



**MOHAMED SATHAK A J COLLEGE OF ENGINEERING**

Sponsored by Mohamed Sathak Trust

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

Siruseri IT Park, Egattur, Chennai 603 103

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**Add on/Certificate programs**

**Academic Year 2017 – 2018**

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**PRINCIPAL**  
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Siruseri IT Park, Egattur, Chennai-603 103.



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### Value Added Course

2017-2018

S.No	Name of Add on / Certificate programs offered	Course Code(if any) Collaboration Details	Year of offering	Number of students completing the course this year	Type of Add-on Course
1	Revit Architecture	-	2017-2018	60	Self Framed Course
2	Python Fullstack	-	2017-2018	49	Self Framed Course
3	Introduction to PLC and SCADA	-	2017-2018	51	Self Framed Course
4	CAD Modeling Using CATIA V5	-	2017-2018	83	Self Framed Course
5	CNC Programming	-	2017-2018	102	Self Framed Course
6	PC Hardware & Networking Troubleshooting Problems	-	2017-2018	147	Self Framed Course

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**DEPARTMENT OF CIVIL ENGINEERING**

From ,

Dr. Gajalakshmi  
Head of the Department  
Department of Civil Engineering  
Mohamed Sathak A.J. College of Engineering,  
Chennai – 603103.

To

The Principal,  
Mohamed Sathak A.J. College of Engineering,  
Chennai – 603103.

Respected Sir,

Sub: Permission for conducting ADD on course – reg.

With reference to the above cited subject, we have proposed to conduct ADD on courses for the students of Civil Engineering department. The selected courses are useful to the students for learning the emerging technical fields.

Kindly provide the permission for the same.

Year/Sem	Title	Dates
III/VI - Civil	Revit Architecture	11/12/2017 to 15/12/2017

Thanking you

Place : Chennai

Date: 4/12/2017

Your's faithfully

G. Ciyar  
4/12/2017

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**DEPARTMENT OF CIVIL ENGINEERING**

From,

Dr. Gajalakshmi  
Head Of The Department  
Department of Civil Engineering  
Mohamed Sathak A.J. College of Engineering,  
Chennai – 603103.

To

The Principal,  
Mohamed Sathak A.J. College of Engineering,  
Chennai – 603103.

Respected Sir,

Sub: Assigning of faculty for VAC course curriculum design for the academic year 2017-2018 reg.

Ref: Letter of Requisition for the appointment of faculty for ADD on course curriculum design for the academic year 2017-2018 Dated 11/12/2017 to 15/12/2017.

The undersigned appreciates the department for proposing to conduct such kind of programme. As per your recommendation and referring to the above subject. I am pleased to nominate the following faculty members for ADD on course curriculum design.

The above listed faculty is hereby instructed to design the curriculum taking in to consideration the thrust areas of the respective field and ensure it should enhance the employability opportunities for the students.

Title	Name of the Faculty
Revit Architecture	Mr.B.Rizha Ur Rahman AP/CIVIL

Thanking you

Place : Chennai

Date: 4/12/2017

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Your's faithfully

*C. Ciyal*  
4/12/2017



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**DEPARTMENT OF CIVIL ENGINEERING**

Date: 04/12/2017

MSAJCE/CIVIL/COE/01/2017-2018

**CIRCULAR**

It is hereby informed to Third Year students of CIVIL department Revit Architecture is arranged from 11/12/2017 to 15/12/2017 at BIM lab. All are advised to attend positively.

*C. Ciyas*  
4/12/2017  
Head of Department

*Wsh*  
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**DEPARTMENT OF CIVIL ENGINEERING**

**COURSE MODULE**  
**B.E CIVIL ENGINEERING ( REGULATIONS 2013 )**

**ADD ON COURSE**  
**REVIT ARCHITECTURE**

**L T P C**  
**1 0 2 2**

**OBJECTIVES:**

- The objective of this course is to impart necessary and practical knowledge of Building Information Modeling (BIM) and Communicate a design idea, structural detailing , concept graphically, visually in 3D Infrastructural Modeling.

