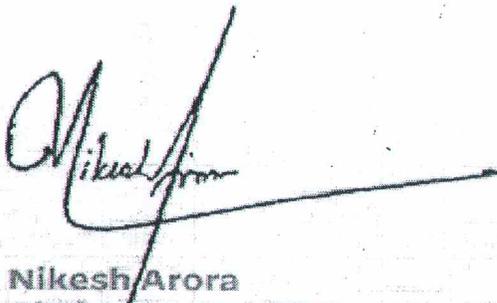
## Student Certificate of Completion

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**Hanish S**

has successfully completed

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Chairman and CEO  
Palo Alto Networks

**2XcEZfLOEY**  
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**Ganesh P**

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Chairman and CEO  
Palo Alto Networks

**MubRqlc1Xy**  
Authorization Number

**December 21, 2023**  
Authorization Date

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**Ashwath K**

has successfully completed

**Cybersecurity Foundation**



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Sipcot - IT Highway Egattur,  
Chennai - 603103.



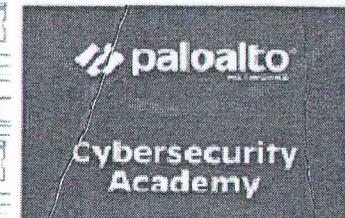
**Nimesh Arora**  
Chairman and CEO  
Palo Alto Networks

**16Z99aNSZX**

Authorization Number

**December 30, 2023**

Authorization Date



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**Suhaib I**

has successfully completed

**Cybersecurity Foundation**



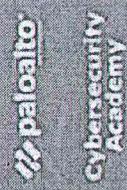
Nikesh Arora  
Chairman and CEO  
Palo Alto Networks

**MATw0koC99**  
Authorization Number

**December 30, 2023**  
Authorization Date

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Chennai - 603103.

ECE 1.2.2

Semester -6

Value Added Course on  
**IOT USING ARDUINO**

L	T	P	C
1	0	2	2

**Objectives:**

- To expose student and gain knowledge about Arduino technology with IOT
- To Program and construct applications using Arduino using a number of different sensors and IOT

**Unit – I Introduction to Arduino**

Embedded processing portfolio, Architecture and hardware organization of Arduino, Configuring GPIO and Clock systems, Real time applications using GPIO configuration, LCD interfacing, Technical explanation ADC, Configuring ADC, Real time applications using Sensors

**Unit – II Interfacing with Zigbee**

Bluetooth Interfacing, Android mobile based device control ,GSM interfacing and send SMS, Real time Application Development with GSM ,Zigbee Interfacing, Data transmission using zigbee, Real time applications interfacing with sensors and Zigbee

**Unit – III Real Time applications**

DC Motor Interfacing, H-bridge concept and design and ultrasonic interfacing, Clockwise and anticlockwise control, Real time applications interfacing with robotic vehicle model, Real time applications interfacing with sensors and Robot

**Unit – IV Li-Fi with Ardino**

Introduction, Li-Fi based Data communication, Interfacing Li-Fi with Arduino, Application Development with Li-Fi.

**Unit – V IOT –Configuration & Integration**

Introduction to IoT & Scope of IoT, Web page creation, Data transmission from sensors, Configuration webpage ,Sensor data monitoring , Wireless Interfacing, Android mobile based device control, GSM interfacing and send SMS, Real time Application Development with GSM, Zigbee Interfacing Data transmission using zigbee, Real time applications interfacing with robotic vehicle.

**Outcomes:**

The students will be outfitted with hands on knowledge in IOT using ARDUINO.

Upon completion of the program, the students will be able to

  
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C01	Understand features of the Arduino platform
C02	Application development-Integrate with Zigbee
C03	Study and execute real time applications
C04	Application development -Li-Fi with Ardino
C05	Execute coding to gather and process data on the Arduino via the cloud.

**Total Hours: 45**

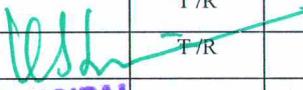
VALUE ADDED COURSE - COURSE CONTENT

Department of ECE

Class :IV ECE

Academic Year: 2023 TO 2024

Name of the Value Added Course	IVA067- IoT using Arduino	Name of the handling Faculty	S.Piriyadharshini	
<b>Course Objective</b>				
1) To expose student and gain knowledge about Arduino Technology with IOT				
2) To program and construct applications using Arduino using a number of different sensors and IOT				
<b>Course Outcome</b>				
CO1	Understand features of Arduino Platform			
CO2	Application Development - Integrate with Zigbee			
CO3	Study and execute real time applications			
CO4	Application Development - LiFi with Arduino			
CO5	Execute coding together and process data on the Arduino via the cloud			
<b>Lesson Plan for VAC</b>				
Sl. No.	Topic	T / R*	Periods Required	Mode of Teaching
		Book		
<b>UNIT I - Introduction to Arduino</b>				
1	Embedded processing portfolio	T/R	1	PPT
2	Architecture and hardware organization of Arduino	T/R	1	PPT
3	Configuring GPIO and Clock Systems	T/R	1	PPT
4	Real Time Applications using GPIO configuration	T/R	1	PPT
5	LCD Interfacing	T/R	1	PPT
6	Technical explanation ADC	T/R	1	PPT
7	Configuring ADC	T/R	1	PPT
8	Real time applications using sensors	T/R	1	PPT
<b>UNIT II - Interfacing with Zigbee</b>				
9	Bluetooth Interfacing	T/R	1	PPT
12	Android mobile based device control	T/R	1	PPT
13	GSM Interfacing and send SMS	T/R	1	PPT
14	Real time Application Development with GSM	T/R	1	PPT
15	Zigbee Interfacing	T/R	1	PPT
16	Data transmission using zigbee	T/R	1	PPT
17	Real time application interfacing with sensors and Zigbee	T/R	2	PPT
18				
<b>UNIT III - Real Time Applications</b>				
20	DC Motor Interfacing	T/R	2	PPT/TOOL
21	H Bridge Concept and design and ultrasonic interfacing	T/R	1	PPT/TOOL
22	Clockwise and Anticlockwise control	T/R	1	PPT/TOOL
23	Real time Application interfacing with Robotic vehicle model	T/R	1	PPT/TOOL
24	Real time applications interfacing with sensors and Robot	T/R	1	PPT/TOOL
25				

  
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 Chennai - 603103.





DEPARTMENT OF ECE  
 IOT USING ARDUINO - PROJECT REVIEW

21/11/23

S.no	BATCH		PROJECT TITLE	PRESENTATION (20)	DEMONSTRATION (20)	RECORD (20)	VIVA (20)	TOTAL (100)
	Reg. No.	Name of the Students						
1.	311820106001	ABINAYA . K	Multi purpose Distance Measuring device.	28	25	20	16	89
	311820106002	ABITHA . B		27	24	20	15	86
	311820106007	CARDL PERSY . N		25	24	20	14	83
	311820106009	JANANI . M.E		25	24	20	14	83
2.	311820106022	SHAIK ABDULLA.A.S	Temperature Fan controller Wing ESP8266.	26	24	20	16	86
	311820106003	AFLAL AHAMED . A		25	24	20	14	83
	311820106016	NIRMAL . K		24	23	20	14	81
	311820106010	JASEEM MOHAMED . P		24	23	20	13	80
3.	311820106004	AHMAD SYED SEMAK	Smart water Level monitoring system.	25	26	28	15	84
	311820106021	SHAIKRUKH FAKRDEEN		28	26	18	16	88
	311820106011	KISHORE.S		25	24	18	14	81
	311820106005	KAMALI . D		24	24	18	14	80
4.	311820106005	AMUDESHINARAN . S	Iot based Home Automata -H00.	25	24	18	14	81
	311820106020	SATHESH KUMAR		24	25	20	14	83
	311820106030	BALAKRISHNAN		22	26	20	15	83
	311820106025	THANVEER .SHERIFF		22	20	20	13	75
5.	311820106006	BASHARATHULLA	Smart Door Lock system.	21	20	20	13	74
	311820106013	MADHIVANAN .R		28	20	20	20	88
	311820106018	SAFRIN .S		25	25	20	16	86
	311820106014	MUKSHITH . N		25	24	20	15	84
6.	311820106030	NAYEEM	Collision avoidance and safety measures in Electric vehicle.	26	25	20	16	87
	311820106007	POOSATHISH KUMAR		27	20	20	19	86
	311820106007	GIRISH		26	28	20	18	92
	311820106003	FOUZIA JABEEN .		26	28	20	15	89
				24	24	20	14	82

HOD/ECE

SUBJECT INCHARGE  
 Miji Mwi



DEPARTMENT OF ECE  
IOT USING ARDUINO- ASSESMENT I  
IV YEAR

S.No	Reg. No.	Name of the Students	Marks (30)
1	311820106001	ABINAYA K	21
2	311820106002	ABITHA B	20
3	311820106003	AFLAL AHAMED M	28
4	311820106004	AHMAD SYED SEMAR	29
5	311820106005	AMUDESHWARAN S	28
6	311820106006	BASHARATHULLA A	21
7	311820106007	CAROL PERSY N	27
8	311820106009	JANANI E	23
9	311820106010	JASEEM MOHAMED P	27
10	311820106011	KISHORE S	29
11	311820106013	MADHIVANAN R	27
12	311820106014	MOHAMED MUKSHITH N	23
13	311820106016	NIRMAL K	27
14	311820106017	POOSATHISHKUMAR M	22
15	311820106018	SAFRIN S	20
16	311820106020	SATHESH KUMAR V	22
17	311820106021	SHAHROUKH FAKRUDEEN K	29
18	311820106022	SHAIK ABDULLA A	28
19	311820106025	THANVEER SHERIFF	21
20	311820106301	BALA KRISHNAN.S	22
21	311820106302	FOUZIA JABEEN S P	20
22	311820106303	GIRISH .R	22
23	311820106305	KAMAL.D	20
24	311820106306	MOHAMED NAYEEM B	21
25	311820106702	KISHORE.R	21

*[Signature]*  
CLASS ADVISOR

*[Signature]*  
HOD/ECE  
21/11/23

*[Signature]*  
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No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.



DEPARTMENT OF ECE  
IOT USING ARDUINO- ASSESMENT II  
IV YEAR

S.no	Reg. No.	Name of the Students	Marks (25)
1	311820106001	ABINAYA K	21
2	311820106002	ABITHA B	17
3	311820106003	AFLAL AHAMED M	21
4	311820106004	AHMAD SYED SEMAR	AB
5	311820106005	AMUDESHWARAN S	AB
6	311820106006	BASHARATHULLA A	21
7	311820106007	CAROL PERSY N	20
8	311820106009	JANANI E	19
9	311820106010	JASEEM MOHAMED P	20
10	311820106011	KISHORE S	AB
11	311820106013	MADHIVANAN R	20
12	311820106014	MOHAMED MUKSHITH N	20
13	311820106016	NIRMAL K	20
14	311820106017	POOSATHISHKUMAR M	22
15	311820106018	SAFRIN S	22
16	311820106020	SATHESH KUMAR V	22
17	311820106021	SHAHRUKH FAKRUDEEN K	25
18	311820106022	SHAIK ABDULLA A	20
19	311820106025	THANVEER SHERIFF	21
20	311820106301	BALA KRISHNAN.S	22
21	311820106302	FOUZIA JABEEN S P	22
22	311820106303	GIRISH .R	22
23	311820106305	KAMALI.D	21
24	311820106306	MOHAMED NAYEEM B	22
25	311820106702	KISHORE.R	22

*[Signature]*  
CLASS ADVISOR

*[Signature]*  
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No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

*[Signature]*  
HOD/ECE  
21/11/23

Name with Designation : S. Priyadharshini AP/ECE.

Department : ECE.

Branch : BE.

Academic Year / Semester : 2023 - 2024.

Subject Code & Title : IVA067 IoT using Arduino

Type of Subject : Theory cum Practical / Practical ✓

Date of Reopening : 24/7/23.

Last Working Day : 17/11/23.

Total Allocated Periods : 45

Total Conducted Periods : 45

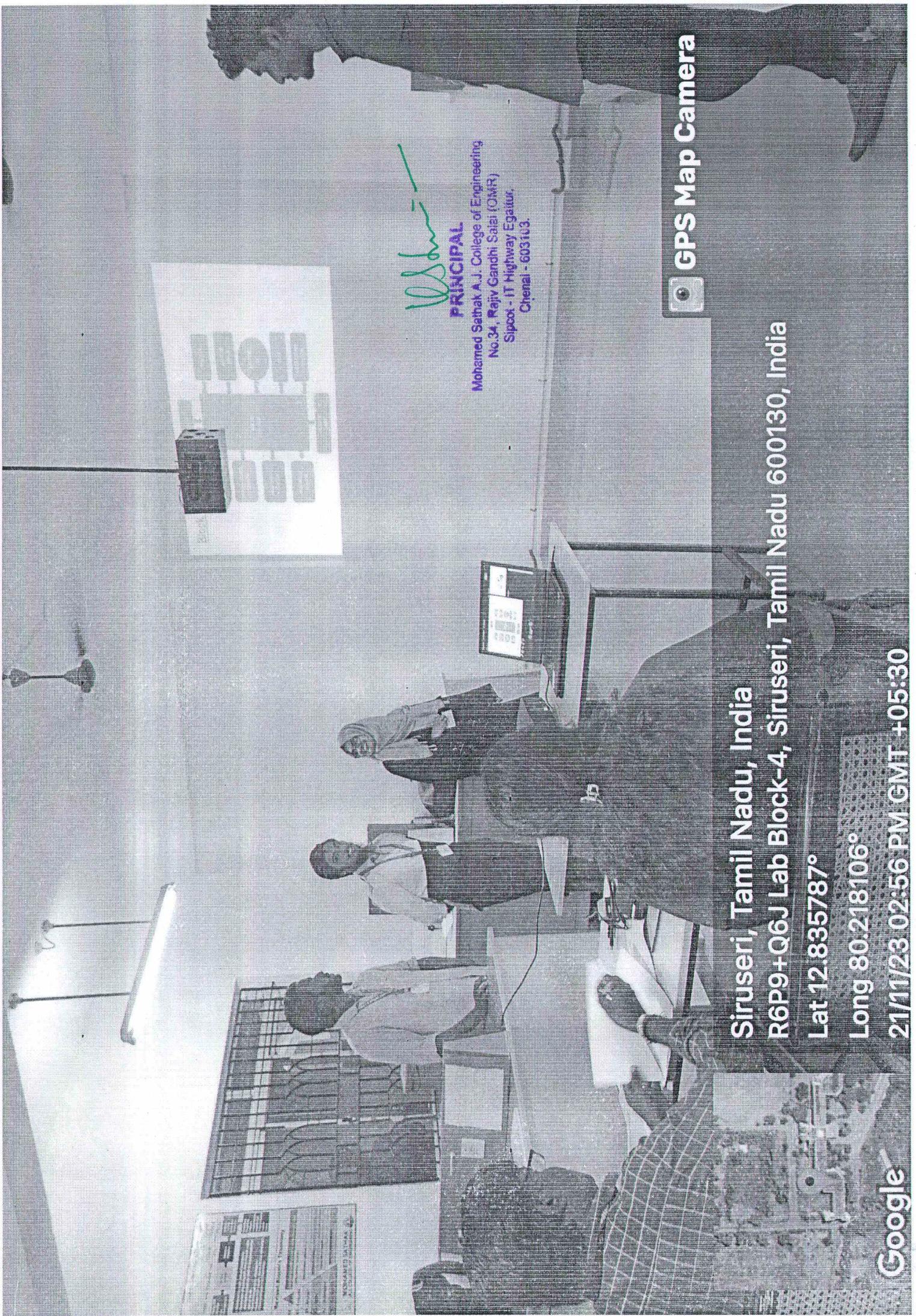
**Assessment Details**

Assessment	Assessment Conducted on	No. of Students			Pass %	Remarks
		Total	Passed	Failed		
I	23/9/2023	25	25	-	100%	-
II	17/10/2023	25	22	03	88%	3 students were absent

**Class Timetable**

Periods	1	2	3	4	5	6	7	8
Time								
Monday								
Tuesday			← VAC IOT →					
Wednesday								
Thursday								
Friday								

  
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 **GPS Map Camera**

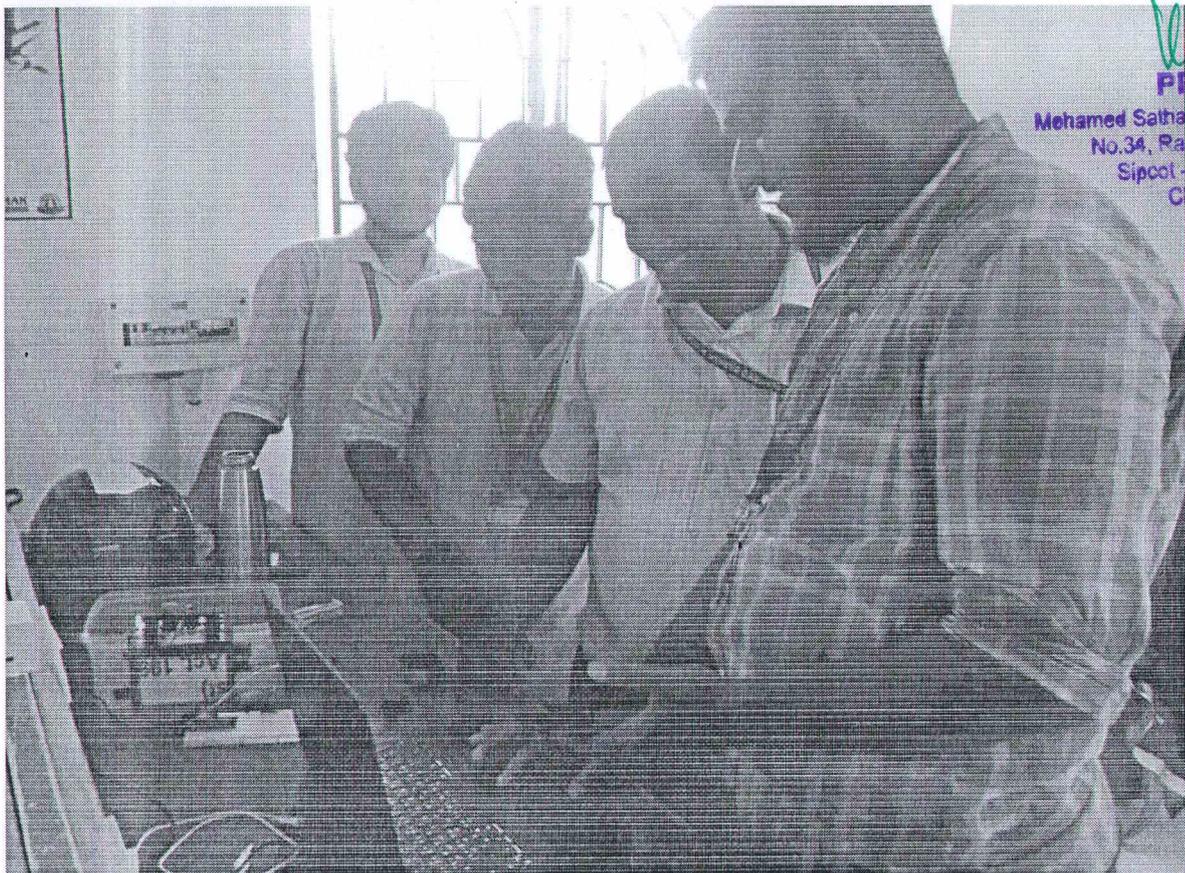
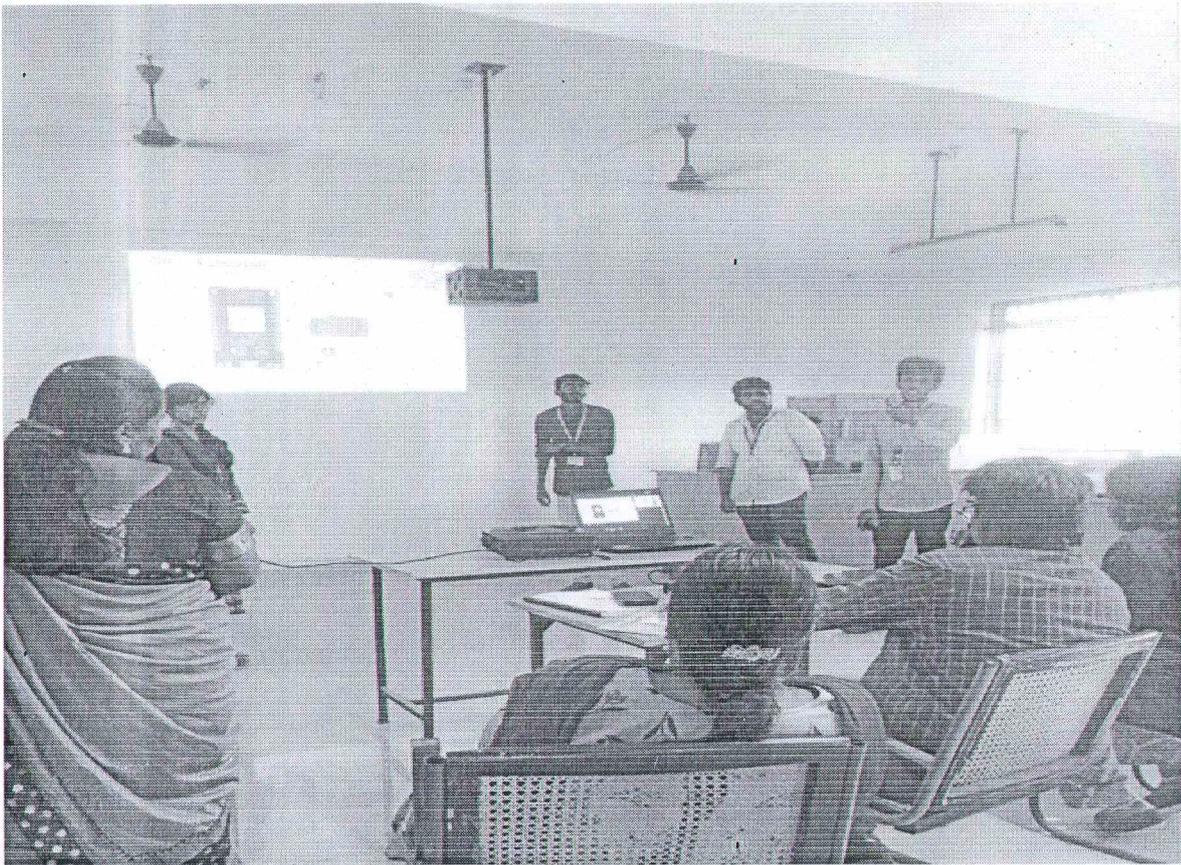
**Siruseri, Tamil Nadu, India**  
**R6P9+Q6J Lab Block-4, Siruseri, Tamil Nadu 600130, India**

**Lat 12.8335787°**

**Long 80.218106°**

**21/11/23 02:56 PM GMT +05:30**

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Chennai - 603103.

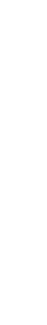
**ANNA UNIVERSITY :: CHENNAI - 600025.**  
**OFFICE OF THE CONTROLLER OF EXAMINATIONS**  
**Provisional Results of Nov. / Dec. Examination, 2023.**

Inst.Code/Name : 3118 - MOHAMMED SATHAK A.J.COLLEGE OF ENGINEERING Semester No. : 07 DATE OF PUBLICATION :23-04-2024

Branch : 106-B.E. Electronics and Communication Engineering

Reg. Number	Subject Code ->	EC8701	EC8702	EC8711	EC8751	EC8761	EC8791	IVA067	OMF751	SB8056
	Stud. Name	Grade								
311819106001	AHAMED ALI H						U		B	
311819106012	MOHAMMED ASIF A						B			
311819106013	MOHAMMED TAHEER R	U					U			
311819106022	SYED AAKHIB MOHAMMED I	U								
311819106301	NAVINASH S	B					U			
311819106303	SALMAN S		B							
311820106001	ABINAYA K	B+	A	O	A	O	B	B	A	A+
311820106002	ABITHA B	B	A	O	B+	O	B	B	B+	A+
311820106003	AFLAL AHAMED M	B+	B+	A	B+	O	B	B	B+	A+
311820106004	AHMAD SYED SEMAR	B	B	A+	B	A+	U	B	B	A+
311820106005	AMUDESHWARAN S	B	U	A+	B+	A+	U	B	B+	A+
311820106006	BASHARATHULLA	B	U	A+	U	O	U	B+	A	O
311820106007	CAROL PERSY N	B	B	A+	U	A+	B	B	B+	A+
311820106009	JANANI M.E	B+	B	A+	B	A+	B+	B	B+	A+
311820106010	JASEEM MOHAMED P	B	B	B	B	B+	U	U	A	A
311820106011	KISHORE S	B	B	A+	B+	A+	B	B	B+	A+
311820106013	MADHIVANAN R	B	B+	A+	B+	A+	B	B	A	O
311820106014	MOHAMED MUKSHITH N	B+	B	A+	B+	O	U	B+	A	O
311820106016	NIRMAL K	B+	B	B+	B	A	B	B	B+	A+
311820106017	POOSATHISH KUMAR M	B	B+	A+	B	O	B	B	A	A+
311820106018	SAFRIN S	B	B	A+	B+	A+	B	B	B+	A+
311820106020	SATHESH KUMAR V	B+	A	O	B	O	B+	B	B+	O
311820106021	SHAHIRUKH FAKRUDEEN K	B	B+	O	B	O	B	B	A+	O
311820106022	SHAIK ABDULLA A S	U	B	O	B	O	U	B	B	A+
311820106025	THANVEER SHERIFF A	U	B	B	U	A	U	B	U	A
311820106301	BALAKRISHNAN S	U	UA	B	U	B+	U	U	U	A
311820106302	FOUZIA JABEEN S P	B	B	B	U	A+	U	B	B+	A+
311820106303	GIRISH R	U	U	B	U	A	U	B	B+	A+
311820106305	KAMALI D	U	U	A+	U	A+	U	B	A	A+
311820106306	MOHAMED NAYEEM B	U	U	O	U	O	B	B+	A	O
311820106702	KISHORE R	U	U	B	U	B+	U	B	A	A

  
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Attendance Sheet									
Date & Time:		Batch ID		JKFIL/2023-2024/MDU-1/Automotive/002					
Name & Address Of The Assessing Body				O.Gokulan, No.12/11.Ganapathy Nagar, Kadachanendhal, Alagar Kovil Main Road, Madurai, Tamilnadu					
Name Of The Training Provider				MSA/ICE					
Course Name				NIL					
Course Name				VLSI Design					
Training Start date									
S.NO	Student ID	Aadhar ID	Student Name	Father Name	Address	Training End Date	Signature		
1	311821106007	5202 7253 1687	Chithra S	Suresh	No.3/290 Mangala vinayagar Kovil street, thirusulam				
2	311821106006	6150 6013 6430	Bhavani H	S.Hari	2/263 Arignar Anna Street karapakkam chennai-97				
3	311821106024	926276164277	Nandhini K	S.Kathavarayan	No. 51 Nathakollal metu Street, Kodanagar, cheyyar				
4	311821106027	643803680839	Safia Farheen Z R	Zakir Khan PB	114 ICIA, TKM road, Melamaiyur, vedha complex, vallam				
5	311821106013	7541 1159 9043	Humaira Nusrath	Humaira Nusrath	Old No.61/2, New no.106, bazar road 4th lane, Mylapore, Chennai				
6	311821106031	7360 1900 5015	Sovndharya G	K.Gangadharan	31/104, Canal Bank road, ganithi nagar, Adyar, chennai-600020				
7	311821106036	645494634069	Venkatesh S	D.R.Shanmugam	No.12, A block, parthasarathy Nagar, old washermenpet, Chennai -21				
8	311821106004	627885075574	Ariharan	Annadurai	Kotheadavilagam, North Street, Srimusnam Ik, Cuddalore dt				
9	311821106020	780856575594	Mohammed Aathif	Munal	Pallivasal street				

Signature of the Inspection officer: M. Saravanan Kumar. TIE, I

  
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 (Co-ordinator)  
 M. Saravanan Kumar

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Siruseri IT park, OMIR, Chennai - 603103

LESSON PLAN							
Department Electronics and Communication Engineering							
Name of the Subject	TCC - Foundation Course in VLSI Design	Name of the handling Faculty	M Kamarajan				
Subject Code	VLSI-TCC	Year / Sem	III/V				
Acad Year	2023-2024	Batch	2021-2025				
Course Objective							
To learn fundamental principle of universal gate, knowledge of Combinational and Sequential Circuit design							
To understand the principle of digital VLSI Technology, design rules, fabrication process and structure of transistors							
To understand the digital CMOS design							
To understand the hardware modeling using Verilog							
To Design and Simulate a Universal gates, Combinational and Sequential logic circuits in Verilog							
Course Outcome							
CO1	Understand the design of combinational and sequential circuits						
CO2	Understand the design cycle of VLSI Technology, Structure and fabrication process						
CO3	Describe the Design layout rules and Inverter design						
CO4	Write a HDL code, abstraction level basic programming and creating test bench						
CO5	Design, Simulate and Synthesize a Verilog modeling of Logic gates, Combinational and Sequential Logic Circuit using a tool Xilinx						
Lesson Plan							
Sl. No.	Topic(s)	T / R*	Periods Required	Mode of Teaching (BB / PPT / NPTEL / MOOC / etc.)	Blooms Level (L1-L6)	CO	PO
		Book					
UNIT I INTRODUCTION TO DIGITAL ELECTRONICS							
1	Numbers System and Logic gates	T1	1	BB, PPT	L2	CO1	PO1-PO3
2	Latches and Flip Flops	T1	1	BB, PPT	L2	CO1	PO1-PO3
3	Combinational Logic circuit design	T1	1	BB, PPT	L2	CO1	PO1-PO3
4	Sequential Logic Circuit Design	T1	1	BB, PPT	L2	CO1	PO1-PO3
UNIT II-BASICS OF DIGITAL VLSI TECHNOLOGY							
5	History of VLSI and Introduction to family of transistor	T1	1	BB	L2	CO2	PO1-PO3
6	Basics of CMOS Transistor	T1	1	BB	L2	CO2	PO1-PO3
7	MOSFET Fabrication Process	T1	1	BB, PPT	L2	CO2	PO1-PO3
8	Inverter and VLSI Designflow, Introduction to ASIC & FPGA	T1	1	BB	L2	CO2	PO1-PO3
UNIT III- FABRICATION PROCESS AND LAYOUT DESIGN RULES							
9	Fabrication Process and Layout Design Rules	T1	1	BB	L2	CO3	PO1-PO3
10	Introduction to Fabrication Process and CMOS Technology	T1	1	BB, PPT	L2	CO3	PO1-PO3
11	CMOS Inverter Fabrication Process	T1	1	BB	L2	CO3	PO1-PO3
12	Layout Design rules	T1	1	BB	L2	CO3	PO1-PO3
13	Semi custom Design Flow	T1	1	BB	L3	CO3	PO1-PO3
14	Full Custom Design flow	T1	1	BB	L3	CO3	PO1-PO3
UNIT IV DIGITAL CMOS DESIGN							
15	CMOS Inverter basics and characteristics	T1	2	BB, PPT	L2	CO3	PO1-PO3
16	Inverter Sizing	T1	2	BB	L2	CO3	PO1-PO3
17	Inverter Design	T1	1	BB	L3	CO3	PO1-PO3
18	Other types of inverter and its Problem	T1	1	BB	L2	CO3	PO1-PO3
UNIT V HARDWARE MODELING USING VERYLOG							
19	Introduction to verylog and Programming Structure	T1	1	BB	L2	CO4	PO1-PO3
20	Level of abstraction, Data types	T1	1	BB	L2	CO4	PO1-PO3
21	Behavioural Modeling and Timing	T1	1	PPT	L2	CO4	PO1-PO3
22	Verylog Procedural assignment and functions	T1	1	BB	L2	CO4	PO1-PO3
23	Introduction to blocking and Non blocking	T1	1	NPTEL	L2	CO4	PO1-PO3
24	Verylog user defined primitives	T1	1	BB, PPT	L2	CO4	PO1-PO3
25	Writing verylog programs	T1	1	BB, NPTEL	L4	CO4	PO1-PO5, PO12
26	Writing verylog programs and Test Benches	T1	1	BB, NPTEL	L4	CO4	PO1-PO5, PO12
27	Writing verylog programs and Test Benches	T1	2	BB	L4	CO4	PO1-PO5, PO12
UNIT VI IMPLEMENTATION AND SIMULATION OF LOGIC GATES, COMBINATIONAL CIRCUIT AND SEQUENTIAL CIRCUIT							
28	Implementation of Logic gates, Universal Gates using Data flow modeling in verylog, Gate level modeling		1	BB, NPTEL	L4	CO5	PO1-PO5, PO12
29	Implementation of Combinational Circuits and Sequential circuits in Verylog		1	BB, NPTEL	L4	CO5	PO1-PO5, PO12
Text Books							
1	Jan D Rabaey, Anantha Chandrakasan, " Digital Integrated Circuits A Design Perspective", PHI, 2016						
2	Neil H E Weste, Kamran Eshraghian, " Principles of CMOS VLSI Design A System Perspective," Addison Wesley, 2009						
Website / URL References							
1	<a href="https://nptel.ac.in/courses/108103179">https://nptel.ac.in/courses/108103179</a>						
2	<a href="https://archive.nptel.ac.in/courses/106/105/106105165/">https://archive.nptel.ac.in/courses/106/105/106105165/</a>						
3	<a href="https://www.tutorialspoint.com/vlsi_design/behavioural_modelling_timing_control_in_verilog.htm">https://www.tutorialspoint.com/vlsi_design/behavioural_modelling_timing_control_in_verilog.htm</a>						
Blooms Level							
Level 1 (L1): Remembering	Lower Order	Fixed Hour	Level 4 (L4) Analyzing		Higher Order	Projects / Mini Projects	
Level 2 (L2): Understanding			Level 5 (L5) Evaluating				

*(Signature)*

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Level 3 (L3) : Applying		Thinking	Exams	Level 6 (L6) : Creating						Thinking	
Mapping syllabus with Bloom's Taxonomy LOT and HOT											
Unit No	Unit Name	L1	L2	L3	L4	L5	L6	LOT	HOT	Total	
Unit 1	INTRODUCTION TO DIGITAL ELECTRONICS	-	4	-	-	-	-	4	-	4	
Unit 2	BASICS OF DIGITAL VLSI TECHNOLOGY	-	4	-	-	-	-	4	-	4	
Unit 3	FABRICATION PROCESS AND LAYOUT DESIGN	-	4	2	-	-	-	6	-	6	
Unit 4	DIGITAL CMOS DESIGN	-	3	1	-	-	-	3	1	4	
Unit 5	HARDWARE MODELING USING VERYLOG	-	6	-	4	-	-	6	4	10	
Unit 6	XILLINK IMPLEMENTATION	-	-	-	2	-	-	-	2	2	
Total			21	3	6			23	7	30	
Total Percentage		0.00	0.70	0.10	0.20	0.00	0.00	76.00	24.00	100.00	

CO PO Mapping														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	2	-	-	-	-	-	-	-	-	-	1	1
CO2	3	2	1	-	-	-	-	-	-	-	-	-	1	1
CO3	3	2	2	-	-	-	-	-	-	-	-	-	2	1
CO4	3	2	1	-	3	-	-	-	-	-	-	1	2	2
CO5	3	3	3	-	3	-	-	-	-	-	-	1	2	2
Avg	3	2	2	-	3	-	-	-	-	-	-	1	2	1

Justification for CO-PO mapping	
CO1	Strong correlation for PO1, medium correlation for PO2, PO3 is given as the CO1 can be used to apply knowledge of engineering to identify, formulate, design and solve the problems Basic design of electronic circuits PSO1 and PSO2 is needed designing circuits
CO2	Strong correlation for PO1, medium correlation for PO2 and less PO3 is given as the CO2 can be used to apply knowledge of engineering to analyse the performance Basic design of electronic circuits PSO1 and PSO2 is needed designing circuits
CO3	Strong correlation for PO1, medium correlation for PO2 and less PO3 is given as the CO3 can be used to apply knowledge of engineering to analyse the performance s Medium correlation for PSO1 is given as VLSI process
CO4	High correlation for PO1, less correlation of PO2, PO3 is given as the CO4 can be used to apply knowledge of engineering to identify, formulate and analyse the circuits Use of modern techniques and design tools PO5 Medium correlation for PSO1 and PSO2
CO5	High correlation for PO1, PO2, PO3 to design, develop and provide solutions by using modern tools PO5 for developing VLSI technology, life long learning required PO12 Medium correlation for PSO1 and PSO2
3	High level
2	Moderate level
	Low level

Name & Sign of Faculty Incharge : N. K. Manojam J. G. M.  
Name & Sign of Subject Expert :  
Head of the Department : Dr I Manju I. Manju

Format No : 231

  
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Mohamed Sathack AJ Colleg of Engineering

Siruseri, Chennai-603103

Department of Electronics and Communication Engineering

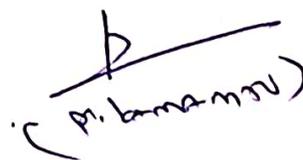
**TCC-Fountation Course in VLSI Design**

**Pratical Question Paper**

1. Write a verylog code for logic gates using gate level modeling and simulate using tool Xillink
2. Design, Simulate and Synthesize a D Flip –Flop and T Flip –Flop using tool Xillink
3. Design, Simulate and Synthesize a J-K Flip –Flop and T Flip –Flop using tool Xillink
4. Design, Simulate and Synthesize a Half adder using tool Xillink
5. Design, Simulate and Synthesize a Full adder using tool Xillink
6. Write a Verilog code for full adder using two half adder and simulate using tool Xillink
7. Write a Verilog code for full Subtractor and simulate using tool Xillink
8. Design an Multiplexer using HDL.Simulate it using tool Xilinx
9. Design, Simulate and create a layout of CMOS inverter using tool DSCH and Micro wind
- 10.Design, Simulate and create a layout of NAND gate using tool DSCH and Micro wind



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(P. bama nsv)

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**TCC-Fountation Course in VLSI Design**

1. The output of combinational circuit changes

a) Continuously with time

b) At regular intervals

c) In response to clock signals

**d) Instantaneously with input changes**

2. For what combinations of the inputs D and EN will a D latch reset?

a. D = LOW, EN = LOW

**b. D = LOW, EN = HIGH**

c. D = HIGH, EN = LOW

d. D = HIGH, EN = HIGH

3. Latches constructed with NOR and NAND gates tend to remain in the latched condition due to which configuration feature?

a. Asynchronous operation

b. low input voltage

c. gate impedance

**d. cross coupling**

4. NMOS devices are formed in

a) p-type substrate of high doping level

b) n-type substrate of low doping level

**c) p-type substrate of moderate doping level**

d) n-type substrate of high doping level



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5.nMOS is

- a) donor doped
- b) acceptor doped**
- c) all of the mentioned
- d) none of the mentioned

6. Inversion layer in enhancement mode consists of excess of

- a) positive carriers
- b) negative carriers**
- c) both in equal quantity
- d) neutral carriers

7.In MOS transistors, is used for their gate

- a) metal
- b) silicon-di-oxide
- c) polysilicon**
- d) gallium

8. \_\_\_\_\_ is used to deal with effect of variation

- a) chip level technique
- b) logic level technique
- c) switch level technique
- d) system level technique**

9..Architecture is used to design VLSI is \_\_\_\_\_

- a) system on a device
- b) single open circuit
- c) system on a chip**
- d) system on a circuit



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10. The design flow of VLSI system is

1. architecture design
2. market requirement
3. logic design
4. HDL coding

a) 2-1-3-4

b) 4-1-3-2

c) 3-2-1-4

d) 1-2-3-4

11. Physical and electrical specification is given in

- a) architectural design
- b) logic design
- c) system design
- d) **functional design**

12. nMOS fabrication process is carried out in a

- a. **thin wafer of a single crystal**
- b) thin wafer of multiple crystals
- c) thick wafer of a single crystal
- d) thick wafer of multiple crystals

13. Interconnection pattern is made on

- a) polysilicon layer
- b) silicon-di-oxide layer
- c) **metal layer**
- d) diffusion layer

14. P-well doping concentration and depth will affect the

- a) **threshold voltage**
- b)  $V_{ss}$
- c)  $V_{dd}$

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Department of Electronics and Communication Engineering

Technology Centre for E-yantra: Embedded & Robotics

Student Namelist – Academic Year:2023-2024

1.2.2

ELE TLL

Course Name: Internet of Things (IoT)

S. No	Name of the Student	Department
1.	Sulaiman H	CSE
2.	Yazar Arafath A	CSE
3.	Hassan	CSE
4.	Muhasin Ahamed A	IT
5.	Rakshita R	IT
6.	Abubacker Sideeq SM	IT
7.	Afsal.I	IT
8.	Dhanush Adithya S	MECH
9.	Udhayakumar.G	MECH
10.	Abinaya V	ECE
11.	Abdul Baasit A	ECE
12.	Mohamed Yahya N.I	ECE
13.	Kishore.D	ECE
14.	Sahul hameed T	ECE
15.	Dhinesh.C	ECE
16.	J.Jayasudhan	ECE
17.	Anish kumar.K	ECE
18.	Gopi.K	ECE
19.	Gajendiran.R	ECE
20.	Maheswaran.R	ECE
21.	Karthikeyan.S	ECE
22.	Majithul Hikkum	ECE
23.	Sarfan S.A	EEE
24.	Thiyagu.A	EEE
25.	Karthick.A	EEE
26.	Santhosh Kumar V	EEE

  
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Internet of Things (ACY 2023-2024 ODD)				
STUDENTS NAME LIST				
S.No	Register No	Name of Student	Year/Sem	Status of completion
1	311821106002	Abinaya V	III/V	Qualified
2	311821106016	R Maheswaran	III/V	Qualified
3	311821106001	A.Abdul Baasit	III/V	Qualified
4	311821106019	N.I Mohamed Yahya	III/V	Qualified
5	311821106015	Kishore.D	III/V	Qualified
6	311821106304	Sahul Hameed T	III/V	Qualified
7	311821106008	Dhinesh.C	III/V	Qualified
8	311821106014	J.Jayasudhan	III/V	Qualified
9	311821106003	K.Anish kumar	III/V	Qualified
10	311821106303	Karthikeyan.S	III/V	Qualified
11	311821106018	Majithul Hikkum.N.A	III/V	Qualified
12	311821106009	R.Gajendiran	III/V	Qualified
13	311821106010	Gopi.K	III/V	Qualified

  
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34. Rajiv Gandhi Salai (OMR). Siruseri IT Park, Chennai - 603 103.



## CERTIFICATE — OF COMPLETION —

This is to certify that Mr. / Ms Abinaya V III ECE student of  
Mohamed Sathak A J College of Engineering, Chennai has successfully Completed the Technology Centre  
Course on " Foundation of IoT " from 02nd August 2023 to 25th October 2023 Conducted by Centre for  
E-yantra: Embedded and Robotics, Department of Electronics and communication engineering.

**Mr.M.Ashok kumar**  
Course coordinator

**Dr. I. Manju**  
Head - IQAC & HoD/ECE

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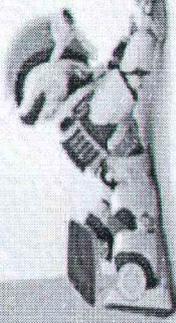
**Dr. K.S. Srinivasan**  
Principal





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**Mr.M.Ashok kumar**  
Course coordinator

**Dr. I. Manju**  
Head - IQAC & HoD/ECE

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**Dr. K.S. Srinivasan**  
Principal





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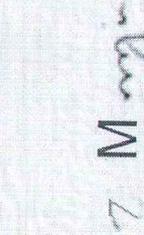
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**Dr. I. Manju**  
Head - IQAC & HoD/ECE

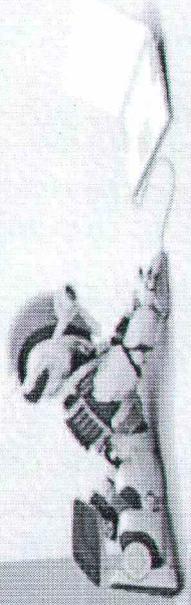
**Dr. K.S. Srinivasan**  
Principal





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**Mr. M. Ashok kumar**  
Course coordinator

7 M  
**Dr. I. Manju**

Head - IQAC & HoD/ECE

**PRINCIPAL**  
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No.34, Rajiv Gandhi Salai (OMR)  
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**Mr.M.Ashok kumar**  
Course coordinator

**Dr. I. Manju**  
Head - IQAC & HoD/ECE

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This is to certify that Mr. / Ms Karthikeyan. S III ECE student of Mohamed Sathak A J College of Engineering, Chennai has successfully Completed the Technology Centre Course on " Foundation of IoT " from 02nd August 2023 to 25th October 2023 Conducted by Centre for E-yantra: Embedded and Robotics, Department of Electronics and communication engineering.

  
**Mr.M.Ashok kumar**  
Course coordinator

  
**Dr. I. Manju**  
Head - IQAC & HoD/ECE

  
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This is to certify that Mr. / Ms N.Majithul Hikku III ECE student of Mohamed Sathak A J College of Engineering, Chennai has successfully Completed the Technology Centre Course on " Foundation of IoT " from 02nd August 2023 to 25th October 2023 Conducted by Centre for E-yantra: Embedded and Robotics, Department of Electronics and communication engineering.

*(Signature)*

**Mr.M.Ashok kumar**  
Course coordinator

*(Signature)*

**Dr. I. Manju**  
Head - IQAC & HoD/ECE

*(Signature)*

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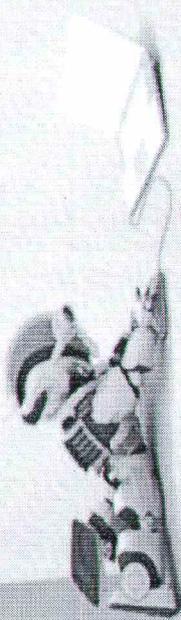
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**Mr.M.Ashok kumar**  
Course coordinator

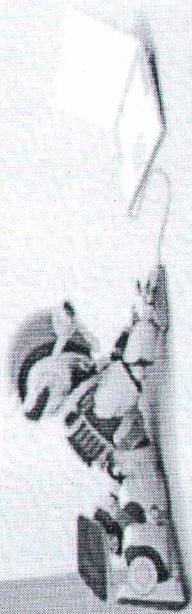
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Head - IQAC & HoD/ECE

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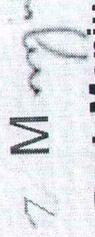
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**Mr.M.Ashok kumar**  
Course coordinator

  
**Dr. I. Manju**  
Head - IQAC & HoD/ECE

  
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**Dr. K.S. Srinivasan**  
Principal



**Program Educational Objectives (PEO)**

- PEO1: Graduates will be Prepared for designing Electronics and Communication Components and Systems with Creativity and Sustainability.
- PEO2: Graduates will be Skilled in the use of modern tools for Critical Problem Solving and analyzing industrial and Societal requirements.
- PEO3: Graduates will be Prepared with managerial and Leadership skills for Career and starting up own firms.

**Program Specific Outcome (PSO)**

- Engineering graduates will be able to
- PSO1: Apply the acquired knowledge in analyze, develop and test Creative Solution for Electronics and Communication Systems and its Application.
- PSO2: Provide cost effective and eco-friendly Solutions for Real Time Problems of Industrial and societal needs using Embedded & IoT tools.

**Course Outcome (CO)**

**Personal Timetable**

Periods	1	2	3	4	5	6	7	8
Time	8:15-9:05 9:05-9:55	9:05-9:55	10:10-11:00 11:00-12:40	11:00-11:50 11:50-12:40	11:50-12:40	1:40-2:30 2:30-3:20		
Monday						IIOT		
Tuesday			IIOT				Embedded IoT Lab	
Wednesday	EA IoT			TRC-IOT			IIOT LAB	
Thursday	IIOT				EA IoT			
Friday				EA IoT				

**Class Timetable**

Periods	1	2	3	4	5	6	7	8
Time	8:15-9:05 9:05-9:55	9:05-9:55	10:10-11:00 11:00-12:40	11:00-11:50 11:50-12:40	11:50-12:40	1:40-2:30 2:30-3:20		
Monday	WC	IP	TRF	VLSI	TLRF	IIOT	WC	
Tuesday	VLSI	LPIC	IIOT	MC	TRF	LPIC LAB		
Wednesday	IP	LPIC		TCC		IIOT LAB		
Thursday	IIOT	TRF	IP	WC	MC	VLSI LAB		
Friday	VLSI	WC	IP	VLSI	TRF	WC LAB		

Learners	Medium		Gender		Stay
	Tamil (TM)	English (EM)	Boys	Girls	
Slow					
Average					
Advance					
Day scholar					
Hostler					
Day scholar			24	02	

  
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 Sipcot - IT Highway Egattur,  
 Chennai - 603103.