**Unit I : Create one floor plan as per Auto cad**

**9**

- Introduction to Revit Architecture – History, Versions
- Exploring GUI , Work spaces, Starting a new project

**Unit II :Drawing Tools**

**9**

- Wall – (Location line , Materials)
- Line, Circle, Arc, Polygon, Rectangle

**Unit III : Create one 2D Floor plan with Doors and Windows with export and Documentation**

**9**

- Components : Door 2D, Window 2D, Furniture 2D, Modify Tools : Import from Auto CAD export as PDF file
- Railings – Add railings, Add railings by sketching, Modify railing, Modify continuous rail.

**Unit IV : Double storey Elevation**

**9**

- Curtain wall (Adding curtain Grids, Mullions)
- Elevation, section, 3D View, Background, Cropping View
- Visibility or Graphic View Templates, Duplicate Views, Visual style filter

**Unit V :Elevation Tools**

**9**

- Lights – Lighting fixtures
- Sun Settings
- Specifying sun Settings

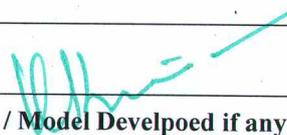
**TOTAL: 45 HOURS**

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Sl. No.	Topic	T / R*	Periods Required	Mode of Teaching
		Book		
1	]Introduction to Revit Architecture – History, Versions	TB	5	Online
2	Exploring GUI	TB	2	Online
3	Work spaces	TB	1	Online
4	Starting a new project	RB	1	Online
5	Wall – (Location line , Materials)	TB	5	Online
6	Line, Circle, Arc, Polygon, Rectangle	TB	4	Online
7	Components : Door 2D, Window 2D, Furniture 2D, Modify Tools : Import from Auto CAD export as PDF file	TB	5	Online
8	Railings – Add railings, Add railings by sketching, Modify railing, Modify continuous rail.	RB	4	Online
9	Curtain wall (Adding curtain Grids, Mullions)	TB	3	Online
10	Elevation, section, 3D View, Background, Cropping View	RB	3	Online
11	Visibility or Graphic View Templates, Duplicate Views, Visual style filter	RB	3	Online
12	Lights – Lighting fixtures	TB	3	Online
13	Sun Settings	RB	3	Online
14	Specifying sun Settings	RB	3	Online
Quiz / Mini Projects / Model Developed if any				
Quiz Conducted				
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**Value added course summary 2017 - 18**

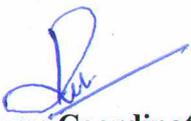
**Course code and Name** : Revit Architecture  
**Course Duration** : 45 Hours  
**Year offered** : III year Students 2017 - 18  
**Course Instructor** : Mr.B.Rizha Ur Rahman AP/Civil  
**Course Outcome** :

Upon completion of the course, A complete skill set, confidence and knowledge required to manage projects using Revit Architecture and the knowledge of industry-standard best practices to apply during the process of managing a project.

**Course Type** : Add on Course  
Theory and Practical with Hands on sessions

**Assessment Mode :**

**Attendance** : 45 Hours  
**No. of Participants** : 60  
**Scheme of Exam** : MCQ Online through GCR  
**Date of Exam** : 18/12/2017

  
**Course Coordinator**

  
**HoD**

  
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**DEPARTMENT OF CIVIL ENGINEERING**