S. No.	Register Number	Students Name	Profile			Class	1	2	3	4	5	6	7	8	9	10
			Arrears	CGPA	Hostel / DS / OB	Month	08	08	08	08	08	09	09	10	10	10
						Date	02	09	16	23	30	20	27	4	11	25
						Period	3,4,5	3,4,5	3,4,5	3,4,5	3,4,5	3,4,5	3,4,5	3,4,5	3,4,5	3,4,5
		<b>CSE</b>														
1	311821104005	Sulaiman H				/	AB	/	OD	/	/	/	/	/	/	AB
2	311821104061	Yasare Arafath A				AB	AB	AB	OD	/	/	/	A	/	AB	
		<b>ECE</b>														
4	311821106002	Alimoya V				/	/	/	/	/	/	/	/	/	/	AB
5	311821106016	Maheswaran R				/	/	/	/	/	/	/	/	/	/	
6	311821106001	Abdul Basit A				/	/	/	/	/	/	/	A	/	/	
7	311821106019	Md. Yahya N T				AB	/	/	/	/	/	/	A	/	AB	
8	311821106015	Kishore D				/	/	/	/	/	/	/	A	/	AB	
9	311821106304	Rahul Hameed T				/	AB	/	/	/	/	/	/	/	/	
10	311821106008	Dhinesh C				/	/	/	/	/	/	/	A	/	AB	
11	311821106014	Jayasudhan T				/	/	/	/	/	/	/	A	/	AB	
12	311821106303	Karthikeyan S				/	/	/	/	/	/	/	A	/	/	
13	311821106003	Anish Kumar K				/	/	/	/	/	/	/	A	/	/	
14	311821106010	Gopi K				/	/	/	/	/	/	/	/	/	/	
15	311821106009	Gajendran R				/	/	/	AB	/	/	/	/	A	/	
16	311821106017	Majithul Hikrum				-	/	/	/	/	/	/	A	/	AB	
		<b>MECH</b>														
18	311821114003	Ahamushadithya				/	/	/	/	/	A	A	A	/	/	
19	311821114018	Udaya Kumare				AB	/	/	/	/	/	/	/	A	/	
		<b>IT</b>														
21	311821105091	Muhasin Ahamed					AB	/	/	/	/	/	A	/	/	
22	311821105001	Alubaker Sideeq				AB	/	/	/	/	/	/	A	/	/	
23	311821105046	Rakshita				AB	/	/	/	/	/	/	A	/	/	
No. of absentees						6	7	2	3	4	1	1	12	2	8	
Signature of the faculty member																



**Department of Electronics and Communication Engineering**  
**Technology Centre for E-yantra: Embedded & Robotics**

**Syllabus: Internet of Things (IoT)**

**Objective:**

The objective of this course is to impart necessary and practical knowledge of components of Internet of Things and develop skills required to build real-life IoT based projects

**Module 1: IoT Introduction Sensors & Actuators**

9

IoT Architecture, Physical & Logical IoT design Basics, IoT Enabling Technologies, IoT Stack, IoT Applications, Sensor working, Sensor Characteristics, Types of sensors and working principle Sensors used in IoT

**Module 2: IoT Hardware platforms**

9

IoT Hardware platforms Specifications and interfaces Serial Communication Protocols Arduino IDE Arduino Programming Interfacing various sensors, modules and devices to Arduino, Python program with Raspberry PI with focus on interfacing external gadgets, controlling output, reading input from pins.

**Module 3: Networking Fundamentals & Wireless for IoT**

9

TCP/IP Basics, IPV6, Network devices & configurations, Web servers & Socket programming, Overview of Wireless Sensor Networks., IEEE standards for IoT, Overview of Wireless Modems (RF, GSM/GPRS, Bluetooth, RFID, Wi-Fi etc.), NodeMCU and ESP32.

**Module 4: IoT Protocols**

9

IoT Protocol overview, MQTT, COAP, HTTP/HTTPS, 6lowpan, UART Communication Protocol, I2C Protocol device interfacing and decoding of signal, SPI Protocol device interfacing and decoding of signal, WIFI and Router interfacing, Ethernet Configuration, Bluetooth study and analysis of data flow, Zigbee Interfacing and study of signal flow.

**Module 5: Cloud platforms for IoT & Applications development**

9

IoT dashboards - Introduction to various cloud platforms, Device and data management from Cloud Platforms, Uploading data from hardware platforms to cloud, Development of IoT Applications – Home Automation – Smart Agriculture – Smart Cities – Smart Healthcare.

  
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Chennai - 603103.

**Total: 45 Hours**

## LIST OF PRACTICAL EXERCISES:

1. i) Write a program to control Servo Motor (0 to 180 degree and 180 to 0 degree) using Arduino with Tinkercad simulator.  
ii) Write a program to control LED using Serial Input (using text) and Arduino with Tinkercad simulator
2. To interface LED/Buzzer with Arduino/Raspberry Pi and write a program to turn ON LED for 1 sec after every 2 seconds.
3. To interface Push button / Digital Sensor (IR/LDR) with Arduino/Raspberry Pi and write a program to turn ON LED when push button is pressed or at sensor detection.
4. To interface DHT11 Sensor with Arduino/Raspberry Pi and write a program to print temperature and humidity readings.
5. To interface motor using relay with Arduino/Raspberry Pi and write a program to turn ON Motor when push button is pressed.
6. To interface OLED with Arduino/Raspberry Pi and write a program to display temperature and humidity readings on it.
7. To interface Bluetooth with Arduino/Raspberry Pi and write a program to send sensor data to smartphone using Bluetooth.
8. To interface Bluetooth with Arduino/Raspberry Pi and write a program to turn LED ON/OFF when "1/0" is received from smartphone using Bluetooth.
9. Write a program on Arduino/Raspberry Pi to upload temperature and humidity data to Adafruit IO Cloud.
10. Write a program to create web server with DHT11 on Arduino/Raspberry Pi to display temperature and humidity readings.
11. Write a program to create web socket on Arduino/Raspberry Pi to control LED turn ON/OFF.
12. Write a program to control Stepper motor using Google Assistance with IFTTT.
13. Write a program to control LED turn ON/OFF from Anywhere (Firebase Web App)
14. Write a program to Stepper control motor from Android App (MIT App Inventor)



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**Department of Electronics and Communication Engineering**  
**Technology Centre for E-yantra: Embedded & Robotics**

**Syllabus: Internet of Things (IoT)**

**Syllabus Competition Status**

Module No	Title	Status
1.	IoT Introduction Sensors & Actuators	100%
2.	IoT Hardware platforms	100%
3.	Networking Fundamentals & Wireless for IoT	50%
4.	IoT Protocols	-
5.	Cloud platforms for IoT & Applications development	-

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**Department of Electronics and Communication Engineering**  
**Technology Centre for E-yantra: Embedded & Robotics**

**Syllabus: Internet of Things (IoT)**

**List of Activity Conducted**

1. Write a program to control Servo Motor (0 to 180 degree and 180 to 0 degree) using Arduino.
2. To interface LED/Buzzer with Arduino and write a program to turn ON LED for 1 sec after every 2 seconds.
3. To interface DHT11 Sensor with Arduino and write a program to print temperature and humidity readings.
4. To interface LAMP using relay with Arduino and write a program to turn ON and OFF.
5. To interface Bluetooth with Arduino and write a program to turn LED ON/OFF when "1/0" is received from smartphone using Bluetooth.
6. Write a program to create web server on NodeMCU- ESP8266 to control Lamp turn ON/OFF.

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**Department of Electronics and Communication Engineering**  
**Technology Centre for E-yantra: Embedded & Robotics**

**Syllabus: Internet of Things (IoT)**

**Questions**

1. To write a program and execute to control Servo Motor (0 to 180 degree and 180 to 0 degree) using Arduino.
2. To write and execute an interface LED/Buzzer with Arduino and write a program to turn ON LED for 1 sec after every 2 seconds.
3. To interface LAMP using relay with Arduino and write a program to turn ON and OFF
4. To interface DHT11 Sensor with Arduino and write a program to print temperature and humidity readings.
5. To write and execute a C++ program using a suitable Gas sensor and microcontroller for detecting LPG gas leak.
6. To develop and execute a C++ program using a suitable sensor and microcontroller to control morning alarm and night lamp.
7. To develop and execute a C++ program using a suitable microcontroller and ultrasonic sensor to accurately measure the distance between the sensor and an object.
8. To interface Bluetooth module with Arduino and write a program to turn LED ON/OFF when "1/0" is received from smartphone using Bluetooth.
9. Write a program to create web server on NodeMCU- ESP8266 to control Lamp turn ON/OFF.
10. To write and execute a C++ program using a NodeMCU-ESP8266 microcontroller to control LED ON and OFF using Adafruit IO Cloud.

**Internal Examiner**

  
**PRINCIPAL**  
Mohamed Sathak A.J. College of Engineering  
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Chennai - 603103.

**External Examiner**





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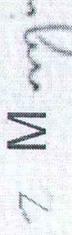
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**Mr.M.Ashok kumar**  
Course coordinator

  
**Dr. I. Manju**  
Head - IQAC & HoD/ECE

  
**PRINCIPAL**  
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Chennai - 603103.  
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Course coordinator

  
**Dr. I. Manju**  
Head - IQAC & HoD/ECE

  
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**Dr. K.S. Srinivasan**  
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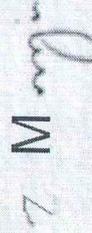


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**Mr. M. Ashok kumar**  
Course coordinator

  
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No.34, Rajiv Gandhi Salai (OMR)  
Sircoot - IT Highway Egattur,  
Chennai - 603103.

  
**Dr. I. Manju**  
Head - IQAC & HoD/ECE

**Dr. K.S. Srinivasan**  
Principal





**MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING**

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)



DEPARTMENT OF ELECTRICAL AND ELECTRONICS  
ENGINEERING

Academic Year: 2023-2024 ODD

TCC - Electric Vehicle Design

**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

VALUE ADDED COURSE - COURSE CONTENT

Department of Electrical and Electronics Engineering

Class : III Year / V Semester

Academic Year:2023 - 24

Name of the Value Added Course	Electric Vehicles	Name of the handling Faculty	Mrs. A. Gayathri
--------------------------------	-------------------	------------------------------	------------------

**Course Objective**

To present a comprehensive overview of Electric and Hybrid Electric Vehicles

To study about the working of Electric Vehicle

To impart the knowledge on energy storage devices

To learn electric vehicle drive systems

To understand the configuration of hybrid vehicle

**Course Outcome**

After completing this course, students should demonstrate competency in the following skills:

Analysis the configuration and control methods of Electric propulsion unit

Summarize the factors that control battery operational characteristics and the primary mechanisms

Describe the basic fundamentals and working principles of electric machines

Analysis the transmission characteristics and mathematical model of electric vehicles

Describe the energy management strategies used in hybrid and electric vehicles

**Lesson Plan for VAC**

Sl. No.	Topic	T / R*	Periods Required	Mode of Teaching
		Book		
	<b>Hardware</b>			
1	Hardware components used in Electric Vehicle	T1	1	BB
2	Controller Connections	T1	1	BB
3	Battery Connections	T1	1	BB
4	Motor Connections	T2	1	BB
5	Accessories Connection	T2	1	BB
6	Assembling all components to Vehicle	T2	1	BB

  
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 SIPCOT - IT Highway Egattur,  
 Chennai - 603103.

### Simulation Fundamentals for the converters in MATLAB

7	Introduction to the Matlab	T1	1	BB
8	Converters in Electric Vehicles	T1	2	BB
9	DC-DC Converter Types and uses in EV's	T1	1	BB
10	Simulation of DC-DC converter	T1	2	BB
11	AC-DC Converter Types and uses in EV's	T1	1	BB
12	Simulation of AC-DC converter	T1	2	BB
13	DC-AC Converter Types and uses in EV's	T1	1	BB
14	Simulation of DC-AC converter	T1	2	BB
15	AC-AC Converter Types and uses in EV's	T1	1	BB
16	Simulation of AC-AC converter	T1	2	BB

#### Quiz / Mini Projects / Model Developed if any

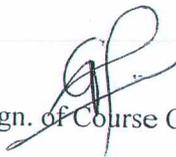
1. Quiz on Battery management system

#### Text / Reference Books

- 1 Iqbal Hussai, "Electric & Hybrid vehicles Design Fundamentals", second edition, CRC Press, 2011.
- 2 M.Ehsani, Y.Gao, S.Gay and A.Emadi, Modern Electric Hybrid electric and Fuel Cell Vehicles. CRC Press, 2015
- 3 T.Denton, "Electric and Hybrid Vehicles", Routledge, 2016

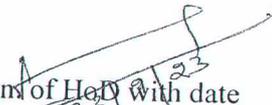
#### Website / URL References

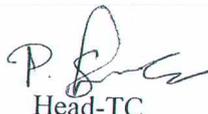
- 1 <http://youtu.be/3E1SXG7VvQk>
- 2 <https://youtu.be/WfiTscWVfWI>
- 3 <https://youtu.be/tyeSahlzt3Y>

  
Sign. of Course Coordinator

  
**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103. Rev. No.: 1.0

  
Sign of Head-TC with date  
23/01/21  
Dr. JEHA.J

  
Head-TC  
[Dr. P. SATHANMUGASE

MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING, Chennai - 603103

TCC Assesment Attendance Sheet

Date: 22/11/2023

Total Students: 12

TCC Course: Electrical Vehicle Design

No. of Absentees: 0

S. No	Name of the Student	Marks for Assessment
1	HariHaran c	35
2	Mohamed Basil S	43
3	Thameem Ansaari	45
4	Abdul Malik J	50
5	M.Al Muhasif Rifath	45
6	SriKarthik V	50
7	Asma Fathima.P.T	45
8	A.Mohamed Izzat	45
9	Mohan raj.k	40
10	Nagaraj.B	38
11	Prasad N	50
12	M.Ahamed Sheik <i>Pillayannan</i>	Absent 45

Signature of Internal Assessor

  
**PRINCIPAL**  
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# Electric Vehicle Design Experiments



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# SYLLABUS

## Unit 1 Electrical Vehicle Design Hardware

Hardware components used in Electric Vehicle, Controller Connections, Battery Connections, Motor Connections, Accessories Connection and Assembling all Components to Vehicles

## Unit 2 Simulation Fundamentals for the converters in MATLAB

Introduction to the Matlab, Converters in Electric Vehicles, DC-DC Converter Types and uses in EV's, Simulation of DC-DC converter, AC-DC Converter Types and uses in EV's, Simulation of AC-DC converter, DC-AC Converter Types and uses in EV's, Simulation of DC-AC converter, AC-AC Converter Types and uses in EV's, Simulation of AC-AC converter

## LIST OF SUGGESTED BOOKS

1. Iqbal Hussai, "Electric & Hybrid vehicles Design Fundamentals", second edition, CRC Press, 2011.
2. M.Ehsani, Y.Gao, S.Gay and A.Emadi, Modern Electric Hybrid electric and Fuel Cell Vehicles. CRC Press, 2015
3. T.Denton, "Electric and Hybrid Vehicles", Routledge, 2016



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# LIST OF EXPERIMENTS

## LIST Of EXPERIMENTS

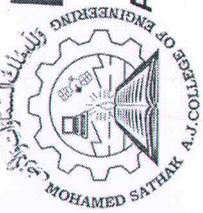
1. Simulation on DC-DC Buck Boost Converter
2. Simulation on DC-DC Boost Converter
3. Simulation on AC-DC Converter
4. Simulation on DC-DC Converter
5. Simulation on AC- AC Converter



**PRINCIPAL**

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1.2.2 JCC EEE



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## CERTIFICATE OF COMPLETION

This certificate is presented to:

**Mr. Dilliganesh A**

of EEE Department for Completion of Technological  
Centre Course "Electric Vehicle Design" from 21st August  
2023 to 8th November 2023

**Gayathri A**  
Faculty Trainer

**Dr S Devikala**  
HoD/EEE

**Dr. K S Srinivasan**  
Principal



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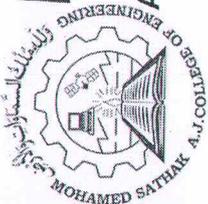
**Mr. Nagaraj B**

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Centre Course "Electric Vehicle Design" from 21st August  
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Centre Course "Electric Vehicle Design" from 21st August  
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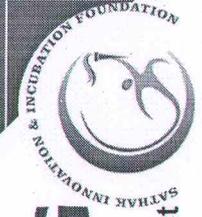
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## CERTIFICATE OF COMPLETION

This certificate is presented to:

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Centre Course "Electric Vehicle Design" from 21st August  
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Centre Course "Electric Vehicle Design" from 21st August  
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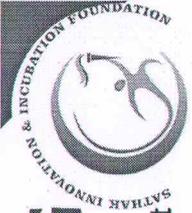
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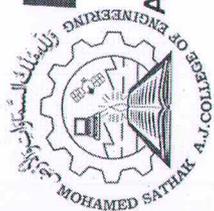
**Mr. Thameem Ansaari**

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Chennai - 603103.

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Centre Course "Electric Vehicle Design" from 21st August  
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This certificate is presented to:

**Mr. HariHaran C**

of EEE Department for Completion of Technological  
Centre Course "Electric Vehicle Design" from 21st August  
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**Gayathri A**  
Faculty Trainer

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EEE - 1.2.2

## Department of Electrical and Electronics Engineering

Academic year: 2023-2024 ODD

### Value Added Course – Electric Vehicle

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MOHAMED SATHAK A J COLLEGE OF ENGINEERING, Chennai - 603103

CONSOLIDATED REPORT OF VALUE ADDED COURSES OFFERED FOR THE PERIOD OF ODD SEM 2023

Department of Electrical and Electronics Engineering

S.No	Name of the Course	Year	Sem	Period	No.of students		Faculty Incharge
					Enrolled	Qualified	
1	Electric Vehicle	IV	VII	August 2023 to November 2023	16		Mr. C. Venkatesh
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

Course Co-ordinator

Sign. of HoD with date

Head-Technology Centers

Format No : TLP 22

Rev.No: 1.0

Rev.Date : 04.01.21

  
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 Chennai - 603103.

**B.E - ELECTRICAL AND ELECTRONICS ENGINEERING**

**REGULATION – 2017**

**CHOICE BASED CREDIT SYSTEM**

**SYLLABUS FOR VALUE ADDED COURSE**

Sl. No	Course Code	Course Title	Category	Contact Periods	L	T	P	C
1	EVA033	Electric Vehicles	EEC	2	2	0	0	2

**Objectives:**

- To present a comprehensive overview of Electric and Hybrid Electric Vehicles
- To study about the working of Electric Vehicle.
- To impart the knowledge on energy storage device.
- To learn electric vehicle drive systems.
- To understand the configuration of hybrid vehicles.

**Unit I Introduction to Electric Vehicle 6**

Introduction - History of Electric Vehicle - Benefits of Electric Vehicle - Types and its challenges - Introduction to EV Motor Drives Technologies - EV Battery Charging Technologies - Electric Vehicle to Grid Connection – Regulation and Policy

**Unit II Electrical Drive and Controller 6**

Types of DC and AC Motors – Selection of Motor – Torque and RPM Calculation – Motor Controlling Techniques – Function of Control Unit – Development Process – Hardware and Software Requirement.

**Unit III Electric Vehicle Drive Train Topologies 6**

Introduction to Drive Train I topology in Electric Vehicle – Basic Concepts of Electric Traction – Power Flow Control – Breaking Systems – Gear and Clutch Arrangement.

**Unit IV Battery Management Systems 6**

Need – Rule based Control and optimization base control – Software based High Level Supervisory control – Mode of Power – Behavior of Motor – Types of Battery – Characteristics.

**Unit V Hybrid Electric Vehicles 6**

History – Importance of Hybrid Vehicle – Vehicle Performance – Power Source – Transmission Characteristics – Fuel Efficiency Analysis.

**TOTAL: 30 PERIODS**

  
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Chennai - 603103.

### Outcomes:

After completing this course, students should demonstrate competency in the following skills:

- Analysis the configuration and control methods of Electric Propulsion unit.
- Summarize the factors that control battery operational characteristics and the primary mechanisms.
- Describe the basic fundamentals and working principles of electrical machines.
- Analysis the transmission characteristics and mathematical models of Electric Vehicles.
- Discuss the energy management strategies used in hybrid and electric vehicles.

### Text Books:

1. Iqbal Hussain, "Electric & Hybrid Vehicles – Design Fundamentals", Second Edition, CRC Press, 2011.
2. M. Ehsani, Y. Gao, S. Gay and A. Emadi, Modern Electric, Hybrid Electric, and Fuel Cell Vehicles, CRC Press, 2005.
3. T. Denton, "Electric and Hybrid Vehicles", Routledge, 2016.
4. C. Mi, M. A. Masrur and D. W. Gao, "Hybrid Electric Vehicles: Principles and Applications with Practical Perspectives", John Wiley & Sons, 2011.

### Reference:

1. S. Onori, L. Serrao and G. Rizzoni, "Hybrid Electric Vehicles: Energy Management Strategies", Springer, 2015.
2. James Larminie, "Electric Vehicle Technology Explained", John Wiley & Sons, 2003.
3. Sandeep Dhameja, "Electric Vehicle Battery Systems", Newnes, 2000.



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VALUE ADDED COURSE - COURSE CONTENT

Department of Electrical and Electronics Engineering

Class : IV/ VII

Academic Year:2023 - 24

Name of the Value Added Course	Electric Vehicles <i>DESIGN</i>	Name of the handling Faculty	Mr. C. Venkatesh
--------------------------------	------------------------------------	------------------------------	------------------

**Course Objective**

- To present a comprehensive overview of Electric and Hybrid Electric Vehicles
- To study about the working of Electric Vehicle
- To impart the knowledge on energy storage devices
- To learn electric vehicle drive systems
- To understand the configuration of hybrid vehiclec

**Course Outcome**

- After completing this course, students should demonstrate competency in the following skills:
- Analysis the confuguration and control methods of Electric propulsion unit
  - Summarize the factors that control battery operational characteristics and the primary mechanisms
  - Describe the basic fundamentals and working principles of electric machines
  - Analysis the transmission characteristics and mathematical model of electric vehicles
  - Describe the energy management strategies used in hybrid and electric vehicles

**Lesson Plan for VAC**

Sl. No.	Topic	T / R*	Periods Required	Mode of Teaching
		Book		
<b>Unit -I Introduction to Electric Vehicle</b>				
1	Introduction - History of Electric Vehicle	T1	1	BB
2	Benefits of Electric Vehicle - types and its challenges	T1	1	BB
3	Introduction to EV Motor drives technologies	T1	1	BB
4	EV battery charging technology	T2	1	BB
5	Electric vehicle to grid connection	T2	1	BB
6	Regulation and policy	T2	1	BB
<b>Unit -II Electric Drive and Controller</b>				
7	Types of DC and AC motors - selection of motor	T1	1	BB
8	Torque and RPM calculation	T1	1	BB
9	Motor controlling techniques	T1	1	BB
10	Function of control unit	T1	1	BB
11	Development process	T1	1	BB
12	Hardware and software requirement	T1	1	BB

  
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MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING, Chennai - 603103

VAC - STUDENTS NAME LIST

Department of Electrical and Electronics Engineering

Academic Year: 2023-2024

Name of the Value Added Course : Electric Vehicles (EVA033)				
Yr / Sem : 4th Year / 7th Sem		Faculty In-charge :	Chintala Venkatesh	
Location :		Duration :	30 Hrs	
Sl.No	Name of the Student	Register No.	Status of Qualifying	Sign of Student
1	ARSHAD.K	311820105001	YES	
2	DIVYASRI S	311820105003	YES	
3	HARISHANKAR.V	311820105004	YES	
4	IMRAN R	311820105005	YES	
5	MOHAMED RASITH	311820105006	YES	
6	SWETHA MARIA FAUSTINA.S	311820105009	YES	
7	SYED HARRUN	311820105010	YES	
8	THOUFIQ AHAMED	311820105011	YES	
9	THOWFIQ M	311820105012	YES	
10	MOHAMED FAZIL. M	311820105302	YES	
11	MOHAMED SAMEER. L	311820105303	YES	
12	MOHAMED YAHYA. A	311820105304	YES	
13	MUHAMMED IMRAN. K	311820105305	YES	
14	MUZAMMIL HAQ.	311820105306	YES	
15	SYED AFRIDI. P	311820105308	YES	
16	MOHAMED UNIAS	311820105701	YES	
17				
18				
19				
20				
21				
22				
23				
24				
25				

Head-Training

Signature of HoD with date

Format No.: TLP 20

Rev.No.: 01

Rev.Date: 04.01.21

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- EXAM SCHEDULE
- RES. REVIEW
- ASSESSMENT
- EXAM RESULTS
- OBJECTIVE
- COMPLAINTS

[Print](#)

### Result for Nov. / Dec. Examination, 2023

Register Number:	311820105701		
Name:	MOHAMED UNAIS A		
Branch:	B.E. Electrical and Electronics Engineering		
Semester	Subject / Code	Grade	Result
07	EE8701	B+	PASS
07	EE8702	A	PASS
07	EE8703	O	PASS
07	EE8711	O	PASS
07	EE8712	O	PASS
07	EVA033	B+	PASS
07	GE8077	A	PASS
07	OCS752	A	PASS
07	EE8059	O	PASS

#### Legends

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Sipcot - IT Highway Egattur,  
Chennai - 603103.