Academic year 2017 – 2018

Enrolled Student Name List

Sl.No	Name of the Student	Register No.	Certificate Program Revit Architecture
1	Abdul Azize F	311813103001	✓
2	Abdul Habeer A	311813103002	✓
3	Abubacker Siddique G S	311813103003	✓
4	Ahamed Riyaz A	311813103004	✓
5	Ahamed Sahib S A	311813103005	✓
6	Ahmed Jassim J	311813103006	✓
7	Alen Litto Y	311813103007	✓
8	Arun Kumar A	311813103008	✓
9	Asarudeen Ahamed A	311813103009	✓
10	Badapondara Krishna	311813103010	✓
11	Balasaravanan R	311813103011	✓
12	Balauriyan M	311813103012	✓
13	Bharathy T	311813103013	✓
14	Fathil Karunai B	311813103014	✓
15	Govindaraj V	311813103015	✓
16	Hedvy Metchado F	311813103016	✓
17	Jahangeer M	311813103017	✓
18	Jaison S	311813103018	✓
19	Kamalakanan K	311813103019	✓
20	Karthikeyan V	311813103020	✓
21	Mohaideen Musafar Meera K	311813103021	✓

  
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22	Mohamed Abdullah S Y	311813103022	✓
23	Mohamed Azeemudeen M	311813103023	✓
24	Mohamed Fadhil M	311813103024	✓
25	Mohamed Ibrahim A M N	311813103025	✓
26	Mohammed Asif A	311813103026	✓
27	Mohammed Muzaffar S	311813103027	✓
28	Muhaiyadeen Badusha O S	311813103028	✓
29	Nithindravid S	311813103029	✓
30	Nithya R	311813103030	✓
31	Preeta Rani S	311813103031	✓
32	Ravichandran S	311813103032	✓
33	Sabitha R	311813103033	✓
34	Sakthivel K	311813103034	✓
35	Salman Ahmed M	311813103035	✓
36	Saravanan G	311813103036	✓
37	Sathish K	311813103037	✓
38	Sathiyaseelan K	311813103038	✓
39	Selvakumar A	311813103039	✓
40	Sulthan Nifras H	311813103040	✓
41	Udayakumar S	311813103041	✓
42	Vedanayaki K	311813103042	✓
43	Vigneshkumar M	311813103043	✓
44	Vijayavasan M	311813103044	✓
45	Wasim Abbas M	311813103045	✓
46	Farhan P	311813103301	✓
47	Mohamed Ansar S	311813103302	✓
48	Suresh M	311813103501	✓
49	SOORIYAKUMAR V	311815103072	✓

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50	SRIRAM S	311815103074	✓
51	THAMEEMUL ANSARI A	311815103077	✓
52	UDHAYAKUMAR A	311815103078	✓
53	UMAR FAROOQ K A	311815103079	✓
54	AMEENULALTHAF A	311815103301	✓
55	KARTHICK K	311815103303	✓
56	MOHAMED RASIK S	311815103304	✓
57	MOHAMED THOUFFIC M	311815103305	✓
58	SHETTY VIKESH D	311815103307	✓
59	VINOTHKUMAR L	311815103308	✓
60	MOHAMED HYDER SHAREEF M	311815103901	✓