# Result for Nov. / Dec. Examination, 2023

Register Number :	311820105012		
Name:	THOWFIQ M		
Branch:	B.E. Electrical and Electronics Engineering		
Semester	Subject Code	Grade	Result
07	EE8701	B	PASS
07	EE8702	A	PASS
07	EE8703	B+	PASS
07	EE8711	O	PASS
07	EE8712	O	PASS
07	EVA038	B+	PASS
07	GE8077	B+	PASS
07	OC-S752	B	PASS
07	SB8059	A+	PASS
06	EE8601	B	PASS

**Legend:**

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Chennai - 603103.

Reg. No:

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**Question Paper**

B.E/B.TECH DEGREE INTERNAL ASSESSMENT TEST-I

Fifth Semester

Electrical and Electronics Engineering

**EVA033 ELECTRIC VEHICLE**

(Value Added Course)

Time: 1 Hour 30 Minutes

Answer ALL questions

Maximum: 50 marks

**OBJECTIVES:**

- To present a comprehensive overview of Electric and Hybrid Electric Vehicles.
- To study about the working of Electric Vehicle.
- To impart the knowledge on energy storage device.
- To learn electric vehicle drive systems.
- To understand the configuration of hybrid vehicle.

**OUTCOMES:**

After completing the course, students should demonstrate competency in the following skills:

- CO1: Analysis the configuration and control methods of electric propulsion unit.
- CO2: Summarize the factors that control battery operational characteristics and the primary mechanisms.
- CO3: Describe the basic fundamentals and working principles of electrical machines.
- CO4: Analysis the transmission characteristics and mathematical models of electric vehicles.
- CO5: Discuss the energy management strategies used in hybrid and electric vehicles.

**PART-B ( 5 \* 8 = 40 Marks )**

1. Explain about the history of Electric Vehicle? (CO-1) (BTL-K1)
2. Write briefly about benefits of electric vehicle? (CO-1) (BTL-K1)
3. Discuss about the EV Battery Charging Technologies? (CO-1) (BTL-K2)
4. Classify the Types of AC Motors and DC Motors Explain it Briefly? (CO-2) (BTL-K2)
5. What are the methods to control the speed of DC motor? (CO-2) (BTL-K2)

**PART-C ( 2 \* 20 = 40 )**

6. Torque and RPM Calculation of the motor? (CO-2) (BTL-K2)
7. Explain and drive the Train 1 topology in Electric vehicle? (CO-3) (BTL-K1)

\*\*\*\*\*ALL THE BEST\*\*\*\*\*

  
**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

Reg. No:

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**Question Paper**

B.E/B.TECH DEGREE INTERNAL ASSESSMENT TEST-II

Fifth Semester

Electrical and Electronics Engineering

**EVA033 ELECTRIC VEHICLE**

(Value Added Course)

Time: 1 Hour 30 Minutes

Answer ALL questions

Maximum: 50 marks

**OBJECTIVES:**

- To present a comprehensive overview of Electric and Hybrid Electric Vehicles.
- To study about the working of Electric Vehicle.
- To impart the knowledge on energy storage device.
- To learn electric vehicle drive systems.
- To understand the configuration of hybrid vehicle.

**OUTCOMES:**

After completing the course, students should demonstrate competency in the following skills:

- CO1: Analysis the configuration and control methods of electric propulsion unit.
- CO2: Summarize the factors that control battery operational characteristics and the primary mechanisms.
- CO3: Describe the basic fundamentals and working principles of electrical machines.
- CO4: Analysis the transmission characteristics and mathematical models of electric vehicles.
- CO5: Discuss the energy management strategies used in hybrid and electric vehicles.

**PART-B ( 5 \* 8 = 40 Marks )**

1. Explain Braking system and Gear & cultch arrangement (CO-3) (BTL-K2)
2. Explain of Rule based Control and optimization based control? (CO-4) (BTL-K2)
3. Explain the types of Battery and Characteristics? (CO-4) (BTL-K2)
4. Explain the software based high level supervisory control? (CO-4) (BTL-K2)
5. Explain the software based high level supervisory control? (CO-5) (BTL-K2)

**PART-C ( 2 \* 20 = 40 )**

6. What are the transmission characteristics of EV ? (CO-5) (BTL-K2)
7. What are the different types of hybrids? (CO-5) (BTL-K2)

\*\*\*\*\* ALL THE BEST\*\*\*\*\*



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VALUE ADDED COURSE - COURSE CONTENT

Department of Mechanical Engineering

Class : IV Year/ VII Semester

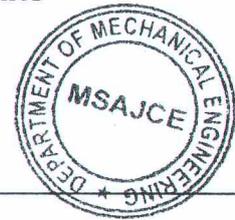
Academic Year: 2023-24

Name of the Value Added Course	MVA022 Introduction to Multibody Dynamics	Name of the handling Faculty	Mr. Mohan S R
--------------------------------	---	------------------------------	---------------

Course Objective

The Students will acquire to

- To present the basic theoretical knowledge of the Foundations of Multi body dynamics
- To apply the knowledge of the applications to machine and structural dynamics.
- To analyze the static and dynamic behaviour of the multi body dynamics.
- To derive the motion equation of the bodies.
- To gain the concept of motion mechanics related to applications of MBD.



Course Outcome

Upon completion of the course,

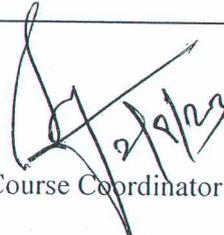
1. Write programs to solve constrained differential equations for systems analyzing multi-body
2. Simulate and analyze all types of static behaviours of the multi-body systems including the kineto- static analysis.
3. Simulate and analyze all types of dynamic behaviours of the multi-body systems including the kineto-static analysis.
4. To derive equations of motion for interconnected bodies in multi-body systems with three-dimensional motion.
5. To Implement and analyze methods of formulating equations of motion for Inter-connected bodies.

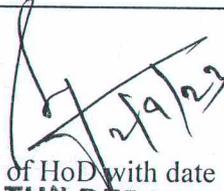
Lesson Plan for VAC

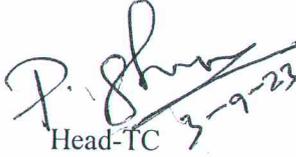
Sl. No.	Topic	T / R*	Periods Required	Mode of Teaching
		Book		
1	The method of constraints for planar kinematic analysis	T	1	PPT & BB
2	Revolute, prismatic, gear and cam pairs are considered together with other 2 DOF	T	2	PPT & BB
3	Introduction to Basic principles for analysis of multi-body systems	T	1	PPT & BB
4	The automatic assembly of the systems of equations for position	T	2	PPT & BB
5	The principle of virtual work and Lagrange's equations	T	1	PPT & BB
6	Introduction to Dynamics of Planar Systems	T	1	PPT & BB
7	Systematic computation and assembly of mass matrix	T	2	PPT & BB
8	Computation of planar generalized forces for external forces and for actuator-spring-damper element	T	1	PPT & BB
9	Simple applications of inverse and forward dynamic analysis	T	2	PPT & BB
10	Numerical integration of first-order initial value problems	T	1	PPT & BB

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11	The method of Baumgarte for the solution of mixed differential-algebraic equations of motion	T	2	PPT & BB
12	The use of coordinates partitioning, QR and SVD decomposition for the orthogonalization of constraints	T	2	PPT & BB
13	Reference frames for the location of a body in space	T	1	PPT & BB
14	Euler angles and Euler parameters	T	2	PPT & BB
15	Kinematic analysis of spatial systems	T	2	PPT & BB
16	Equations of motion of constrained spatial systems	T	2	PPT & BB
17	Exercise	T	5	PPT & BB
Quiz / Mini Projects / Model Developed if any				
NIL				
Text / Reference Books				
1	De Jalon, J.C., Bayo, E., "Kinematic and Dynamic Simulation of Multibody Systems", Springer-Verlag, 1994.			
2	Kane, T.R., Levinson, D.A., "Dynamics: Theory and Applications", McGraw-Hill Book Co., 1985.			
Website / URL References				
1	<a href="https://www.youtube.com/watch?v=1Tyxgv7RUdk">https://www.youtube.com/watch?v=1Tyxgv7RUdk</a>			

  
 Sign. of Course Coordinator

  
 Sign. of HoD with date  
**HEAD OF THE DEPARTMENT**  
 Department of Mechanical Engineering  
 Mohamed Sathak A.J. college of Engineering  
 Siruseri IT Park, Chennai - 603103.

  
 Head-TC

Format No.: TLP 21

Rev. No.: 1.0

Rev. Date: 04.01.21

  
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# MOHAMED SATHAK A J COLLEGE OF ENGINEERING

Anna University - Value Added Course  
MVA022 Introduction to Multibody Dynamics

## Course Registration

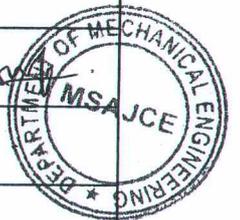
AY 2023-24

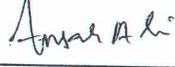
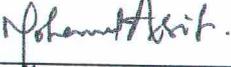
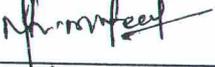
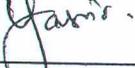
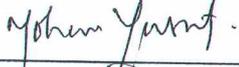
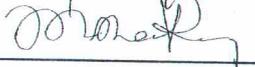
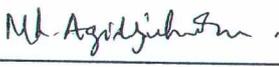
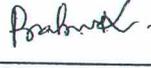
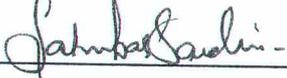
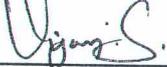
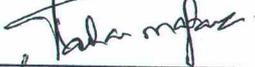
IV Year / VII Semester

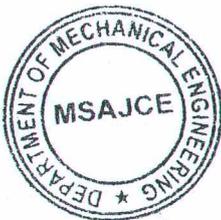
S.No	Reg.No	Student Name	Signature
1	311820114001	ABUTHAGIR. J	Abuthagir J
2	311820114002	ARUN. T	Arun T
3	311820114003	DINESH. M	M. Dinesh
4	311820114004	IMTHIYAS. A	A. Imthiyas
5	311820114005	MANIKANDAN. K	Manikandan K
6	311820114006	MOHAMED AFROSE. M	M. Afrose
7	311820114007	MOHAMED AJMAL A.R	A.R. Ajmal
8	311820114008	MOHAMED GHOUSE NAGUTHA. M	M. Ghouse
9	311820114009	MOHAMED IJAZ. M	M. Ijaz
10	311820114010	MOHAMED ILIYAS.S	M. Ilyas
11	311820114011	MOHAMED ISMAIL. A	A. Ismail
12	311820114012	MOHAMED SATHAKKATHULLAH. M	M. Sathak
13	311820114013	MOHAMMED MANSOOR. S	M. Mansoor
14	311820114014	SADHAM HUSSAIN J	Sadham J
15	311820114015	SALMAN. S	S. Salman
16	311820114016	SHAIK YAHOPÉ. B	B. Shaik
17	311820114017	SYED MOHAMMED SUFIYAN. S	S. Syed
18	311820114018	UMAR JAFFAR ALI A	A. Umar
19	311820114302	FATHEEN AHMED.M	M. Fatheen
20	311820114303	HARIHARAN J	J. Hariharan

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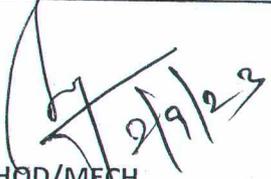
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21	311820114304	HASAN HAFFIL K	
22	311820114306	KISHORE P	
23	311820114307	MOHAMED ANAS.M	
24	311820114308	MOHAMED ANSAR ALI .N	
25	311820114309	MOHAMED ASIF M	
26	311820114311	MOHAMED MUFEED H	
27	311820114313	MOHAMED YASIR S A	
28	311820114314	MOHAMED THAISEER S	
29	311820114315	MOHAMED YUSUF A	
30	311820114316	MOHANRAJ.R	
31	311820114317	MOHIDEEN AGIL ZUBAIR S	
32	311820114318	PRABHU K	
33	311820114319	SAHUBAR SATHIK N	
34	311820114320	SRIRAM.N	
35	311820114321	VASANTHA KUMAR. N	
36	311820114322	VIJAY S	
37	311820114323	YUVAN SAI V N	
38	311820114701	TAHA MAFAAZ AHMED M	



  
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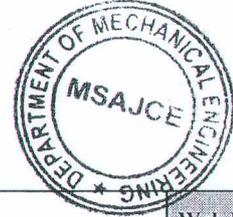
  
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Anna University Examinations Nov/Dec 2023

Department of Mechanical Engineering

MVA022 Introduction to Multibody Dynamics



Sem: IV / VII

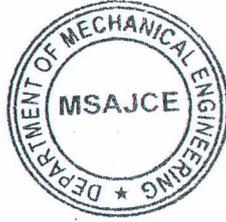
S.No	Reg.No	Student Name	Assesment -1		Assesment -2		Web Portal Entry
			Present / Absent	Marks (100)	Present / Absent	Marks (100)	Marks (100)
1	311820114001	ABUTHAGIR. J	P	91	P	82	87
2	311820114002	ARUN. T	P	92	P	90	91
3	311820114003	DINESH. M	P	90	P	82	86
4	311820114004	IMTHIYAS. A	P	90	P	84	87
5	311820114005	MANIKANDAN. K	P	91	P	85	88
6	311820114006	MOHAMED AFROSE. M	P	92	P	85	89
7	311820114007	MOHAMED AJMAL A.R	P	90	P	82	86
8	311820114008	MOHAMED GHOUSE NAGUTHA. M	P	90	P	88	89
9	311820114009	MOHAMED IJAZ. M	P	90	P	90	90
10	311820114010	MOHAMED ILIYAS.S	P	82	P	88	85
11	311820114011	MOHAMED ISMAIL. A	P	90	P	85	88
12	311820114012	MOHAMED SATHAKKATHULLAH. M	P	82	P	88	85
13	311820114013	MOHAMMED MANSOOR. S	P	90	P	90	90
14	311820114014	SADHAM HUSSAIN J	P	90	P	88	89
15	311820114015	SALMAN. S	P	92	P	90	91
16	311820114016	SHAIK YAHOPÉ. B	P	91	P	90	91
17	311820114017	SYED MOHAMMED.SUFIYAN. S	P	92	P	84	88
18	311820114018	UMAR JAFFAR ALI A	P	92	P	94	93
19	311820114302	FATHEEN AHMED.M	P	92	P	90	91
20	311820114303	HARIHARAN J	P	92	P	90	91
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22	311820114306	KISHORE P	P	90	P	92	91
23	311820114307	MOHAMED ANAS.M	P	90	P	80	85
24	311820114308	MOHAMED ANSAR ALI. N	P	90	P	81	86
25	311820114309	MOHAMED ASIF M	P	90	P	90	90
26	311820114311	MOHAMED MUFEED H	P	90	P	88	89
27	311820114313	MOHAMED YASIR S A	P	90	P	87	89

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			Present / Absent	Marks (100)	Present / Absent	Marks (100)	Marks (100)
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29	311820114315	MOHAMED YUSUF A	P	92	P	80	86
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35	311820114321	VASANTHA KUMAR. N	P	92	P	92	92
36	311820114322	VIJAY S	P	91	P	85	88
37	311820114323	YUVAN SAI V N	P	90	P	86	88
38	311820114701	TAHA MAFAAZ AHMED M	P	90	P	87	89

Faculty Incharge



HOD/Mech

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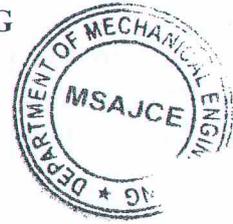
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Regulation – 2017

Seventh Semester – B.E Mechanical Engineering

Assessment - I

MVA022 Introduction to Multi Body Dynamics  
(Value Added Course)



Marks : 100

Time : 3 Hrs

Answer All Questions

Part A (20×1=20 marks)

1. If we place some coins over the paper strip and pull it with a jerk, then coins don't fall off because of
  - A. friction
  - B. inertia
  - C. resistance
  - D. force
2. As weight is a force so it is a
  - A. scalar quantity
  - B. fixed quantity
  - C. variable quantity
  - D. vector quantity
3. The ratio of the force of limiting friction to normal reaction is
  - A. zero
  - B. constant
  - C. greater than 1
  - D. less than 2
4. The force that produces an acceleration of  $1 \text{ ms}^{-2}$  in a body of the mass of 1 kg is called
  - A. slow newton
  - B. zero newton
  - C. one newton
  - D. two newtons
5. When a net force act on a body, it produces acceleration in the body in the direction of the net force which is directly proportional to the net force acting on the body and inversely proportional to its mass. This statement is called
  - A. newton's 2nd law of motion
  - B. newton's 1st law of motion

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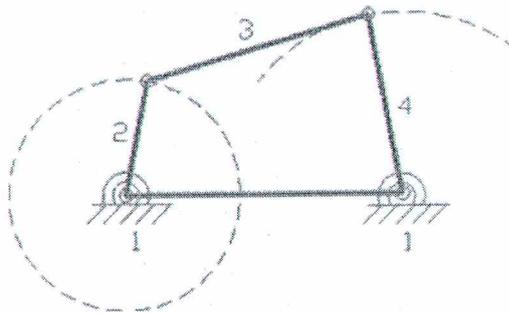
12. The total number of instantaneous centers for a mechanism consisting of  $n$  links are
- A.  $n/2$
  - B.  $n$
  - C.  $n-1$
  - D.  $n(n-1)/2$
13. Which of the following property of the instantaneous center is correct?
- A. A rigid link rotates instantaneously relative to another link at the instantaneous centre for the configuration of the mechanism considered.
  - B. The two rigid links have no linear velocity relative to each other at the instantaneous centre.
  - C. The velocity of the instantaneous centre relative to any third link is same whether the instantaneous centre is regarded as a point on the first link or on the second rigid link.
  - D. all of the mentioned
14. The instantaneous centers which vary with the configuration of mechanism, are called
- A. permanent instantaneous centers
  - B. fixed instantaneous centers
  - C. neither fixed nor permanent instantaneous centers
  - D. none of the mentioned
15. When two links are connected by a pin joint, their instantaneous centre lies
- A. on their point of contact
  - B. at the centre of curvature
  - C. at the centre of circle
  - D. at the pin joint
16. A slider moving on a fixed link having constant radius of curvature will have its instantaneous centre at the center of the circle.
- A. True
  - B. False
17. When the two elements of a pair have \_\_\_\_\_ when in motion, it is said to a lower pair.
- A. line or point contact
  - B. surface contact
  - C. permit relative motion
  - D. none of the mentioned

  
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Answer All Questions

Part C (2×20=40 marks)

26. Draw the assembly of spur gears;  
Driven gear teeth: 120 and dia 12 in.  
Driving gear teeth: 40 and dia 4 in.  
Pitch angle: 20  
Thickness: 1.5 in.  
speed: 150 rpm
27. Trace the path for the following link mechanism.



- L1 = 800 mm  
L2 = 200 mm  
L3 = 480 mm  
L4 = 560 mm

*[Handwritten signature]*  
17/11/23

**HEAD OF THE DEPARTMENT**  
Department of Mechanical Engineering  
Mohamed Sathak A.J. college of Engineering  
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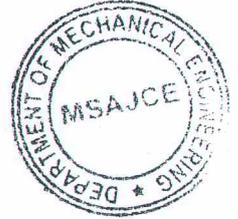
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B.E./B.Tech. DEGREE EXAMINATIONS, NOV./DEC.-2023

Regulation – 2017

Seventh Semester – B.E Mechanical Engineering

Assessment - II

MVA022 Introduction to Multi Body Dynamics  
(Value Added Course)



Marks : 100

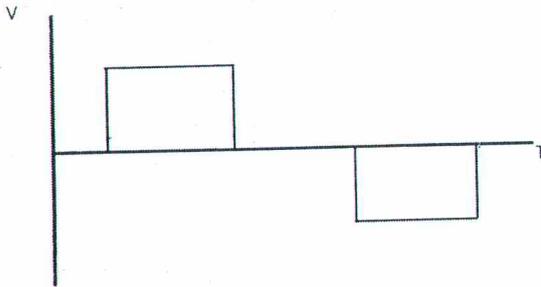
Time : 3 Hrs

Answer All Questions

Part A (20×1=20 marks)

1. The two elements of a pair are said to form a \_\_\_\_\_ when they permit relative motion between them.
  - a) open pair
  - b) kinematic pair
  - c) higher pair
  - d) lower pair
2. A combination of kinematic pairs, joined in such a way that the relative motion between the links is completely constrained, is called a
  - a) structure
  - b) mechanism
  - c) kinematic chain
  - d) inversion
3. The relation between number of pairs(p) forming a kinematic chain and the number of links(l) is
  - a)  $l = 2p - 2$
  - b)  $l = 2p - 3$
  - c)  $l = 2p - 4$
  - d)  $l = 2p - 5$
4. The relation between number of links(l) and number of joints(j) in a kinematic chain is
  - a)  $l = 1/2 (j+2)$
  - b)  $l = 2/3 (j+2)$
  - c)  $l = 3/4 (j+2)$
  - d)  $l = j+4$
5. The relation  $l = 2/3(j+2)$  apply to kinematic chains in which lower pairs are used. This may be used to kinematic chains in which higher pairs are used, but each higher pair may be taken as equivalent to
  - a) one lower pair and two additional links

11. The given figure is a velocity time diagram for which of the follower motion?



- a) Simple harmonic
  - b) Uniform acceleration
  - c) Uniform velocity
  - d) Uniform retardation
12. If a follower is undergoing simple harmonic motion, then at what value of angle of ascent the acceleration is maximum?
- a) 0
  - b) 30
  - c) 45
  - d) 60
13. If all the masses are in one plane, then what is the maximum no. of masses which can be placed in the same plane?
- a) 3
  - b) 4
  - c) 6
  - d) No limitation
14. If the rotation speed of the shaft increases then the balancing mass must also increase.
- a) True
  - b) False
15. The type of pair formed by two elements which are so connected that one is constrained to turn or revolve about a fixed axis of another element is known as
- a) turning pair
  - b) rolling pair
  - c) sliding pair
  - d) spherical pair
16. Which of the following is a lower pair
- a) ball and socket i

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**Answer All Questions**

**Part C (2×20=40 marks)**

26. Draw the assembly of spur gears;  
Driven gear teeth:40 and dia 10cm.  
Driving gear teeth: 40 and dia 10cm.  
Pitch angle: 20  
Thickness: 2cm.  
speed: 55 rpm
27. Draw the cam follower mechanism in multibody dynamic software.  
(Use suitable dimensions)



*[Handwritten signature]*  
9/10/23

**HEAD OF THE DEPARTMENT**

Department of Mechanical Engineering  
Mohamed Sathak A.J. college of Engineering  
Siruseri IT Park, Chennai - 603103.

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No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

# 3D PRINTING

## OBJECTIVES

- To Know the importance of 3D printing in Manufacturing
- To know the different 3D Printing Technologies
- To select a suitable material for 3D Printing
- To observe the different methods for Post-processing of 3D Printing parts
- To Understand the applications of 3D Printing in Automobile, Aerospace, Bio-medical etc.

## UNIT-I INTRODUCTION AND BASIC PRINCIPLES

Introduction to 3D printing, its historical development, Benefits of 3D Printing, Distinction Between 3D Printing and CNC Machining, Other Related Technologies Development of 3D Printing Technology: Classification of 3D Printing Processes, Metal Systems, Applications to various fields.

## UNIT - II 3D PRINTING PROCESS & PHOTOPOLYMERIZATION PROCESSES

Eight Steps in Additive Manufacture, Variations from One 3D Printing Machine to Another, Metal Systems, Maintenance of Equipment, Materials Handling Issues. Introduction to Photopolymerization Processes: Stereo lithography apparatus (SLA): Models and specifications, process, working principle, photopolymers, photo polymerization, layering technology, laser and laser scanning, applications, advantages and disadvantages, Fused Deposition Modeling (FDM): Models and specifications, Process, Working principle, Applications, Advantages and disadvantages.

## UNIT-III DESIGN, PROCESS SELECTION & APPLICATION FOR 3DPRINTING

Design for 3D Printing - Design for Manufacturing and Assembly, Design Tools for 3D Printing. Guidelines for Process Selection - Software Issues for 3D Printing - Preparation of CAD Models – the STL File, Problems with STL Files, STL File Manipulation, Beyond the STL File, Additional Software to Assist 3D Printing.

## COURSE OUTCOMES:

Upon completion of this course, Students should be able to

1. Describe the importance of 3D printing in Manufacturing.
2. Explain the different 3D Printing Technologies.
3. Select suitable materials for 3D Printing.
4. Apply various methods for Post-processing of 3D Printing.
5. Create 3D Printing components in Automobile, Aerospace, Bio-medical etc.

  
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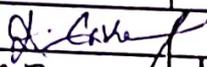
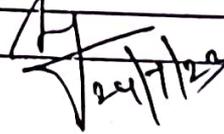
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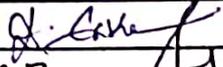
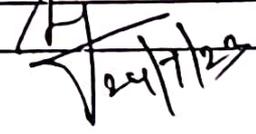
LESSON PLAN			
DEPARTMENT OF MECHANICAL ENGINEERING			
Name of the Subject	3D PRINTING	Name of the handling Faculty	D. Sakthivel
Acad Year	2023-2024	Year / Sem	III / V
<b>Course Objective</b>			
To Know the importance of 3D printing in Manufacturing			
To know the different 3D Printing Technologies			
To select a suitable material for 3D Printing			
To observe the different methods for Post-processing of 3D Printing parts			
To Understand the applications of 3D Printing in Automobile, Aerospace, Bio-medical etc.			
<b>Course Outcome</b>			
1. Describe the importance of 3D printing in Manufacturing.			
2. Explain the different 3D Printing Technologies.			
3. Select suitable materials for 3D Printing.			
4. Apply various methods for Post-processing of 3D Printing.			
5. Create 3D Printing components in Automobile, Aerospace, Bio-medical etc.			
<b>course summery</b>			
Sl. No.	Topic(s)	Periods Required	Mode of Teaching (BB / PPT / etc )
<b>UNIT-I INTRODUCTION</b>			
1	Introduction to 3D printing, its historical development, Benefits of 3D Printing, Distinction Between 3D Printing and CNC Machining.	3	PPT
2	Technologies Development of 3D Printing Technology: Classification of 3D Printing Processes, Metal Systems	3	PPT
3	3D printing Applications to various fields.	3	PPT THEORY & PRACTICAL
4	Eight Steps in Additive Manufacture, Variations from One 3D Printing Machine to Another, Metal Systems, Maintenance of Equipment, Materials Handling Issues.	3	PPT
5	Introduction to Photopolymerization Processes: Stereo lithography apparatus (SLA): Models and specifications, process, working principle, photopolymers, applications, advantages and disadvantages	3	PPT

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6	Fused Deposition Modeling (FDM): Models and specifications, Process, Working principle, Applications, Advantages and disadvantages.	3	PPT
7	Design for 3D Printing - Design for Manufacturing and Assembly	3	THEORY & PRACTICAL
8	Preparation of CAD Models – the STL File,	3	PPT THEORY & PRACTICAL
9	Printing 3D Models.	6	PRACTICAL
Name & Sign of Faculty Incharge : D SAKTHIVEL 			
Head of the Department : Mr. MOHAN.S.R 			

  
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6	Fused Deposition Modeling (FDM): Models and specifications, Process, Working principle, Applications, Advantages and disadvantages.	3	PPT
7	Design for 3D Printing - Design for Manufacturing and Assembly	3	THEORY & PRACTICAL
8	Preparation of CAD Models – the STL File,	3	PPT THEORY & PRACTICAL
9	Printing 3D Models.	6	PRACTICAL
Name & Sign of Faculty Incharge : D SAKTHIVEL 			
Head of the Department : Mr. MOHAN.S.R 			

  
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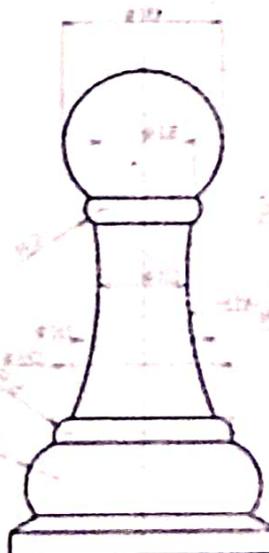
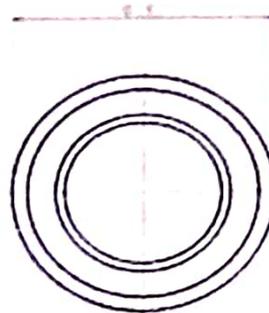
STUDENT REG NO: 311821106033

DEPARTMENT: B.E. ECE

SUBJECT NAME: 3DPD/TCC001 - 3D PRINTING  
AND DESIGN

DATE OF EXAM: 22/11/2022

1. Design figure below and topology optimized the parts. do fabrication using AM process.



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No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.



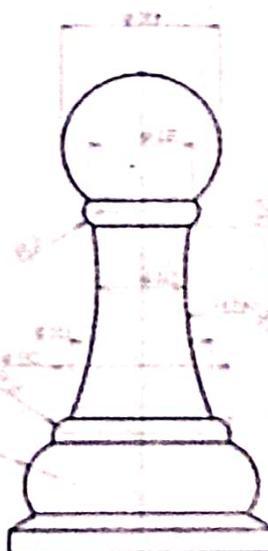
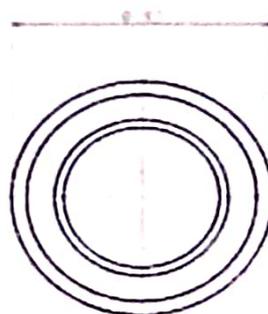
STUDENT REG NO: 311821106083

DEPARTMENT: B.E. ECE

SUBJECT NAME: 3DPD / TCC001 - 3D Printing  
AND DESIGN

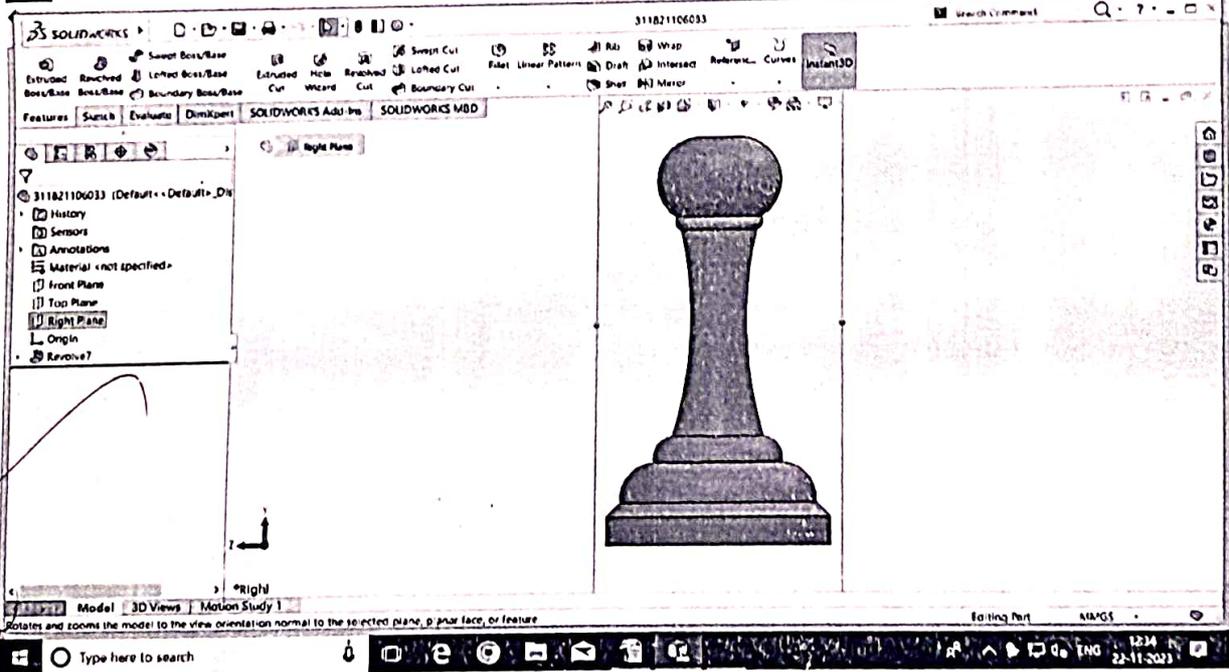
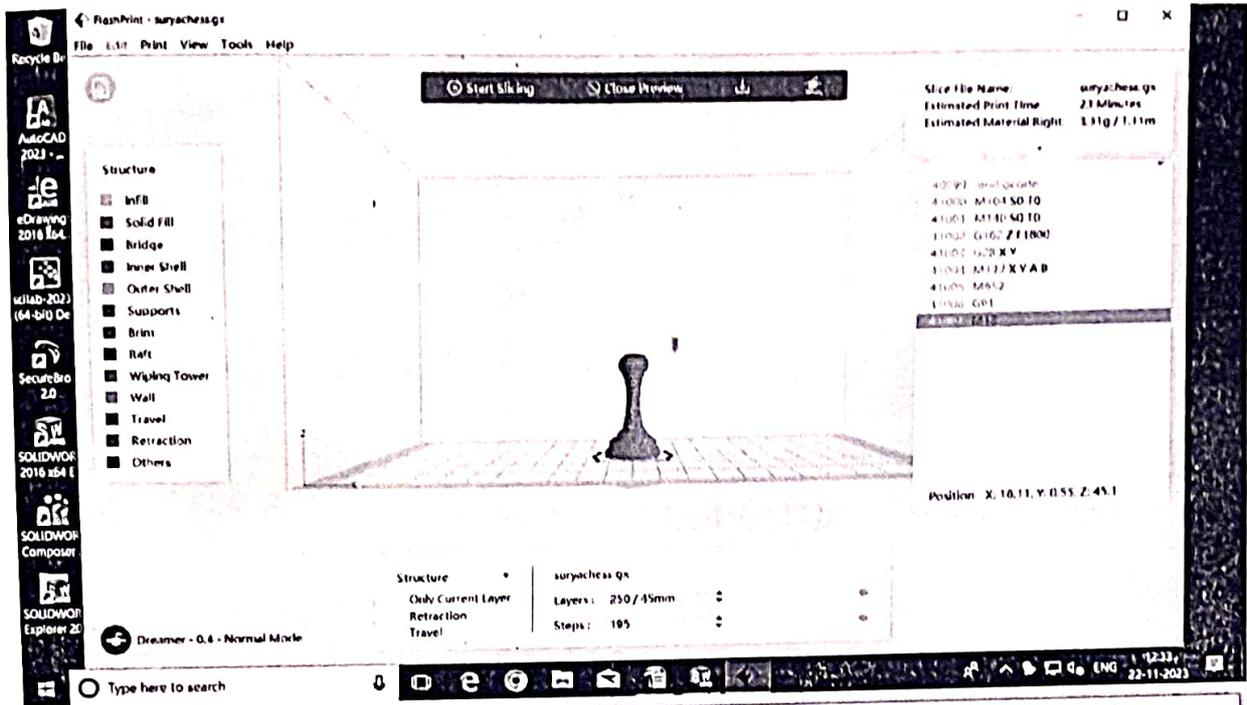
DATE OF EXAM: 22/11/2022

1. Design figure below and topology optimized the parts. do fabrication using AM process.



  
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ROLL NO: 311821106033

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 Chennai - 603103.

S. No.	Register Number	Students Name	Profile			Class	1	2	3	4	5	6	7	8	9	10
			Arrears	CGPA	Hostel/DS/ OB	Month	8	8	8	8	8	9	10	10	10	
						Date	2	9	16	23	30	13	04	11	25	
						Period	3,4,5	3,4,5	2,4,5	3,4,5	3,4,5	3,4,5	3,4,5	2-5	3-5	
1	311821114016	Shaik Trfan K			DS	P	P	P	P	P	P	P	P	P	P	
2	311821114017	Shailish Kumar P			DS	P	P	P	P	P	P	P	P	P	P	
3	311821114301	Abdur Rahman			DS	P	AB	P	P	P	P	P	P	P	P	
4	311821114304	Rasool Mohamed T			H	P	P	P	P	P	P	P	AB	AB		
5	311821114701	Mohamed Sameem			DS	AB	P	P	P	P	P	P	AB	AB		
6	311821114803	Mohammed Anura			H	P	P	P	P	P	P	P	P	P	P	
7	311821114012	Naresh P			DS	P	P	P	P	P	P	AB	P	P		
8	311821114305	Shameer Ahamed A			DS	P	P	P	P	P	P	P	AB	AB		
9	311821114002	Abdul Kaffar			H	P	P	P	P	P	P	AB	AB	AB		
10	311821114005	Haji Putrus Mydeen S			DS	P	P	P	AB	P	P	AB	AB	AB		
11	311821114004	Uokulnath D			DS	AB	P	AB	AB	P	P	P	P	P		
12	311821114302	Chandru			DS	P	P	P	P	P	P	P	P	P		
13	311821114306	Sunayaparambas R			DS	AB	P	P	P	P	P	P	P	P		
14	311821114011	Mohamed Safrees			H	AB	AB	P	P	P	P	AB	AB	AB		
15	311821106032	Suhail K			DS	P	P	P	P	P	P	P	P	P		
16	311821106011	Haaris Thameem Arsoni			DS	P	P	P	P	P	AB	P	AB	AB		
17	311821106033	Surya T			DS	P	P	P	P	P	AB	P	P	P		
18	311821106012	Halith Umar R			DS	P	P	P	P	P	P	P	AB	AB		
19	311821106302	Dinesh KN				P	P	P	P	AB	AB	P	P	P		
20	311821106035	Syed Afrid J			DS	P	P	P	AB	P	AB	P	AB	AB		
21	311821106034	Suran Kumar R			DS	P	P	P	P	P	AB	AB	AB	AB		
22	311821106021	Mohammed Ibrahim						P	AB	P	P	P	P	P		
23	311821105013	Syed hifzul Rahman F			DS	P	P	P	P	P	P	P	P	P		
No. of absentees																
Signature of the faculty member																

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						Date	2	9	16	23	30	13	04	11	25		
						Period	3-4,5	3-4,5	2-4,5	3-4,5	2-4,5	3-4,5	3-4,5	2-5	3-5		
1	311821114016	Shaik Trfan K			DS		P	P	P	P	P	P	P	P	P		
2	311821114017	Shailesh Kumar P			DS		P	P	P	P	P	P	P	P	P		
3	311821114301	Abdus Rahman			DS		P	AB	P	P	P	P	P	P	P		
4	311821114304	Rasool Mohamed T			H		P	P	P	P	P	P	P	AB	AB		
5	311821114701	Mohamed Sameem			DS		AB	P	P	P	P	P	P	AB	AB		
6	311821114803	Mohammed Anura			H		P	P	P	P	P	P	P	P	P		
7	311821114012	Nareesh P			DS		P	P	P	P	P	P	AB	P	P		
8	311821114305	Shameer Ahamed A			DS		P	P	P	P	P	P	P	AB	AB		
9	311821114002	Abdul Kaffar			H		P	P	P	P	P	P	AB	AB	AB		
10	311821114005	Haji Pustun Mydeen S			DS		P	P	P	AB	P	P	AB	AB	AB		
11	311821114004	Cookulnath D			DS		AB	P	AB	AB	P	P	P	P	P		
12	311821114302	Chandru			DS		P	P	P	P	P	P	P	P	P		
13	311821114306	Sunayamalaras R			DS		AB	P	P	P	P	P	P	P	P		
14	311821114011	Mohamed Saifur			H		AB	AB	P	P	P	P	AB	AB	AB		
15	311821106032	Suhail K			DS		P	P	P	P	P	P	P	P	P		
16	311821106011	Haaris Thameem Aroni			DS		P	P	P	P	P	AB	P	AB	AB		
17	311821106033	Suaya T			DS		P	P	P	P	P	AB	P	P	P		
18	311821106012	Halith Umar R			DS		P	P	P	P	P	P	P	AB	AB		
19	311821106302	Dinesh KN					P	P	P	P	AB	AB	P	P	P		
20	311821106035	Syed Afid J			DS		P	P	P	AB	P	AB	P	AB	AB		
21	311821106034	Surasan Kumar R			DS		P	P	P	P	P	AB	AB	AB	AB		
22	311821106021	Mohammed Ibrahim															
23	311821105013	Syed Hifzul Rahman F			DS		P	P	P	P	P	P	P	P	P		

No. of absentees

Signature of the faculty member

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Mohammed Sathak A.J College of Engineering, Siurseri.  
Department of Training and Placement

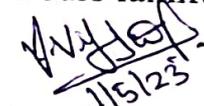
Circular,

Ref No: MSAJCE/P&T/01/05

01.05.2023

This is to inform to Placement Registered Students as we planned to conduct the Placement Training on Robotic Process Automation Course. for our college Third year students from 02.08.24 to 25.10.24. All are advised to attend the training regularly and attendance is mandatory.

Yours faithfully



Head Training.

Copy to

The Principal  
All HoDs  
IQAC



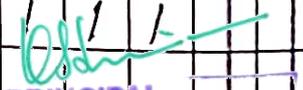
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Chennai - 603103.

S. No.	Register Number	Students Name	Profile			Class	1	2	3	4	5	6	7	8	9	10
			Arrears	CGPA	Hostel / DS / OB	Month	8	8	8	8	8	9	9	9	9	10
						Date	02	09	16	23	30	6	13	20	27	4
		CSE														
1	4001	H. Afreen					1	a	a	a	a	a				1
2	4003	Arivukkarasu					1	1	1	a	a	1	1			a
3	4006	K. Dharshini					1	a	1	a	a	1	1			a
4	4007	G. Devi					a	a	1	a	1	1	1			1
5	4008	Dhanushkumar P					1	a	1	a	a	1	1			a
6	4009	A. Divya					1	a	1	a	a	1	1			a
7	4010	R. Gokulnath					1	a	1	a	a	1	1			1
8	4011	Gulabi. Bashara A					1	1	1	a	a	1	1			a
9	4012	K. Harini					a	a	a	a	a	1	1			1
10	4013	M. Harini					1	a	1	a	a	1	1			1
11	4016	D. Karthik					a	a	1	a	a	1	1			a
12	4018	K. Kaviya					1	1	1	a	1	1	1			1
13	4023	Manikandan					a	a	1	a	a	1	1			a
14	4027	Md. Hamim					1	1	1	a	a	1	1			a
15	4031	Md. Saifudeen					1	1	1	a	a	1	1			a
16	4032	Md. Sameer					a	1	1	a	a	1	1			1
17	4043	Richardson vetri					1	1	1	a	a	a	a			a
18	4044	L. Rithanya					1	a	1	a	a	1	1			a
19	4045	Riyaskhan. N					1	1	a	a	a	1	a			a
20	4046	M. Rufeena					1	a	1	a	1	1	1			a
21	4048	R. Sijin					1	1	1	a	1	1	1			a
22	4051	Swetha					1	1	1	a	1	1	1			a
23	4053	Syed Jumafahil					1	1	a							a
No. of absentees							5	11								
Signature of the faculty member																

PRINCIPAL

Mohamed Sainak A.J. College of Engineering  
 No. 34, Rajiv Gandhi Salai (OMR)  
 Sipcah, Highway Egattur  
 Chennai - 605103.

S. No.	Register Number	Students Name	Profile			Class	1	2	3	4	5	6	7	8	9	10	
			Arrears	CGPA	Hostel/DS/OB	Month	8	8	8	8	8	9	9	9	9	9	10
						Date	2	9	16	23	30	6	13	20	27	4	
						Period	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
24	4056	S.Syed Sameer Khan					1	1	1	a	a	1	1			1	
25	4059	E.D. Uma					1	a	1	a	a	a				1	
26	4302	Farhan Basha T					1	1	1	a	1	1	1			1	
27	5005	Abirama Sundarim					1	a	1	a	1	1	1			1	
28	5009	Basim S						1	a	1	1	a	a			a	
29	5010	Basurudeen					1	a	1	1	1	1	1			1	
30	5014	Fazeela L					1	a	1	1	a	1	1			a	
31	5015	Ganapathi M					1	1	1	1	a	1	1			1	
32	5016	Harish R						1	1	1	1	a	a			1	
33	5018	Imran Ahmed					1	1	1	1	a	1	a			1	
34	5019	Junaith Akther							1	1	1	a				a	
35	5020	R. Kalaiselvan						1	1	1	1					a	
36	5027	Md. Harshath H					1	1	1	1	1	1	1			a	
37	5028	Md. Mujammil M					1	1	a	1	1	a	a			a	
38	5030	Md. Syed Ibrahim					1	a	1	1	1	1	a			a	
39	5031	Md. Vasim					1	a	a	1	1	1	a			1	
40	5032	Md. Yasir M S							1	1	1	1	a			a	
41	5033	S. Md. Yasir						1	1	1	1	1	1			a	
42	5037	Mugilan M					a	1	1	1	a	1	1			1	
43	5038	Md. Hafiz					a	1	1	1	1	1	1			a	
44	5040	N. Nishad Nazeeq						1	1	1	1	1	1			a	
45	5042	Noor Mohamed							1	1	1	1	1			a	
46	5048	Rubresh														1	
No. of absentees																	12
Signature of the faculty member																	

  
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 Chennai 603103.

S. No.	Register Number	Students Name IT/CSE	Profile			Class	1	2	3	4	5	6	7	8	9	10
			Arrears	CGPA	Hostel / DS / OB	Month	8	8	8	8	8	9	9	9	9	10
						Date	2	9	16	23	30	6	13	20	27	4
47	5050	Sahana serin				a	a	1	a	a	a	a				a
48	5052	Saran M				a	1	a	1	a	1	a				1
49	5057	Sri Balaji S.				1	1	1	1	1	1	1				1
50	5302	Md. Kalith.				1	1	1	1	1	1	1				a
51	5303	Md. Paariq				1	1	1	1	1	1	1				a
52	4301	Boopathi				1	1	a	a	1	1	a				1
53	4304	Naresh				1	1	1	a	1	1	1				1
54	4024	J.S. Maryam.						1	1	a	a	a				a
55	5003	Abdul Karim <del>M. Saran</del>						1	1	1	a	1	a			a
56	5024	J. Md. Asil						1	1	1	a	a	a			a
57	5008	Aashiq Ahamed						1	a	1	a	a	a			a
58	5057	Samson				1	1	a	a	a	1	a				a
59		ECE														a
60	35122110	(Transferred candidate)														a
61	6025	S. Pavithra							1	1	1	1				1
62		EEE														
63	35122110	(Transferred candidate)														
64	5701	Md. Riazdeen M							1	1	1	1				1
65		Md. Imthias														
66		Md. Owais														
67																
68																
69																
No. of absentees																
Signature of the faculty member																

  
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**CONSOLIDATED IBM DETAILS FOR THE PERIOD OF ODD / EVEN SEM 2023/ 2024**

Department : ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Academic Year: 2023-2024

S.No	Name of the student	Title	Period	Organized
1	H.AADIL MOHAMED	Business Intelligence	December 19th 2024	IBM
2	Y.ABDUL FAIZE	Business Intelligence	December 5th 2024	IBM
3	A.B.AHAMED RAASIM	Business Intelligence	December 6th 2024	IBM
4	A.AKRAM BILLAL	Business Intelligence	December 6th 2024	IBM
6	R.BALAJI	Business Intelligence	December 6th 2024	IBM
7	M.DARVESH AHAMED	Business Intelligence	December 7th 2024	IBM
8	P.DHIVYA	Business Intelligence	December 7th 2024	IBM
9	S.HARI RAGAVENDRA	Business Intelligence	December 6th 2024	IBM
10	R.S.JESSICA CHARLET	Business Intelligence	December 7th 2024	IBM
11	R.KARTHIKA	Business Intelligence	December 8th 2024	IBM
12	S.KAVIYZHAGAN	Business Intelligence	December 6th 2024	IBM
13	A.KEVIN FANNEX	Business Intelligence	December 7th 2024	IBM
14	U.S.MITHRAN	Business Intelligence	December 17th 2024	IBM
15	A.MOHAMED ASIF	Business Intelligence	December 7th 2024	IBM
17	C.MOHAMED SIDDIQ	Business Intelligence	December 7th 2024	IBM
18	V.MOHAMED HAMZA	Business Intelligence	December 7th 2024	IBM
19	M.MOHAMED IRFAN	Business Intelligence	December 7th 2024	IBM
20	A.MOHAMED JAFFAR SAADIQ	Business Intelligence	December 8th 2024	IBM
21	J.MOHAMED RIYAZ	Business Intelligence	December 7th 2024	IBM
22	D.N.NALEEM AHAMED	Business Intelligence	December 7th 2024	IBM
23	M.R.SHAH NAWAS	Business Intelligence	December 7th 2024	IBM
24	K.A.SHAM	Business Intelligence	December 8th 2024	IBM
25	P.SHRIVARSA	Business Intelligence	December 17th 2024	IBM
27	T.YASINRAJ	Business Intelligence	December 7th 2024	IBM
29	VARSHINI M	Business Intelligence	December 6th 2024	IBM

  
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CONSOLIDATED IBM DETAILS FOR THE PERIOD OF ODD / EVEN SEM 2023/ 2024

Department : COMPUTER SCIENCE AND BUSINESS SYSTEM

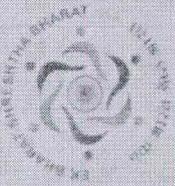
Academic Year: 2023-2024

S.No	Name of the student	Title	Period	Organized
1	MOHAMED IBRAHIM.S	Business Intelligence	December 7th 2024	IBM
2	IDREES	Business Intelligence	December 7th 2024	IBM
3	VISWANATHAN.B	Business Intelligence	December 6th 2024	IBM
4	PRAVEEN JAYARAMAN	Business Intelligence	December 6th 2024	IBM

  
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Ek Bharat Shreshtha Bharat

# Yuva Sangam

Exposure Visit of youth to  
various States of India.