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Sl.No	Name of the Student	Register No.	11/12/2017	12/12/2017	13/12/2017	14/12/2017	15/12/2017
1	Abdul Azize F	311813103001	/	/	/	/	/
2	Abdul Habeer A	311813103002	/	/	/	/	/
3	Abubacker Siddique G S	311813103003	/	/	/	/	/
4	Ahamed Riyaz A	311813103004	/	/	/	/	/
5	Ahamed Sahib S A	311813103005	/	/	a	/	/
6	Ahmed Jassim J	311813103006	/	/	/	/	/
7	Alen Litto Y	311813103007	/	/	/	/	/
8	Arun Kumar A	311813103008	/	/	/	/	/
9	Asarudeen Ahamed A	311813103009	/	/	/	/	/
10	Badapondara Krishna	311813103010	/	/	/	/	/
11	Balasaravanan R	311813103011	/	/	/	/	/
12	Balasuriyan M	311813103012	/	a	/	/	/
13	Bharathy T	311813103013	/	/	/	/	/
14	Fathil Karunai B	311813103014	/	/	/	/	/
15	Govindaraj V	311813103015	/	/	/	/	/
16	Hedvy Metchado F	311813103016	/	/	/	/	/
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26	Mohammed Asif A	311813103026	/	a	/	/	/
27	Mohammed Muzaffar S	311813103027	/	/	/	/	/
28	Muhaiyadeen Badusha O S	311813103028	/	/	/	/	/
29	Nithindravid S	311813103029	/	/	/	/	/
30	Nithya R	311813103030	/	/	/	/	/
31	Preeta Rani S	311813103031	/	/	/	/	/
32	Ravichandran S	311813103032	/	/	/	/	/
33	Sabitha R	311813103033	/	/	/	/	/
34	Sakthivel K	311813103034	/	/	/	/	/
35	Salman Ahmed M	311813103035	/	/	/	/	/
36	Saravanan G	311813103036	/	/	a	/	/
37	Sathish K	311813103037	/	/	/	/	/
38	Sathiyaseelan K	311813103038	/	/	/	/	/
39	Selvakumar A	311813103039	/	/	/	/	/
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45	Wasim Abbas M	311813103045	/	/	/	/	/
46	Farhan P	311813103301	/	/	/	/	/
47	Mohamed Ansar S	311813103302	/	/	/	/	/
48	Suresh M	311813103501	/	/	/	/	/
49	SOORIYAKUMAR V	311815103072	/	/	/	/	/
50	SRIRAM S	311815103074	/	/	/	/	/
51	THAMEEMUL ANSARI A	311815103077	/	/	/	/	/
52	UDHAYAKUMAR A	311815103078	/	/	a	/	/

*(Handwritten Signature)*  
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53	UMAR FAROOQ K A	311815103079	/	/	/	/	/
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55	KARTHICK K	311815103303	/	/	/	/	/
56	MOHAMED RASIK S	311815103304	/	/	/	/	/
57	MOHAMED THOUFFIC M	311815103305	/	/	/	/	/
58	SHETTY VIKESH D	311815103307	/	/	/	/	/
59	VINOTHKUMAR L	311815103308	/	/	/	/	/
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1. A list of model elements that belong to a particular family type but that differ in size or other characteristics. Using \_\_\_\_\_ - you can load only the size you need - rather than loading the entire family type. For example - suppose that you want to

- Moment
- Type Catalog
- Project Browser
- Zoom

2. A representation of a building model. A Revit project file contains a database of information about a building model - and a \_\_\_\_\_ is one way of looking at that information. The Project Browser lists the views available for a project. These can incl

- Reference Plane
- Type Catalog
- Project View
- Layer Mapping File

3. An open schema created to help building designers gather information about the energy consumption characteristics of building projects. To perform energy analysis for a building model - you can export a Revit project to \_\_\_\_\_. Using a third-party ap

- Panel
- Polymesh
- Centerline
- gbXML

4. A wall that is inserted into another wall of a different type or construction. \_\_\_\_\_ are useful - for example - when you need to create a storefront on a building exterior. The following image shows a curtain wall embedded in a host wall.

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- Embedded Wall
  - Type Parameters
  - Architectural Column
  - Core
5. An arrangement of elements in a building model. For example - in a large office - you can create an \_\_\_\_\_ of desks and chairs. In a structural design - you can create an \_\_\_\_\_ of beams or columns. You can create a linear \_\_\_\_\_ - in which the elements
- Pattern Component
  - Project Standards
  - Wireframe
  - Array
6. A functional area (such as structural - mechanical - electrical - or architectural) - or an area of expertise (such as architecture - structural engineering - or construction). In a Revit project - you can assign \_\_\_\_\_ to categories and to views. You
- Wall Sweep
  - Crop Region
  - Far clip plane
  - Discipline
7. The settings used in a project that you want to apply to another project. \_\_\_\_\_ include family types - line weights - materials - view templates - and object styles.
- Shading with Edges
  - View List
  - Project Standards
  - Web Library
8. A horizontal plane that helps to define the view range in a floor plan or reflected ceiling plan. By default - the \_\_\_\_\_ is the same as the bottom clip plane. However - you can specify the \_\_\_\_\_ to show elements (such as foundation footings) below

  
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**Assessment**

- Library
  - Phase
9. The graphic design (fill pattern) used to represent a surface when shown in projection.
- Spot Coordinate
  - RFA
  - Surface Pattern
  - Shading
10. To transfer a file or a collection of information from an outside location into a Revit project. In Revit Architecture - you can \_\_\_\_\_ groups - templates - detail components - entourage - materials - families of model elements and annotation element
- Explode
  - Break Line
  - Spot Elevation Dimension
  - Load
11. A wall that holds back earth (for example - at the edge of a terrace or excavation). In Revit Architecture - you can specify that a wall type functions as a retaining wall in the type properties.
- Compound Wall
  - Walkthrough
  - Section Box
  - Retaining Wall
12. A 3D shape consisting of multiple polygons that are joined (meshed) together. For example - a \_\_\_\_\_ cube consists of 6 square surfaces that are joined together to form the cube shape. This is sometimes referred to as face-based geometry.
- Polymesh

  
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Setback

13. Project coordinates that are used for remembering the mutual positions of multiple interlinked files. Those interlinked files can be all RVT files - or a combination of RVT - DWG - and DXF files.

- Fill Pattern
- Shared Coordinates
- Status Bar
- Origin

14. A 3-dimensional shape used in a building model. You can use the Family Editor to create \_\_\_\_\_ shapes to build families of model elements.

- Solid Geometry
- End Cap
- Poche
- 3D reference plane

15. A graphical icon in the Revit drawing area that you use to manipulate elements. For example - when you select a chain of walls - blue circles display. These blue circles are drag \_\_\_\_\_. You can drag such a \_\_\_\_\_ to change the shape of the walls. Or

- Control
- RFA
- Template
- Parameter

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Kannalakaran . K  
311813103019



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10/15

1. A list of model elements that belong to a particular family type but that differ in size or other characteristics. Using \_\_\_\_\_ you can load only the size you need - rather than loading the entire family type. For example - suppose that you want to

- Moment
- Type Catalog
- Project Browser
- Zoom

2. A representation of a building model. A Revit project file contains a database of information about a building model - and a \_\_\_\_\_ is one way of looking at that information. The Project Browser lists the views available for a project. These can include

- Reference Plane
- Type Catalog
- Project View
- Layer Mapping File

3. An open schema created to help building designers gather information about the energy consumption characteristics of building projects. To perform energy analysis for a building model - you can export a Revit project to \_\_\_\_\_. Using a third-party application

- Panel
- Polymesh
- Centerline
- gbXML

4. A wall that is inserted into another wall of a different type or construction. \_\_\_\_\_ are useful - for example - when you need to create a storefront on a building exterior. The following image shows a curtain wall embedded in a host wall.

  
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- Embedded Wall
- Type Parameters
- Architectural Column
- Core

5. An arrangement of elements in a building model. For example - in a large office - you can create an \_\_\_\_\_ of desks and chairs. In a structural design - you can create an \_\_\_\_\_ of beams or columns. You can create a linear \_\_\_\_\_ - in which the elements

- Pattern Component
- Project Standards
- Wireframe
- Array

6. A functional area (such as structural - mechanical - electrical - or architectural) - or an area of expertise (such as architecture - structural engineering - or construction). In a Revit project - you can assign \_\_\_\_\_ to categories and to views. You

- Wall Sweep
- Crop Region
- Far clip plane
- Discipline

7. The settings used in a project that you want to apply to another project. \_\_\_\_\_ include family types - line weights - materials - view templates - and object styles.