Chief Administrative Officer  
Nodal Officer, Yuva Sangam Phase - III  
IIM Tiruchirappalli



भारत 2023 INDIA



## Certificate of Participation

to

**Prasanna G**

for the active and enthusiastic participation in Yuva Sangam Phase - III  
Youth Exchange Program, an initiative by the Government of India,  
under the aegis of Ek Bharat Shreshtha Bharat between TAMIL NADU and  
RAJASTHAN from December 06, 2023 to December 15, 2023  
hosted by Indian Institute of Information Technology Kota, Rajasthan.

Dean (Corporate Relations & Faculty Affairs)  
Chairman - Core Committee, Yuva Sangam Phase - III  
IIM Tiruchirappalli



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To

MADHVA RAM A

for the active and invaluable participation in Yuva Sangam-phase-IV, a youth exchange program, (an initiative of the Government of India under the aegis of *Ek Bharat Shreshtha Bharat*) organised & hosted by Uttarakhand State Nodal Institution - Hemvati Nandan Bahuguna Garhwal University, Srinagar Garhwal, Uttarakhand, from "28 March to 2 April 2024" in association with IIIT, Trichy, Tamil Nadu (Yuva Sangam-Phase-IV, Partner institution).

Tamil Nadu/Puducherry Youth Visit to Uttarakhand

Prof. Prashant Kandari  
Nodal Officer, Yuva Sangam, Uttarakhand

Prof. Annpurana Nautiyal  
Vice-Chancellor, HNB Garhwal University



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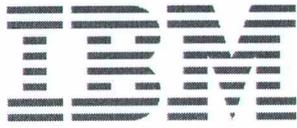
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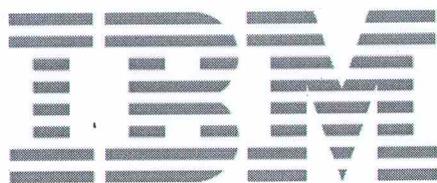
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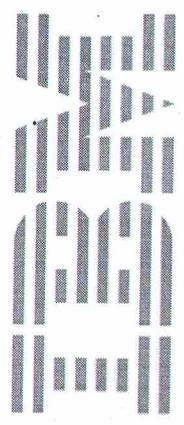
Jagadisha Bhat  
Country Manager - Software Services  
IBM India Pvt Ltd

**December 17, 2024**

Authenticity of this certificate can be validated by going to:  
<https://courses.ibmcep.cognitiveclass.ai/certificates/3e918c4a9cda4f518364d8b5a9d8ec32>

**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.



This is to certify that

**Yasin Raj**

successfully completed and received a passing grade in

# Business Intelligence

(CEBIAIIN, provided by IBM)

A course on [ibmcepcognitiveclass.ai](https://ibmcepcognitiveclass.ai)  
Powered by IBM Developer Skills Network.

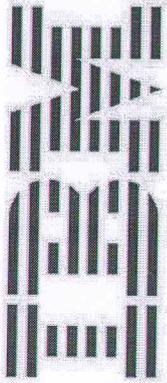
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Jagadisha Bhat  
Country Manager - Software Services  
IBM India Pvt Ltd

**PRINCIPAL**  
Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

December 7, 2024

Authenticity of this certificate can be validated by going to:



This is to certify that

**Varshini M**

successfully completed and received a passing grade in

**Business Intelligence**

(CEBIAIIN, provided by IBM)

A course on [ibmcep.cognitiveclass.ai](https://ibmcep.cognitiveclass.ai)  
Powered by IBM Developer Skills Network.

Issued by  
**IBM Career Education Program**

Jagadisha Bhat  
Country Manager - Software Services  
IBM India Pvt. Ltd

**December 6, 2024**

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**PRINCIPAL**  
Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.



**MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING**

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)



**JAVA Training**  
**By**  
**SMART SKILL TECHNOLOGIES**  
  
**SYLLABUS**

**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.



**MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING**

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)



From,

Department of Training and Placement,

MSAJCE,

To,

The Principal,

MSAJCE

Respected Sir,

Sub: Permission to conduct a Placement Training – Reg

As we planned to conduct the placement training on JAVA Programming for industry by SMART SKILL TECHNOLOGIES for our college Third YEAR CSE, IT and EEE Placement Registered students from April Second Week. Kindly provide permission to conduct and training and use the lab 401,402,417 and 416 to conduct training and do the needful.

Thanking You

Chennai,

02/04/2024

Yours Faithfully,

  
Head Training

  
**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.



### Report on Java Training by SMART SKILL TECHNOLOGIES

The java class has started for the 3<sup>rd</sup> year placement at the month of mid of march and april. The college staff incharge for the java class is Mr. Vigneshwaran (Mech) and Mr.Gopi(EEE).

The class starts with basics of core-java. The incharge for the java class is Ashik and Sudarshan. It contains almost of 15 topics. The topics weretaken with the practical examples. The application or tool used for the java program workout is eclipse.

Every day after the topic completion task will be given related to the taken topics with the practical session and the task contains almost 10 to 15 questions.

The task should be submitted to the official placement group and the task were checked by the admin. If any doubt or corrections arise, it will be rectified in the training session.

**The topics will be listed below:**

Day-1	Class, method,object
Day-2	Inheritance, Datatype,access modifier
Day-3	Polymorphism
Day-4	Abstraction
Day-5	Control Statements
Day-6	String functions
Day-7	Arrays
Day-8	Collection Intro
Day-9	Lists
Day-10	Userdefined List
Day-11	Linkedlist Vs Vector
Day-12	Set and types
Day-13	Constructor and types
Day-14	This and super and access specifier
Day-15	Encapsulation

**Overview of Java training days:**

Training of Java class	Revision of Java class	Exam	Total
15 days	4days	1 day	20days

*[Signature]*  
**PRINCIPAL**  
 Mohamed Sathak A.J. College of Engineering  
 No.34, Rajiv Gandhi Salai (OMR)  
 Sipcot - I.T.Highway Egattur,  
 Chennai - 603103.



The 15-day Java class training was a highly effective and comprehensive program designed to equip participants with both foundational and advanced Java programming skills. The structured curriculum, which included detailed explorations of Object-Oriented Programming (OOP) concepts and control statements, ensured that learners could grasp complex topics systematically.

Each day balanced theoretical instruction with hands-on coding sessions, fostering an environment conducive to active learning and practical application. The inclusion of daily tasks and a mini-project not only reinforced the material covered but also provided real-world context, enabling participants to solve practical problems using Java.

The interactive Q&A sessions were particularly beneficial, allowing learners to address their doubts and solidify their understanding. Overall, the training was well-received and left participants feeling confident and proficient in their Java programming abilities.

### **Exam Structure**

The exam had a total of 50 marks, with a pass mark set at 25 marks. The questions were structured as follows:

- **Ten 2-mark Questions:** These questions were designed to test the participants' understanding of basic concepts and their ability to apply these concepts in straightforward scenarios.
- **Four 5-mark Questions:** These questions required more detailed responses, testing participants' in-depth knowledge and their ability to solve more complex problems.
- **Ten 1-mark Questions:** These questions were typically short-answer, assessing quick recall of key facts and concepts.

By attending the Java class, we have gained knowledge about the core-Java and we have skilled with coding techniques.

**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

Java\_Interview\_Sathak

Program Questions --> Total (20 marks)

---

1. Write a program for Hierachial Inheritance(With definition) -- (5 marks)

2. Write a program to Reverse the String (or) By using any 6 String Methods manipulate the String variables ---- (5 marks)

```
data : String s = "computer programming";
```

3 Without using String methods try to fetch the multiple of 'm' presented in the String -- (5 marks)

```
String s = "computer programming";
```

4. Do some CRUD(Create, Retrieve, Update, Delete) operation in List Interface -(5 marks)

---

Objectives --> (10 marks)

1. How to initialize the value ...?
  2. How to Instanciate for LIST with generics...?
  3. What is the Default package for Scanner class...?
  4. What is the superclass for all the classes in java...?
  5. What is the Parent Exception for all exception in Java...?
  6. What is the Parent Interface for all Interface in Java...?
  7. What is the Default return type of Method ...?
  8. How you will represent the Array ..? choice: class, Interface, Object
  9. What keyword you will use to create a own exception...?
  10. What is the return type of compareTo method....?
- 

Theory ---> (20 marks) each question (2 marks)

1. Difference between Static method and Abstract Method..?
  2. Difference between Collection and Array ...?
  3. Explain about different Type of String...?
  4. Difference between Checked and unchecked exception...?
  5. Differnce between static binding and dynamic binding ...?
  6. Explain about String..?
  7. Explain about set Interface..?
  8. Explain about map interface..?
  9. What is mean by constructor...?
  10. What are the type of variable...?
- 

  
**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
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Chennai - 603103.

Java\_Interview\_Sathak

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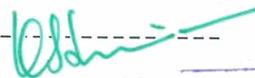
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- 

  
**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salsai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

**Mohamed Sathak AJ College of Engineering**

**(An Autonomous Institution)**

**Department of Training**

**JAVA Final Test Report Conducted by SMART Skills Technologies**

SI No	Name	Year	Mark out of 50	Pass or Fail	CLASS
1	Divya A	3th year	43	Pass	HIGH
2	Shree haari B	3rd year	27	Pass	MEDIUM
3	Mohammed Jameel Asfer	3rd year	43	Pass	HIGH
4	Syed mohammed mateen	3rd year	21	Fail	LOW
5	Leriatamil D	3rd year	30	Pass	MEDIUM
6	Ariyukkarasu K	3rd year	40	Pass	HIGH
7	Azeel Ahmed A	3rd year	26	Pass	MEDIUM
8	Prajesh Ram V	3rd year - IT	37	Pass	HIGH
9	Uma Maheshwari E D	3rd year - CSE	32	Pass	MEDIUM
10	Keerthana T	3rd year - CSE	30	Pass	MEDIUM
11	Devi G	3rd year - CSE	26	Pass	MEDIUM
12	Laksha D	3rd year	30	Pass	MEDIUM
13	Richardson S	3rd year- CSE	35	Pass	MEDIUM
14	Karthik D	3th year - CSE	30	Pass	MEDIUM
15	Gulabi Basharath A	3th year - CSE	32	Pass	MEDIUM
16	Gokulnath R	3th year - CSE	34	Pass	MEDIUM
17	Taufeeq Ahmed	3rd year	14	Fail	LOW
18	Rufeena mehsabeen M	3th year - CSE	40	Pass	HIGH
19	Saran M	3th year	31	Pass	MEDIUM
20	Sijin R	3th year - CSE	30	Pass	MEDIUM
21	Mohamed Kauth A	3th year - IT	20	Fail	LOW
22	Shariar Sarfan S A	3th year - EEE	26	Pass	MEDIUM
23	Harini M	3th year - CSE	40	Pass	HIGH
24	Muhammed Aakif	3th year	22	Fail	LOW
25	Muhammed Irfan	3th year	13	Fail	LOW
26	Dwaraka J S	3th year	28	Pass	MEDIUM
27	Swetha S	3th year - CSE	27	Pass	MEDIUM
28	Darshini K	3th year - CSE	37	Pass	HIGH
29	Nishad Nazeer	3rd year IT	19	Fail	LOW
30	Karishma	3rd year CSE	49	Pass	HIGH
31	Kasthuri	3rd year	46	Pass	HIGH
32	Harini K	3rd year CSE	45	Pass	HIGH
33	Mohammed Isamail	3rd Year CSE	35	Pass	MEDIUM
34	yuvaraj	3rd Year	13	Fail	LOW
35	Vishal	3rd Year	1	Fail	LOW
36	Kaviya	3rd Year	41	Pass	HIGH
37	Adhil Hathim	3rd Year IT	36	Pass	HIGH
38	vishali	3rd Year CSE	48	Pass	HIGH
39	Maryam Shafa	3rd Year CSE	39	Pass	HIGH
40	Syed Zuha Tasneem	3rd Year CSE	39	Pass	HIGH
41	Nabeeha Rahim	3rd Year CSE	41	Pass	HIGH
42	Afreen	3rd Year CSE	41	Pass	HIGH
43	Abdul Malik	3rd Year EEE	47	Pass	HIGH
44	Rithanya	3rd Year	25	Pass	MEDIUM
45	Basim	3rd Year	25	Pass	MEDIUM
46	Mohammed Owaj	3rd Year	33	Pass	MEDIUM
47	Mohammed Sameer	3rd Year CSE	25	Pass	MEDIUM
48	Hasan	3rd Year CSE	25	Pass	MEDIUM
49	Mohammed Hafiz	3rd Year	26	Pass	MEDIUM
50	Subash	3rd year CSE	36	Pass	HIGH
51	Dhanush Kumar	3rd year CSE	39	Pass	HIGH

52	Mohammed Farhan	3rd year CSE	33	Pass	MEDIUM
53	Syed Sameer Khan	3rd Year	27	Pass	MEDIUM
54	Mohammed Rizwan	3rd Year CSE	15	Fail	LOW
55	Srithar	3rd Year IT	45	Pass	HIGH
56	Manikandan	3rd Year CSE	42	Pass	HIGH
57	Abdul Basith	3rd Year	39	Pass	HIGH
58	DurgaDevi	3rd Year IT	47	Pass	HIGH
59	Farhan Basha	3rd Year CSE	26	Pass	MEDIUM
60	Akshaya A	3rd Year	43	Pass	HIGH
61	Sri balaji	3rd Year	39	Pass	HIGH
62	Nithya Sree	3rd Year	47	Pass	HIGH
63	Khaja nawaz	3rd year IT	38	Pass	HIGH
64	Rehana Khan	3rd Year	43	Pass	HIGH
65	Vengadesan	3rd year It	44	Pass	HIGH
66	Imayavarman	3rd year	44	Pass	HIGH
67	Dhanusiya	3rd year	43	Pass	HIGH
68	Suresh	3rd year	40	Pass	HIGH
69	kalai selvan	3rd year	42	Pass	HIGH
70	Abiramasundari	3rd year	44	Pass	HIGH
71	Shameel Ahamed	3rd year	37	Pass	HIGH
72	Manikandan	3rd year	43	Pass	HIGH
73	Fazeela	3rd year	48	Pass	HIGH
74	Mohammed Farhan	3rd year	37	Pass	HIGH
75	Rakshita	3rd year	48	Pass	HIGH
76	Prarthana	3rd year	45	Pass	HIGH

  
PRINCIPAL

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

# Smart Skills Technologies



## Certificate of Completion

**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

This is to certify Mr./Ms. **NITHYASREE G** ..... has successfully completed the  
course **CORE JAVA PROGRAMMING COURSE** ..... Dated **APRIL 2024**  
to **MAY 2024** ..... in Smart Skills Technologies.

**Edwin**

*Sr. Manager - Human Resources*

# Smart Skills Technologies



## Certificate of Completion



**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

This is to certify Mr./Ms. .... **REHANA KHANM A** ..... has successfully completed the  
course ..... **CORE JAVA PROGRAMMING COURSE** ..... Dated ..... **APRIL 2024** .....  
to ..... **MAY 2024** ..... in Smart Skills Technologies.



**Edwin**

*Sr. Manager - Human Resources*

# Smart Skills Technologies



## Certificate of Completion

This is to certify Mr./Ms. .... **SRI BALAJI S** ..... has successfully completed the  
course ..... **CORE JAVA PROGRAMMING COURSE** ..... Dated ..... **APRIL 2024** .....  
to ..... **MAY 2024** ..... in Smart Skills Technologies.

  
**PRINCIPAL**  
Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

  
**Edwin**  
Sr. Manager - Human Resources



**MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING**

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)



From,

Department of Training and Placement,

MSAJCE,

To,

The Principal,

MSAJCE

Respected Sir,

Sub: Permission to conduct a Placement Training – Reg

As we planned to conduct the placement training on NX CAD by TANSAM Powered by SIEMENS for our college Third YEAR Mechanical Placement Registered students from April 15/04/2024 – 22/04/2024. Kindly provide permission to conduct the training and do the needful.

Thanking You

Chennai,

02/04/2024

Yours Faithfully,

  
Head Training

  
PRINCIPAL

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.



**MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING**

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)



**Department of Training and Placement**

Ref NO: MSAJCE/P&T/03/04

Date: 02/04/2024

**CIRCULAR**

This is to inform to placement registered students As we planned to conduct the placement training on NX CAD by TANSAM Powered by SIEMENS for our college Third YEAR Mechanical Placement Registered students from April 15/04/2024 – 22/04/2024. All are advised to attend the training properly without fail attendance is mandatory.

Copy To,  
The Principal  
All HOD  
IQAC

Yours faithfully

*[Handwritten Signature]*  
02/04/24

Head Training

*[Handwritten Signature]*  
**PRINCIPAL**

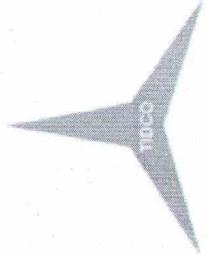
Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

Mohamed Sathak AJ College of Engineering			
Department of Training and Placement			
List of Students Interested for NXCAD Training by TANSAM			
S.No	Name of the Student	Department	Year of Study
1	DHANUSH ADITHYA.S	Mechanical	3rd Year
2	SHAIK IRFAN K	Mechanical	3rd Year
3	HARI M	Mechanical	3rd Year
4	NARESH P	Mechanical	3rd Year
5	HAJI PUDHUR MYDEEN S	Mechanical	3rd Year
6	MOHAMED ANSARI N	Mechanical	3rd Year
7	ABDUL KAFFAR J	Mechanical	3rd Year
8	MOHAMED FAZID S	Mechanical	3rd Year
9	SEYED AHAMED S .T	Mechanical	3rd Year
10	SHAIK KUMAR P	Mechanical	3rd Year
11	AADIL T	Mechanical	3rd Year
12	RASOOL MOHAMED I	Mechanical	3rd Year
13	SHAMEER AHMED. A	Mechanical	3rd Year
14	MOHAMED ANWAR T A	Mechanical	3rd Year
15	ABDUR RAHMAN J	Mechanical	3rd Year
16	SYED MOHAMED	Mechanical	3rd Year
17	MOHAMED SAMEEM P	Mechanical	3rd Year
18	CHANDRU P	Mechanical	3rd Year
19	Udhayakumar	Mechanical	3rd Year

  
**PRINCIPAL**  
 Mohamed Sathak A.J. College of Engineering  
 No.34, Rajiv Gandhi Salai (OMR)  
 Sipcot - IT Highway Egattur,  
 Chennai - 603103.



April 2024



TANSAM

**SIEMENS**

*Ingenuity for life*

# Certificate of Completion

*Presented to*

This is to certify that MOHAMED FAZID S - 311821114010 of

Mohamed Sathak AJ College of Engineering pursuing Department of  
B.E Mechanical Engineering, 3<sup>rd</sup> year has successfully completed the Internship  
Training Programme on NX CAD in TANSAM during 15<sup>th</sup> April – 22<sup>nd</sup> April, 2024.

We wish him all success in his future endeavor.

**PRINCIPAL**

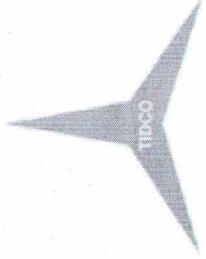
Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

Chief Operating Officer  
Advanced Manufacturing / Skill  
Enablement

Chief Executive Officer  
TANSAM



April 2024



TANSAM

**SIEMENS**

*Ingenuity for life*

# Certificate of Completion

*Presented to*

This is to certify that MOHAMED ANSARIN - 311821114009 of \_\_\_\_\_

Mohamed Sathak AJ College of Engineering pursuing Department of  
B.E Mechanical Engineering, 3<sup>rd</sup> year has successfully completed the Internship  
Training Programme on NX CAD in TANSAM during 15<sup>th</sup> April – 22<sup>nd</sup> April, 2024.

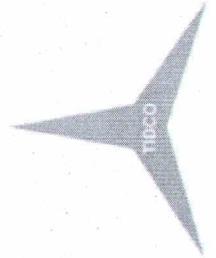
We wish him all success in his future endeavor.

Chief Operating Officer  
Advanced Manufacturing / Skill  
Enablement

**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

Chief Executive Officer  
TANSAM



# Certificate of Completion

*Presented to*

This is to certify that MOHAMED ANWAR T A - 311821114303 of

Mohamed Sathak AJ College of Engineering pursuing Department of  
B.E Mechanical Engineering, 3<sup>rd</sup> year has successfully completed the Internship  
Training Programme on NX CAD in TANSAM during 15<sup>th</sup> April – 22<sup>nd</sup> April, 2024.

We wish him all success in his future endeavor.

**PRINCIPAL**  
Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

Chief Operating Officer  
Advanced Manufacturing / Skill  
Enablement

Chief Executive Officer  
TANSAM

6/6/24, 2:39 PM

Mohamed Sathak A.J. College Of Engineering Mail - CAD Course Training - Reg.

Cc: jeyaraj@tansam.org, alanchryso@tansam.org

Dear Sir,

Thank you for the information. kindly let me know the no of hours required for training

With Thanks & Regards,

Vigneshwaran V

Placement Officer

Department of Training and Placement,

Mohamed Sathak AJ College of Engineering,

7904117425

MSAJCE WEBLINK

[Quoted text hidden]

**vinoth.s@tansam.org** <vinoth.s@tansam.org>  
To: Placement Officer <placement@msajce-edu.in>  
Cc: jeyaraj@tansam.org, alanchryso@tansam.org

Wed, Jan 31, 2024 at 5:27 PM

Hi Sir,

The duration of both training courses is 40 hours each.

Thanks

Vinoth S

[Quoted text hidden]

**Placement Officer** <placement@msajce-edu.in>  
To: vinoth.s@tansam.org  
Cc: jeyaraj@tansam.org, alanchryso@tansam.org

Wed, Jan 31, 2024 at 5:51 PM

Thankyou very much sir I will call you tomorrow

[Quoted text hidden]

**vinoth.s@tansam.org** <vinoth.s@tansam.org>  
To: Placement Officer <placement@msajce-edu.in>  
Cc: jeyaraj@tansam.org, alanchryso@tansam.org, ganeshprabhu.p@tansam.org

Tue, Feb 6, 2024 at 11:52 AM

Hi Sir,

I hope this message finds you well. Following our recent discussion, I am pleased to inform you that we have reviewed and revised the quotation for NX CAD Training. I am delighted to share that we have successfully reduced the overall cost of the quotation. The revised details are outlined in the attached document. Please take a moment to review the revised quotation, and feel free to reach out if you have any questions or require further clarification.

As discussed, we can start the training program on next week from 12Feb2024, Monday. So, you may issue a purchase order for the quoted amount as soon as possible.

Thanks

Vinoth S

  
PRINCIPAL

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

**From:** vinoth.s@tansam.org <vinoth.s@tansam.org>  
**Sent:** 31 January 2024 05:28 PM  
**To:** 'Placement Officer' <placement@msajce-edu.in>  
**Cc:** 'jeyaraj@tansam.org' <jeyaraj@tansam.org>; 'alanchryso@tansam.org' <alanchryso@tansam.org>  
**Subject:** RE: CAD Course Training - Reg.



Placement Cell &lt;placement@msajce-edu.in&gt;

**CAD Course Training - Reg.**

6 messages

**Placement Officer** <placement@msajce-edu.in>

Wed, Jan 31, 2024 at 12:02 PM

To: alanchryso@tansam.org

Cc: vinoth.s@tansam.org, jeyaraj@tansam.org

Dear Sir, Greetings from Mohamed Sathak AJ College of Engineering.  
Our Students are willing to learn the courses related to Computer Aided Drafting, 3D Modeling and Analysis. Will you provide the courses sir? If there, let me know the course details, duration and fee. It may be helpful for the benefits for the students

**With Thanks & Regards,**  
**Vigneshwaran V**  
**Placement Officer**  
**Department of Training and Placement,**  
**Mohamed Sathak AJ College of Engineering,**  
**7904117425**  
**MSAJCE WEBLINK**

**vinoth.s@tansam.org** <vinoth.s@tansam.org>

Wed, Jan 31, 2024 at 5:00 PM

To: Placement Officer &lt;placement@msajce-edu.in&gt;

Cc: jeyaraj@tansam.org, alanchryso@tansam.org

Hi Sir,

As per your requirement, we have attached the Training material & Quotation for NX CAD & Simcenter 3D FEA (Structural and Dynamics) separately. For CAD modeling training we can have the training on your premises, but for Analysis training, we would have the training on our premises. If you need any support, please contact us immediately.