- Shading with Edges
- View List
- Project Standards
- Web Library

8. A horizontal plane that helps to define the view range in a floor plan or reflected ceiling plan. By default - the \_\_\_\_\_ is the same as the bottom clip plane. However - you can specify the \_\_\_\_\_ to show elements (such as foundation footings) below

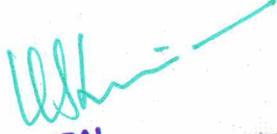
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Assessment

- Library  
 Phase
9. The graphic design (fill pattern) used to represent a surface when shown in projection.
- Spot Coordinate  
 RFA  
 Surface Pattern  
 Shading
10. To transfer a file or a collection of information from an outside location into a Revit project. In Revit Architecture - you can \_\_\_\_\_ groups - templates - detail components - entourage - materials - families of model elements and annotation element
- Explode  
 Break Line  
 Spot Elevation Dimension  
 Load
11. A wall that holds back earth (for example - at the edge of a terrace or excavation). In Revit Architecture - you can specify that a wall type functions as a retaining wall in the type properties.
- Compound Wall  
 Walkthrough  
 Section Box  
 Retaining Wall
12. A 3D shape consisting of multiple polygons that are joined (meshed) together. For example - a \_\_\_\_\_ cube consists of 6 square surfaces that are joined together to form the cube shape. This is sometimes referred to as face-based geometry.
- Polymesh

  
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Setback

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- Parameter

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Sl.No	Name of the Student	Register No.	Status of Qualifying
1	Abdul Azize F	311813103001	Qualified
2	Abdul Habeer A	311813103002	Qualified
3	Abubacker Siddique G S	311813103003	Qualified
4	Ahamed Riyaz A	311813103004	Qualified
5	Ahamed Sahib S A	311813103005	Qualified
6	Ahmed Jassim J	311813103006	Qualified
7	Alen Litto Y	311813103007	Qualified
8	Arun Kumar A	311813103008	Qualified
9	Asarudeen Ahamed A	311813103009	Qualified
10	Badapondara Krishna	311813103010	Qualified
11	Balasaravanan R	311813103011	Qualified
12	Balasuriyan M	311813103012	Qualified
13	Bharathy T	311813103013	Qualified
14	Fathil Karunai B	311813103014	Qualified
15	Govindaraj V	311813103015	Qualified
16	Hedvy Metchado F	311813103016	Qualified
17	Jahangeer M	311813103017	Qualified
18	Jaison S	311813103018	Qualified
19	Kamalakaran K	311813103019	Qualified
20	Karthikeyan V	311813103020	Qualified
21	Mohaideen Musafar Meera K	311813103021	Qualified
22	Mohamed Abdullah S Y	311813103022	Qualified
23	Mohamed Azeemudeen M	311813103023	Qualified
24	Mohamed Fadhil M	311813103024	Qualified
25	Mohamed Ibrahim A M N	311813103025	Qualified
26	Mohammed Asif A	311813103026	Qualified
27	Mohammed Muzaffar S	311813103027	Qualified
28	Muhaiyadeen Badusha O S	311813103028	Qualified

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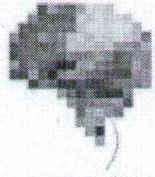
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30	Nithya R	311813103030	Qualified
31	Preeta Rani S	311813103031	Qualified
32	Ravichandran S	311813103032	Qualified
33	Sabitha R	311813103033	Qualified
34	Sakthivel K	311813103034	Qualified
35	Salman Ahmed M	311813103035	Qualified
36	Saravanan G	311813103036	Qualified
37	Sathish K	311813103037	Qualified
38	Sathiyaseelan K	311813103038	Qualified
39	Selvakumar A	311813103039	Qualified
40	Sulthan Nifras H	311813103040	Qualified
41	Udayakumar S	311813103041	Qualified
42	Vedanayaki K	311813103042	Qualified
43	Vigneshkumar M	311813103043	Qualified
44	Vijayavasan M	311813103044	Qualified
45	Wasim Abbas M	311813103045	Qualified
46	Farhan P	311813103301	Qualified
47	Mohamed Ansar S	311813103302	Qualified
48	Suresh M	311813103501	Qualified
49	SOORIYAKUMAR V	311815103072	Qualified
50	SRIRAM S	311815103074	Qualified
51	THAMEEMUL ANSARI A	311815103077	Qualified
52	UDHAYAKUMAR A	311815103078	Qualified
53	UMAR FAROOQ K A	311815103079	Qualified
54	AMEENULALTHAF A	311815103301	Qualified
55	KARTHICK K	311815103303	Qualified
56	MOHAMED RASIK S	311815103304	Qualified
57	MOHAMED THOUFFIC M	311815103305	Qualified
58	SHETTY VIKESH D	311815103307	Qualified
59	VINOTHKUMAR L	311815103308	Qualified
60	MOHAMED HYDER SHAREEF M	311815103901	Qualified