Thanks&amp;Regards

Vinoth S

Technical Head - Advance Manufacturing

TANSAM Centre of Excellence

Mob: +91 6381844247

[Quoted text hidden]

  
**PRINCIPAL**  
Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

**4 attachments** **Quotation For Simcenter FEA.pdf**  
159K **Quotation For NX.pdf**  
159K **NX CAD Training.pdf**  
848K **Simcenter 3D.pdf**  
523K**Placement Officer** <placement@msajce-edu.in>

Wed, Jan 31, 2024 at 5:23 PM

To: vinoth.s@tansam.org

6/6/24, 2:39 PM

Mohamed Sathak A.J. College Of Engineering Mail - CAD Course Training - Reg.

Hi Sir,

The duration of both training courses is 40 hours each.

Thanks

Vinoth S

---

**From:** Placement Officer <placement@msajce-edu.in>

**Sent:** 31 January 2024 05:24 PM

**To:** vinoth.s@tansam.org

**Cc:** jeyaraj@tansam.org; alanchryso@tansam.org

[Quoted text hidden]

[Quoted text hidden]

---

 **Quotation For NX.pdf**  
159K



**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

6/6/24, 2:37 PM

Mohamed Sathak A.J. College Of Engineering Mail - RE: NX CAD Course Training - Reg.

Vinoth S

Technical Head - Advance Manufacturing

TANSAM Centre of Excellence

Mob: +91 6381844247

**From:** Placement Officer <placement@msajce-edu.in>  
**Sent:** 31 January 2024 12:02 PM  
**To:** alanchryso@tansam.org  
**Cc:** vinoth.s@tansam.org; jeyaraj@tansam.org  
**Subject:** CAD Course Training - Reg.

Dear Sir, Greetings from Mohamed Sathak AJ College of Engineering. Our Students are willing to learn the courses related to Computer Aided Drafting, 3D Modeling and Analysis. Will you provide the courses sir? If there, let me know the course details, duration and fee. It may be helpful for the benefits for the students

With Thanks & Regards,  
Vigneshwaran V  
Placement Officer,  
Department of Training and Placement,  
Mohamed Sathak AJ College of Engineering,  
7904117425  
MSAJCE WEBLINK

 Quotation For NX.pdf  
159K

**Placement Officer** <placement@msajce-edu.in>  
To: vinoth.s@tansam.org  
Cc: jeyaraj@tansam.org, ganeshprabhu.p@tansam.org

Tue, Apr 2, 2024 at 6:39 PM

Respected sir,  
Greetings from Mohamed Sathak AJ College of Engineering!!!

Based on our previous discussion and latest telephone conversation with you I am attaching the name list of the 19 Mechanical students who will attend the training from 03.04.2024 on NXCAD by TANSAM kindly send us the schedule and timing

With Thanks & Regards,  
Vigneshwaran V  
Placement Officer,  
Department of Training and Placement,  
Mohamed Sathak AJ College of Engineering,  
7904117425  
MSAJCE WEBLINK

[Quoted text hidden]

 TANSAM NXCAD Training Student list MSAJCE.xlsx  
10K

vinoth.s@tansam.org <vinoth.s@tansam.org>  
To: Placement Officer <placement@msajce-edu.in>  
Cc: jeyaraj@tansam.org, ganeshprabhu.p@tansam.org

Greetings,

I am writing to inform you about an important update in our training program content – NX CAD Software. We have recently added new training and Topology Optimization(download it from link below) which will enhance the learning experience and provide more comprehensive coverage of ess updates will significantly benefit your students and contribute to their academic and professional success. Should you have any questions or require fi not hesitate to contact me.

We are keen to provide training programs in NX CAD, Simcenter 3D & other software for new students. Thank you for considering this proposal.

  
**PRINCIPAL**  
Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

**RE: NX CAD Course Training - Reg.**

3 messages

Thu, Feb 22, 2024 at 1:29 PM

**vinoth.s@tansam.org** <vinoth.s@tansam.org>  
 To: Placement Officer <placement@msajce-edu.in>  
 Cc: jeyaraj@tansam.org, ganeshprabhu.p@tansam.org

Hi Sir,

I hope this message finds you well. Following our recent discussion, I am pleased to inform you that we have reviewed and revised the quotation for NX CAD Training. I am delighted to share that we have successfully reduced the overall cost of the quotation. The revised details are outlined in the attached document. Please take a moment to review the revised quotation, and feel free to reach out if you have any questions or require further clarification.

As discussed, we can start the training program asap. So, you may issue a purchase order for the quoted amount as soon as possible.

Thanks

Vinoth S

**From:** vinoth.s@tansam.org <vinoth.s@tansam.org>  
**Sent:** 06 February 2024 11:53 AM  
**To:** 'Placement Officer' <placement@msajce-edu.in>  
**Cc:** 'jeyaraj@tansam.org' <jeyaraj@tansam.org>; 'alanchryso@tansam.org' <alanchryso@tansam.org>; 'ganeshprabhu.p@tansam.org' <ganeshprabhu.p@tansam.org>  
**Subject:** RE: CAD Course Training - Reg.

Hi Sir,

I hope this message finds you well. Following our recent discussion, I am pleased to inform you that we have reviewed and revised the quotation for NX CAD Training. I am delighted to share that we have successfully reduced the overall cost of the quotation. The revised details are outlined in the attached document. Please take a moment to review the revised quotation, and feel free to reach out if you have any questions or require further clarification.

As discussed, we can start the training program on next week from 12Feb2024, Monday. So, you may issue a purchase order for the quoted amount as soon as possible.

Thanks

Vinoth S

**From:** vinoth.s@tansam.org <vinoth.s@tansam.org>  
**Sent:** 31 January 2024 05:28 PM  
**To:** 'Placement Officer' <placement@msajce-edu.in>  
**Cc:** 'jeyaraj@tansam.org' <jeyaraj@tansam.org>; 'alanchryso@tansam.org' <alanchryso@tansam.org>  
**Subject:** RE: CAD Course Training - Reg.

Hi Sir,

The duration of both training courses is 40 hours each.

Thanks

Vinoth S

**From:** Placement Officer <placement@msajce-edu.in>  
**Sent:** 31 January 2024 05:24 PM  
**To:** vinoth.s@tansam.org  
**Cc:** jeyaraj@tansam.org; alanchryso@tansam.org  
**Subject:** Re: CAD Course Training - Reg.

Dear Sir,  
 Thank you for the information. kindly let me know the no of hours required for training

With Thanks & Regards,  
 Vigneshwaran V  
 Placement Officer,  
 Department of Training and Placement,  
 Mohamed Sathak AJ College of Engineering,  
 7904117425  
 MSAJCE WEBLINK

  
**PRINCIPAL**  
 Mohamed Sathak A.J. College of Engineering  
 No.34, Rajiv Gandhi Salai (OMR)  
 Sipcot - IT Highway Egattur,  
 Chennai - 603103.

On Wed, Jan 31, 2024 at 5:01 PM <vinoth.s@tansam.org> wrote:

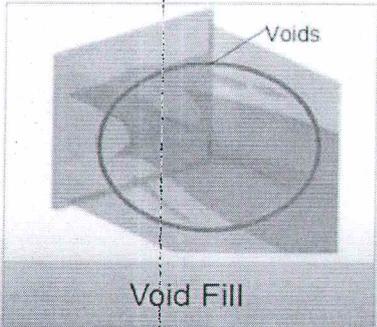
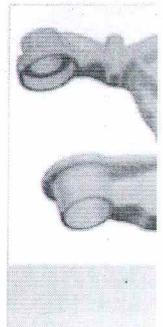
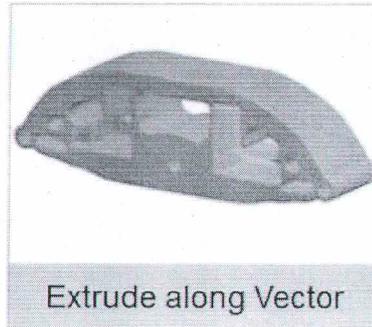
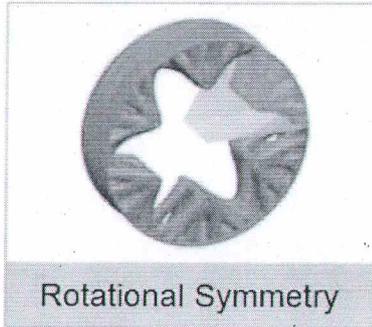
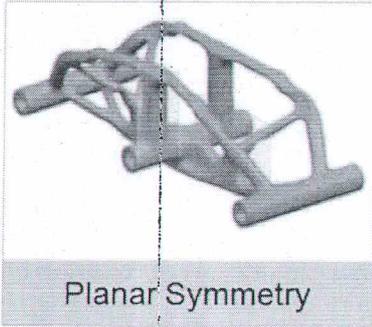
Hi Sir,

As per your requirement, we have attached the Training material & Quotation for NX CAD & Simcenter 3D FEA (Structural and Dynamics) separately. For CAD modeling training we can have the training on your premises, but for Analysis training, we would have the training on our premises. If you need any support, please contact us immediately.

Thanks&amp;Regards

# Topology Optimization Design Constraints

SI



[https://drive.google.com/drive/folders/1lryoC13KnL9fCXVcdbpxBu4-F7o3y3S3?usp=drive\\_link](https://drive.google.com/drive/folders/1lryoC13KnL9fCXVcdbpxBu4-F7o3y3S3?usp=drive_link)

[https://www.youtube.com/watch?v=i1N1XmEMIDk&ab\\_channel=SiemensSoftware](https://www.youtube.com/watch?v=i1N1XmEMIDk&ab_channel=SiemensSoftware)

Thanks & regards,



Vinoth S

Technical Lead - Advance Manufacturing

TANSAM Centre of Excellence

[vinoth.s@tansam.org](mailto:vinoth.s@tansam.org) | [www.tansam.org](http://www.tansam.org)

[Quoted text hidden]

2 attachments

image001.png  
1K

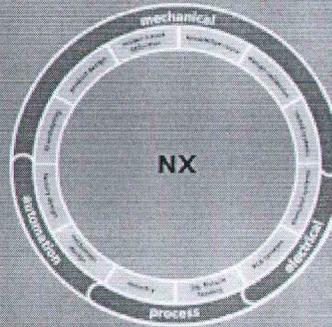
image003.wmz  
227K

  
**PRINCIPAL**  
 Mohamed Sathak A.J. College of Engineering  
 No.34, Rajiv Gandhi Salai (OMR)  
 Sipcot - IT Highway Egattur,  
 Chennai - 603103.



# TAMIL NADU SMART AND ADVANCED MANUFACTURING CENTRE

## NX CAD

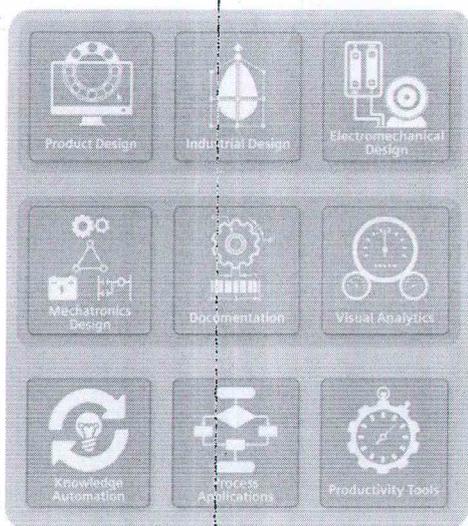


### About NX CAD

NX is the next generation design platform that removes barriers to innovation. Seamlessly combining multiple disciplines, NX enables more iterations by both experts and non-experts, and utilizes the latest manufacturing methods to ensure you recognize the value digitalization and deliver the best designs to market faster. You need a single platform that contains all the tools to break down the barriers between disciplines. NX allows all of your engineers and designers to collaborate and share information across the traditional barriers that exist in a single discipline solution. The NX platform allows your enterprise a complete solution that takes advantage of the data without having to re-master the data in another system. NX takes your innovation to the next level by removing barriers.

### NX for Digital Product Development

## NX CAD



**NX accelerates innovation by helping you leverage knowledge, automate processes, evaluate ideas and manage change efficiently.**

- A unified, integrated solution built on advanced hybrid CAD tools
- Knowledge driven automation
- Simulation & validation
- Managed development environment

NX for Design is an integrated product design solution that streamlines and accelerates the product development process for engineers who need to deliver innovative products in a collaborative environment.

Unlike CAD-only solutions and closed enterprise solutions, NX for Design offers the highest level of integration between development disciplines in an open, collaborative environment

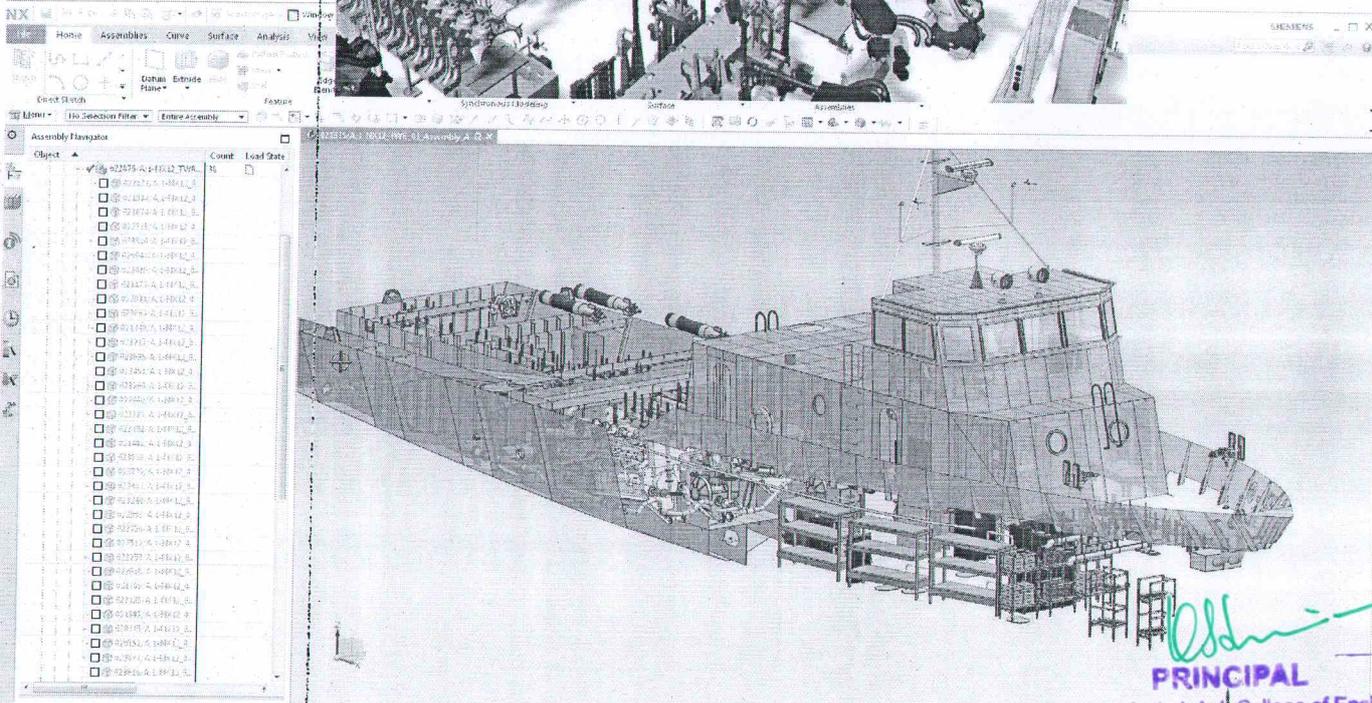
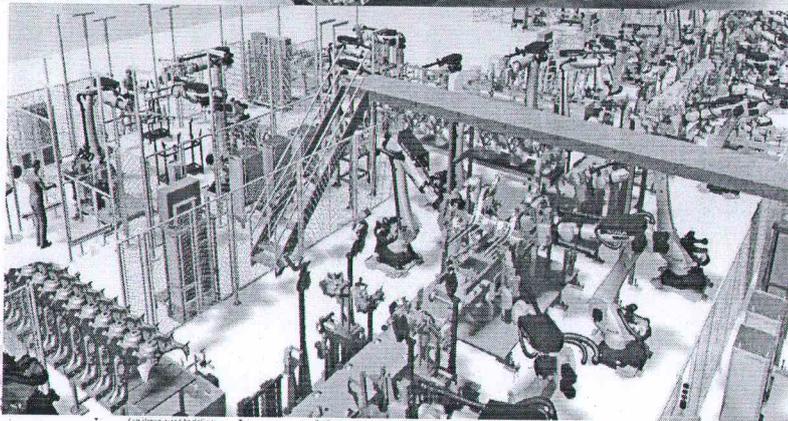
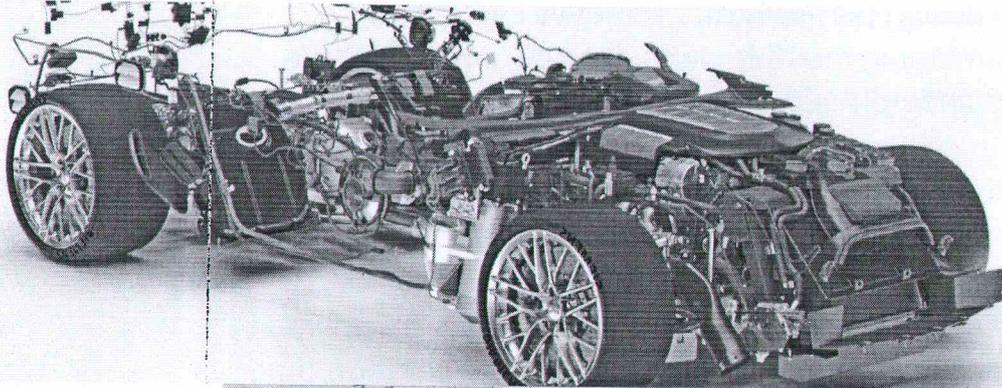
[NX >> Home](#)

**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

# Industry Applications

In nearly 80% of orders, a leading bearings manufacturing handles customization requests for their bearings. To maintain a competitive edge and continue creating customized pieces, the company needed complete control of the product from design to delivery. They chose NX for CAD, Simcenter (CAE) for performance prediction, NX for CAM and Teamcenter for PLM (product lifecycle management) so that all stakeholders used the same data and workflows to make decisions. Now, NX CAD allows their engineers to design new ideas rapidly and efficiently, while also handling design data coming from customers who use different CAD software. And the associativity between NX applications eliminates errors and ensures all files are up-to-date.



**PRINCIPAL**  
Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

## Course Outline

**Introduction** to Mechanical CAD/CAM/CAE Software, Basic Layout NXCAD and its uses, Advantages.

**Interface** of NX CAD, Mouse function, Basic commands: Save, Open, Import, Export.

**Modeling:** Sketching, Constraint, Dimensions. **Design feature:** Extrude, Revolve, Trim body, edge blend, face blend ., etc.

**Drafting:** Introduction, View creation wizard, base view, update view, section view. Annotations, dimensions, tables. Custom symbol, drawing format.

**Surface Modeling:** Introduction to Surface Modeling, Extruded Surface, Ruled Surface, Through Curve, Sweep Surface, N-Sided Surface, Law Extension, Studio Surface, Extract Curves, Face Blend ., etc.

**Sheet Metal Modeling:** Customer defaults, Tabs, Base features, Flanges, Full width flange, Contour flange, lofted flange, Corner, Three bend corner, Job, bend, unbend, Dimple, Louver, cutout, bead, solid punch ., etc.

**Assembly Modeling:** The Assembly Environment, Invoking the Assembly Environment , Invoking the Assembly Environment Using the Assembly Template from the New Dialog Box, Types of Assembly Design Approaches, Creating Bottom-up Assemblies, Placing Components in the Assembly Environment, Changing the Reference Set of a Component, Applying Assembly Constraints to Components, Points to Remember while Assembling Components, Creating a Component Array in an Assembly, The Top-down Assembly Design Approach, Creating Components Using the Top-down Assembly Design Approach, Creating Subassemblies, Editing Assembly Constraints, Exploding Views., etc.



**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

## Contact Information

**Email:** [info@tansam.org](mailto:info@tansam.org) **Website:** [www.tansam.org](http://www.tansam.org)

**Address:** TIDEL Park, Rajiv Gandhi IT Expressway, Tharamani, Chennai,  
Tamil Nadu 600113.





April 2024



**SIEMENS**  
Ingenuity for life



# Certificate of Completion

*Presented to*

This is to certify that MOHAMED ANSARIN - 311821114009 of  
Mohamed Sathak A.J. College of Engineering pursuing Department of  
B.E Mechanical Engineering, 3<sup>rd</sup> year has successfully completed the Internship  
Training Programme on **NX CAD** in **TANSAM** during 15<sup>th</sup> April – 22<sup>nd</sup> April, 2024.  
We wish him all success in his future endeavor.

Chief Operating Officer  
Advanced Manufacturing / Skill  
Enablement

PRINCIPAL  
Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

Chief Executive Officer  
TANSAM



April 2024



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# Certificate of Completion

*Presented to*

This is to certify that MOHAMED FAZID S - 311821114010 of  
Mohamed Sathak A.J College of Engineering pursuing Department of  
B.E Mechanical Engineering, 3<sup>rd</sup> year has successfully completed the Internship  
Training Programme on **NX CAD** in **TANSAM** during 15<sup>th</sup> April – 22<sup>nd</sup> April, 2024.  
We wish him all success in his future endeavor.

Chief Operating Officer  
Advanced Manufacturing / Skill  
Enablement

PRINCIPAL  
Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

Chief Executive Officer  
TANSAM



April 2024



**SIEMENS**  
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# Certificate of Completion

*Presented to*

This is to certify that MOHAMED SAMEEM P - 311821114701 of  
Mohamed Sathak A.J. College of Engineering pursuing Department of  
B.E Mechanical Engineering, 3<sup>rd</sup> year has successfully completed the Internship  
Training Programme on **NX CAD** in **TANSAM** during 15<sup>th</sup> April – 22<sup>nd</sup> April, 2024.  
We wish him all success in his future endeavor.

  
**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.



Chief Operating Officer  
Advanced Manufacturing / Skill  
Enablement



Chief Executive Officer  
TANSAM



April 2024



**SIEMENS**  
Ingenuity for life



# Certificate of Completion

*Presented to*

This is to certify that SHAILESH KUMAR P - 311821114017 of  
Mohamed Sathak A.J. College of Engineering pursuing Department of  
B.E Mechanical Engineering, 3<sup>rd</sup> year has successfully completed the Internship  
Training Programme on **NX CAD** in **TANSAM** during 15<sup>th</sup> April – 22<sup>nd</sup> April, 2024.  
We wish him all success in his future endeavor.

  
**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.



Chief Operating Officer  
Advanced Manufacturing / Skill  
Enablement



Chief Executive Officer  
TANSAM



April 2024



**SIEMENS**  
*Ingenuity for life*



# Certificate of Completion

*Presented to*

This is to certify that RASOOL MOHAMED I - 311821114304 of  
Mohamed Sathak AJ College of Engineering pursuing Department of  
B.E Mechanical Engineering, 3<sup>rd</sup> year has successfully completed the Internship  
Training Programme on **NX CAD** in **TANSAM** during 15<sup>th</sup> April – 22<sup>nd</sup> April, 2024.  
We wish him all success in his future endeavor.

  
**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.



Chief Operating Officer  
Advanced Manufacturing / Skill  
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Chief Executive Officer  
TANSAM



**MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING**

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)



From,

Department of Training and Placement,

MSAJCE,

To,

The Principal,

MSAJCE

Respected Sir,

Sub: Permission to conduct a Placement Training – Reg

As we planned to conduct the placement training on Embedded Training Program by TVS Training and Services, Chennai at Ambattur for our college Third YEAR EEE & ECE Placement Registered students from April 25/04/2024 – 30/04/2024. Kindly provide permission to conduct the training and Usage of CAD LAB and do the needful.

Thanking You

Chennai,

15/04/2024

Yours Faithfully,

  
Head Training

  
**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.



**MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING**  
(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)



**Department of Training and Placement**

Ref NO: MSAJCE/P&T/08/04

Date: 15/04/2024

**CIRCULAR**

This is to inform to placement registered students As we planned to conduct the placement training on Embedded Training Program by TVS Training and Services, Chennai at Ambattur for our college Third YEAR EEE & ECE Placement Registered students from April 25/04/2024 – 30/04/2024. All are advised to attend the training properly without fail attendance is mandatory.

Copy To,  
The Principal  
All HOD  
IQAC

Yours faithfully

*[Handwritten Signature]*  
15/4/24

Head Training

*[Handwritten Signature]*  
PRINCIPAL

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

MOHAMED SATHAK A J COLLEGE OF ENGINEERING		
DEPARTMENT OF TRAINING AND PLACEMENT		
STUDENTS NAMELIST- TVS TRAINING		
S.NO	NAME	DEPARTMENT-YEAR
1	DILLIGANESH A	B.E- EEE- 3RD YR
2	SYED HIFZUL RAHMAN F	B.E- EEE- 3RD YR
3	J.ABDUL MALIK	B.E- EEE- 3RD YR
4	SRI KARTHIK.V	B.E- EEE- 3RD YR
5	MOHANRAJ.K	B.E- EEE- 3RD YR
6	SANTHOSH KUMAR V	B.E- EEE- 3RD YR
7	PRASAD NAGARAJ	B.E- EEE- 3RD YR
8	AL MUHASHIF RIFATH. M	B.E- EEE- 3RD YR
9	HARIHARAN C	B.E- EEE- 3RD YR
10	MOHAMED RIYAZDEEN. M	B.E- EEE- 3RD YR
11	NAGARAJ. B	B.E- EEE- 3RD YR
12	A MOHAMED IZZAT	B.E- EEE- 3RD YR
13	KARTHICK A	B.E- EEE- 3RD YR
14	A. THIYAGU	B.E- EEE- 3RD YR
15	MOHAMED BASIL S	B.E- EEE- 3RD YR
16	S.A.SHARIAR SARFAN	B.E- EEE- 3RD YR
17	THAMEEM ANSAARI I.S	B.E- EEE- 3RD YR
18	HAARIS THAMEEM ANSARI A	B.E- ECE- 3RD YR
19	SURYA T	B.E- ECE- 3RD YR
20	R.HALITH UMAR	B.E- ECE- 3RD YR
21	A.ABDUL BAASIT	B.E- ECE- 3RD YR
22	SAFIA FARHEEN.Z.R	B.E- ECE- 3RD YR
23	MAHESWARAN R	B.E- ECE- 3RD YR
24	VENKATESH S	B.E- ECE- 3RD YR
25	SUHAIL K	B.E- ECE- 3RD YR
26	BHAVANI.H	B.E- ECE- 3RD YR
27	JAYASUDHAN.J	B.E- ECE- 3RD YR
28	MOHAMMED AATHIF.M	B.E- ECE- 3RD YR
29	SYED AFRID. I	B.E- ECE- 3RD YR
30	ARIHARAN A	B.E- ECE- 3RD YR
31	KISHORE.D	B.E- ECE- 3RD YR
32	SAHUL HAMEED T	B.E- ECE- 3RD YR
33	DINESH K.N	B.E- ECE- 3RD YR
34	KARTHIKEYAN S	B.E- ECE- 3RD YR
35	SOWNDHARYA G	B.E- ECE- 3RD YR
36	HUMAIRA NUSRATH S	B.E- ECE- 3RD YR
37	DINESH C	B.E- ECE- 3RD YR
38	NANDHINI K	B.E- ECE- 3RD YR
39	PAVITHRA S	B.E- ECE- 3RD YR
40	CHITHRA S	B.E- ECE- 3RD YR
41	ASMA FATHIMA P T	B.E- ECE- 3RD YR
42	MAJITHUL HIKKUM N	B.E- ECE- 3RD YR
43	MOHAMED IBRAHIM	B.E- ECE- 3RD YR

  
**PRINCIPAL**  
 Mohamed Sathak A.J. College of Engineering  
 No.34, Rajiv Gandhi Salai (OMR)  
 Sipcot - IT Highway Egattur,  
 Chennai - 603103.

44	ANISH KUMAR.K	B.E- ECE- 3RD YR
45	GAJENDRAN R	B.E- ECE- 3RD YR
46	Suvan Kumar R	B.E- ECE- 3RD YR
47	Abinaya V	B.E- ECE- 3RD YR
48	GOPI K	B.E- ECE- 3RD YR



**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.



Placement Cell <placement@msajce-edu.in>

### TVS - Content & training Schedule

6 messages

Arunkumar (ADMISSIONS/TVSTS) <arunkumar.v@tvsts.com>

Sat, Apr 20, 2024 at 3:59 PM

To: placement@msajce-edu.in

Cc: principal@msajce-edu.in, "Md.Samiuddin (DGM/TVSTS)" <sam@tvsts.com>

Dear Mr. V. Vigneshwaran sir

Based on the telephone conversation and continuation of your mail, I attached the Program content and details of rescheduling, for confirmation. Please look into this and acknowledge as early as possible.

Details:

Program – Embedded (PIC, Rtos & Linux)

No.of Days – 5

Schedule date – 25, 26, 27, 29, and 30<sup>th</sup> of April 2024.

Venue – TVS Training and Services.

Timing – 9 am to 5 pm.

Note: Please share the list of students to generate LMS for pretest and posttest assessment.

Looking forward.

Thanks and Regards

<p>Arunkumar V Manager-B2E</p>		<p><u>Contact</u> +91 9840026311 044-2625 2170 <a href="mailto:arunkumar.v@tvsts.com">arunkumar.v@tvsts.com</a> <a href="http://www.tvsts.com">www.tvsts.com</a></p>
<p>TVS Training &amp; Services Plot no, 7/9A,7/9B,7/9c,MTH Road, Ambattur Industrial Estate Chennai - 600058 Landmark: Opposite to Kochar Apartments</p>		

  
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Chennai - 603103.

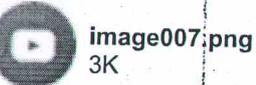
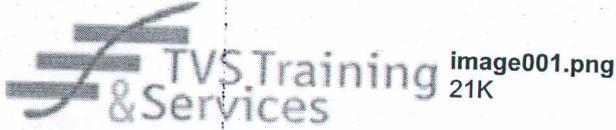
 **Md. Sathak - Embedded Content.pdf**  
415K

**Placement Officer** <placement@msajce-edu.in>  
To: "Arunkumar (ADMISSIONS/TVSTS)" <arunkumar.v@tvsts.com>  
Cc: Principal <principal@msajce-edu.in>, "Md.Samiuddin (DGM/TVSTS)" <sam@tvsts.com>

Sat, Apr 20, 2024 at 7:29 PM

Thankyou sir noted  
[Quoted text hidden]

**7 attachments**



  
**PRINCIPAL**  
Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

**Placement Officer** <placement@msajce-edu.in>  
To: "Arunkumar (ADMISSIONS/TVSTS)" <arunkumar.v@tvsts.com>

Mon, Apr 22, 2024 at 2:09 PM

Respected Sir,  
Here I have attached the students name list for the training program commencing on 24.04.2024  
Kindly find the attachment

[Quoted text hidden]

 **TVS TRAINING NAMELIST.xlsx**  
10K

**Placement Officer** <placement@msajce-edu.in>  
To: "Arunkumar (ADMISSIONS/TVSTS)" <arunkumar.v@tvsts.com>

Thu, Apr 25, 2024 at 5:15 PM

Dear Sir,  
Kindly request you to remove J Abdul Malik - EEE and S A Sarira Sarfan - EEE from the list 46 final students sir from tom  
mostly all will attend sir

[Quoted text hidden]

**Arunkumar (ADMISSIONS/TVSTS)** <arunkumar.v@tvsts.com>  
To: Placement Officer <placement@msajce-edu.in>

Mon, Apr 29, 2024 at 10:04 AM

Good Morning Sir

Good Morning Sirs,

I hereby mention the account details. Please note it, sir. Once payment is done please inform us by sharing the reference ID or UPI. Requesting you to close by today EOD sir.

Looking forward

Details

**Name of the account holder:** TVS Training & Services Ltd

**Account Number:** 00040310011667

**Bank Name :** HDFC Bank

**Bank Branch :** ITC Center, Anna Salai Branch

**IFSC code :** HDFC0000004

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

Thankyou sir noted

[Quoted text hidden]

[Quoted text hidden]

Arunkumar V

Manager:B2E

TVS Training & Services

Plot no, 7/9A,7/9B,7/9c,MTH Road,

Ambattur Industrial Estate

Chenna - 600058

Landmark: Opposite to Kochar  
Apartments

Contact

[Quoted text hidden]



**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
Chennai - 603103.

Dear sir,

I writing this email to approve the following request

1. As Anna University has planned with short notice to conduct the end semester practical examination from coming Saturday I kindly request you to postpone the last two day sessions of the training we will communicate the date later
2. Regarding the payment as our management is not in the station we will complete the payment on Thursday, Friday or Saturday
3. Myself along with our principal will come to your place on thursday regarding the discussion on training for next academic year

Kindly accept the request and do the needful  
My sincere apologies for the inconvenience caused

With regards,  
Vigneshwaran V,  
Head Training  
Department of training and placement  
Msajce

[Quoted text hidden]

**7 attachments**

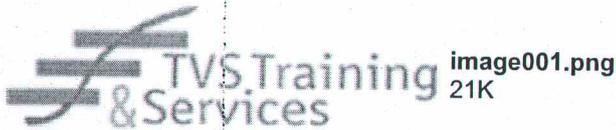


image001.png  
21K



image002.png  
4K



image003.png  
4K



image004.png  
4K



image005.png  
5K



image006.png  
4K



image007.png  
3K

A handwritten signature in blue ink.

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Sipcot - IT Highway Egattur,  
Chennai - 603103.

## Embedded Training Program-Mohamed Sathak A.J. College Of Engineering

S No	Modules	Topics covered	Theory	Practicals	Total
1	RTOS & LINUX	1. Need for RTOS	8	8	16hrs
		2. Responsibility of RTOS			
		3. Task switch			
		4. Scheduling			
		5. ISR			
		6. BSP,BSO			
		7. Bootloader design concept			
		8. Interrupt management			
2	PIC microcontroller	1.Basic architecture PIC16F877A	8	16	24 Hrs
		2. Pin outs & specifications			
		3. Registers & Memory Management			
		4.IDE installation & configuration for new Project.			
		5. On Chip Peripherals –GPIO, PWM,ADC,			
		6. Timers/counter, Seria,IPorts, Interrupts,I2C,SPI			
<b>Total</b>				40hrs	
<b>Days</b>				5	
<b>Per day</b>				8hrs	



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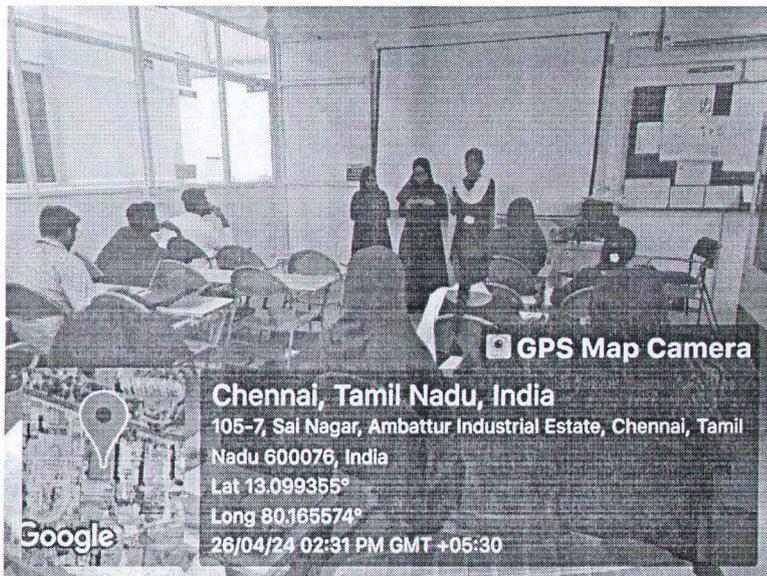
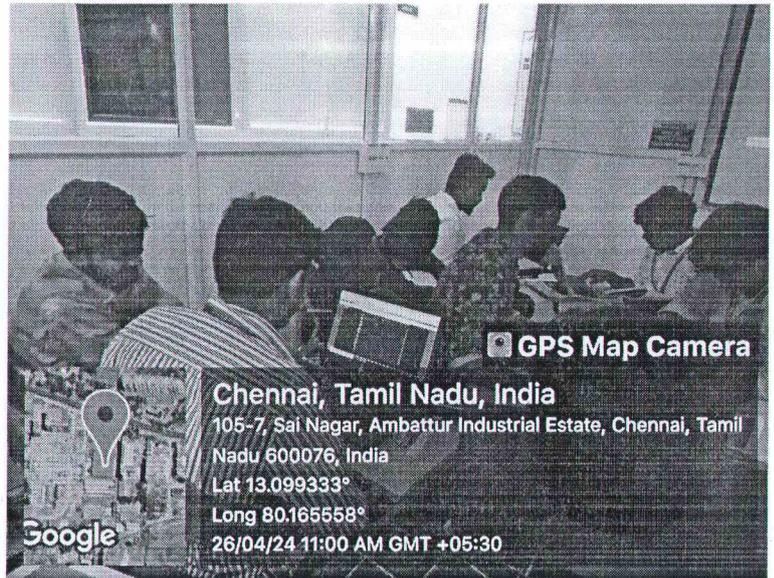
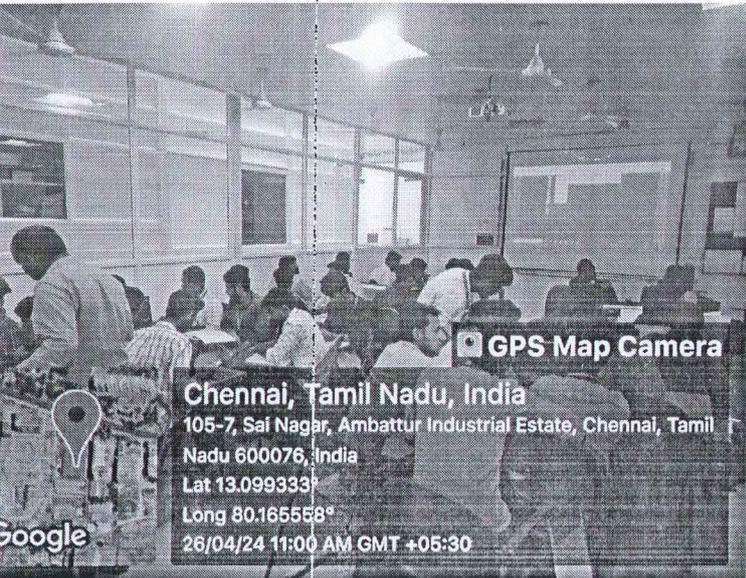


# MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING

34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Chennai - 603 103.



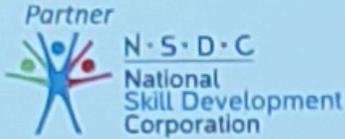
## Photos during the TVS - Training Program



*Mohamed Sathak*  
**PRINCIPAL**

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# CERTIFICATE

*This is to certify that Mr. Syed Hifzul Rahman F  
of M/s. Mohamed Sathak A J College of Engineering  
has successfully completed 15 days Training on  
“Embedded Systems”*

*Conducted by TVS Training and Services Ltd.,  
From 11<sup>th</sup> September 2024 to 30<sup>th</sup> September 2024*

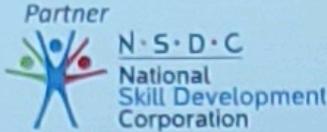


**Mr. G. Narayanamurthy**  
(CEO, TVS Training & Services Ltd.)

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# CERTIFICATE

*This is to certify that Mr. Srikarthik V  
of M/s. Mohamed Sathak A J College of Engineering  
has successfully completed 15 days Training on  
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From 11<sup>th</sup> September 2024 to 30<sup>th</sup> September 2024*

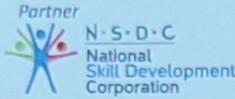


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*This is to certify that **Mr. Karthikeyan S**  
of **M/s. Mohamed Sathak A J College of Engineering**  
has successfully completed 15 days Training on  
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Conducted by **TVS Training and Services Ltd.,**  
From **11<sup>th</sup> September 2024 to 30<sup>th</sup> September 2024***



**Mr. G. Narayanamurthy**  
(CEO, TVS Training & Services Ltd.)

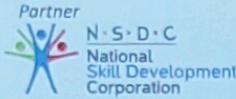
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# CERTIFICATE

*This is to certify that Ms. Safia Farheen Z R  
of M/s. Mohamed Sathak A J College of Engineering  
has successfully completed 15 days Training on  
“Embedded Systems”*

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*This is to certify that Ms. Pavithra S  
of M/s. Mohamed Sathak A J College of Engineering  
has successfully completed 15 days Training on  
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From 11<sup>th</sup> September 2024 to 30<sup>th</sup> September 2024*



**Mr. G. Narayanamurthy**  
(CEO, TVS Training & Services Ltd.)

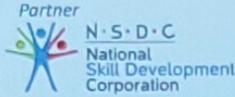
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*This is to certify that **Mr. Maheswaran R**  
of **M/s. Mohamed Sathak A J College of Engineering**  
has successfully completed 15 days Training on  
**“Embedded Systems”**  
Conducted by **TVS Training and Services Ltd.**,  
From **11<sup>th</sup> September 2024 to 30<sup>th</sup> September 2024***



**Mr. G. Narayanamurthy**  
(CEO, TVS Training & Services Ltd.)

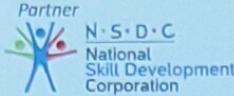
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Chennai - 603103.

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*This is to certify that Ms. Chithra S  
of M/s. Mohamed Sathak A J College of Engineering  
has successfully completed 15 days Training on  
“Embedded Systems”  
Conducted by TVS Training and Services Ltd.,  
From 11<sup>th</sup> September 2024 to 30<sup>th</sup> September 2024*



**Mr. G. Narayanamurthy**  
(CEO, TVS Training & Services Ltd.)

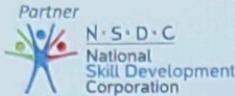
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# CERTIFICATE

*This is to certify that Ms. Asma Fathima P T  
of M/s. Mohamed Sathak A J College of Engineering  
has successfully completed 15 days Training on  
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Conducted by TVS Training and Services Ltd.,  
From 11<sup>th</sup> September 2024 to 30<sup>th</sup> September 2024*



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*This is to certify that **Mr. Anish Kumar K**  
of **M/s. Mohamed Sathak A J College of Engineering**  
has successfully completed 15 days Training on  
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Conducted by **TVS Training and Services Ltd.,**  
From 11<sup>th</sup> September 2024 to 30<sup>th</sup> September 2024*



**Mr. G. Narayanamurthy**  
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of M/s. Mohamed Sathak A J College of Engineering  
has successfully completed 15 days Training on  
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From 11<sup>th</sup> September 2024 to 30<sup>th</sup> September 2024*



**Mr. G. Narayanamurthy**  
(CEO, TVS Training & Services Ltd.)

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Sipcot - IT Highway Egattur,  
Chennai - 603103.

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*This is to certify that Ms. Abinaya V  
of M/s. Mohamed Sathak A J College of Engineering  
has successfully completed 15 days Training on  
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From 11<sup>th</sup> September 2024 to 30<sup>th</sup> September 2024*



**Mr. G. Narayanamurthy**  
(CEO, TVS Training & Services Ltd.)

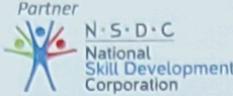
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Sipcot - IT Highway Egattur,  
Chennai - 603103.

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From 11<sup>th</sup> September 2024 to 30<sup>th</sup> September 2024*



**Mr. G. Narayanamurthy**  
(CEO, TVS Training & Services Ltd.)

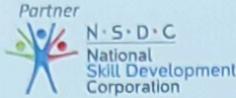
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Chennai - 603103.

CONGRATULATIONS



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of M/s. Mohamed Sathak A J College of Engineering  
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**Mr. G. Narayanamurthy**  
(CEO, TVS Training & Services Ltd.)

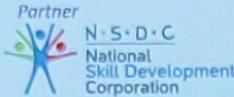
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# CERTIFICATE

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of M/s. Mohamed Sathak A J College of Engineering  
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From 11<sup>th</sup> September 2024 to 30<sup>th</sup> September 2024*



**Mr. G. Narayanamurthy**  
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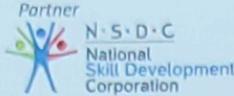
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of M/s. Mohamed Sathak A J College of Engineering  
has successfully completed 15 days Training on  
“Embedded Systems”  
Conducted by TVS Training and Services Ltd.,  
From 11<sup>th</sup> September 2024 to 30<sup>th</sup> September 2024*



**Mr. G. Narayanamurthy**  
(CEO, TVS Training & Services Ltd.)

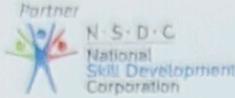
**TVS TRAINING AND SERVICES LTD.**

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No.34, Rajiv Gandhi Salai (OMR)  
Sipcot - IT Highway Egattur,  
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# CERTIFICATE

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of M/s. Mohamed Sathak A J College of Engineering  
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**Mr. G. Narayanamurthy**  
(CEO, TVS Training & Services Ltd.)

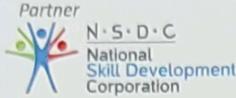
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# CERTIFICATE

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From **11<sup>th</sup> September 2024** to **30<sup>th</sup> September 2024***



**Mr. G. Narayanamurthy**  
(CEO, TVS Training & Services Ltd.)

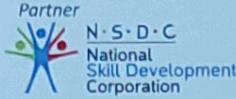
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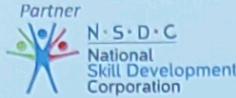
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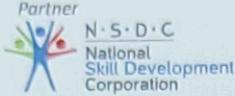
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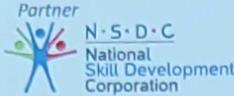
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has successfully completed 15 days Training on  
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### Topics Covered

Module	Topics	Duration (In Hrs)	
		Theory	Practical
Fundamental of electronics	Basic concepts of Electronics , Test & measurement equipment's & Classification of components	4	4
	Analog signal & Signal conditioning		
	Digital signal & Signal converter		
	Registers, Memory		
	Digital to Analog Converter		
	Basics, Digital vs Analog data, Number systems & conversions , Memory scales, Memory types and applications.		
	Logic gates - AND, OR, NOT, NAND, NOR , ExOR, ExNOR gates		
	Combinational circuits & Sequential circuits		
Embedded C programming concepts	Brief of FLipFlop and counters - 4 Bit Binary counter using T flipflop Simulation	2	6
	Introduction of C Programming		
	Functions , Arrays , Pointers ,Structures and Unions		
	Dynamic Memory Allocation		
	Enumerated data types		
	File Handling Concepts		
	Command line Arguments		
PIC Microcontroller	Sorting and Searching Techniques	4	12
	Architecture PIC16F877A		
	Pin outs & specifications		
	Registers & Memory Management		
	IDE Installation & configuration for new project		
Internet of Things using smart devices using Raspberry pi	On Chip Peripherals – GPIO, PWM,ADC, Timers/counter, Serial Ports, Interrupts,I2C,SPI	8	24
	Introduction to IoT		
	IoT Simulation		
	Interfacing Sensors Overview of Sensor		
	Wireless Networking & IoT protocols		
Schematics & PCB Design	Cloud Platform for IoT	4	20
	Schematic and PCB Design		
	Soldering procedure & its types		
	Equipment selection		
Mini Projects	Defects & their causes	0	24
	Inspection Standards		
Emerging Technology	To design and develop product based project (Group Activity )	0	24
	Awareness on Industry 4.0		8
TOTAL (THEORY + PRATICALS)		22	98
Total Training Hours		120	

  
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From,

Department of Training and Placement,

MSAJCE,

To,

The Principal,

MSAJCE

Respected Sir,

Sub: Permission to conduct a Placement Training – Reg

As we planned to conduct the placement training on Introduction to Python by IBM First Year Placement Registered students Phase 1- from 21/12/2023 to 30/12/2023 and Phase 2- From 12/01/2024 – 19/01/2024. Kindly provide permission to conduct the training and Usage of Lab and do the needful.

Thanking You

Chennai,

13/12/2023

Yours Faithfully,

*[Handwritten Signature]*  
13/12/2023  
Head Training

*[Handwritten Signature]*  
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**Department of Training and Placement**

Ref NO: MSAJCE/P&T/11/12

Date: 13/12/2023

**CIRCULAR**

This is to inform to placement registered students As we planned to conduct the placement training on Introduction to Python by IBM First Year Placement Registered students Phase 1- from 21/12/2023 to 30/12/2023 and Phase 2- From 12/01/2024 – 19/01/2024. All are advised to attend the training properly without fail attendance is mandatory.

Copy To,  
The Principal  
All HOD  
IQAC

Yours faithfully

*A. Vijay*  
13/12/2023

Head Training

*[Signature]*

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Chennai - 603103.



This is to certify that

**Aamirahamed. G**

successfully completed and received a passing grade in

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**gurijala chandra prakash Babu**

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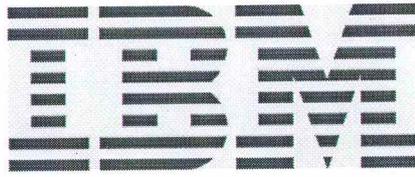
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