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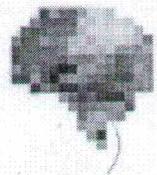
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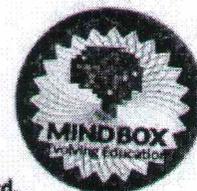


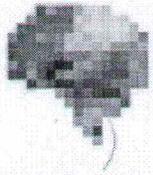
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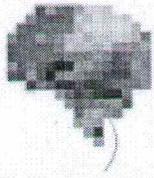
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**311813103006**

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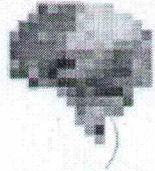
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**311813103007**

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Srinagar, 11  
903 1035  
Gambhir

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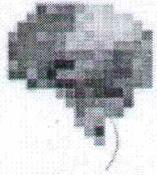
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has successfully completed COURSE ON REVIT ARCHITECTURE

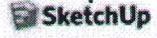
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Vice President





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This is to certify that..... **BADAPONDARA KRISHNA** ..... Roll No. **311813103010**

has successfully completed..... **COURSE ON REVIT ARCHITECTURE** .....

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From,  
The Head of Department,  
Department of CSE & IT,  
Mohamed Sathak A.J.College of Engineering,  
Chennai – 603103.

To,  
The Principal,  
Mohamed Sathak A.J.College of Engineering,  
Chennai – 603103.

Respected Madam/Sir,

Sub: Permission for conducting ADD on course – reg.

With reference to the above cited subject, we have proposed to conduct ADD on courses for the students of CSE & IT department. The selected courses are useful to the students for learning the emerging technical fields.

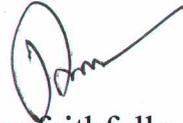
Kindly provide the permission for the same.

Year/Sem	Title	Dates
II/IV	Python Full Stack	05/02/2018 – 12/02/2018

Thanking you

Place: Chennai

Date: 02.02.2018

  
yours faithfully



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From,  
The Head of Department,  
Department of CSE & IT,  
Mohamed Sathak A.J.College of Engineering,  
Chennai- 603103.

Respected Madam/Sir,

Sub: Assigning of faculty for ADD ON course curriculum design for the academic year 2017-2018 reg.

Ref: Letter of Requisition for the appointment of faculty for ADD on course curriculum design for the academic year 2017-2018 Dated: 05/02/2018 – 12/02/2018.

The undersigned appreciates the department for proposing to conduct such kind of programme. As per your recommendation and referring to the above subject. I am pleased to nominate the following faculty members for ADD on course curriculum design.

Title	Name of the Faculty
Python Full Stack	Mr.A.Syed Ismail AP/CSE

The above listed faculty is hereby instructed to design the curriculum taking in to consideration the thrust areas of the respective field and ensure it should enhance the employability opportunities for the students.

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Date:02/02/2018

Ref:01/MSAJCE/COMMON CIRCULAR/EVEN/2017-2018

**CIRCULAR**

Our department is organizing a “ADD ON” on Python Full Stack during 05/02/2018 to 12/02/2018. The II Year Students from Computer Science and Engineering and Information Technology, register with Mr.A.Syed Ismail AP/CSE on or before 05/02/2018.

The session schedule is as follows,

**Timing: 1.30 PM to 3.30 PM**

**Resource Person: Mr.A.Syed Ismail**

**AP/CSE**

**Venue: Computer Lab II**

  
**HOD**

**COPY TO:**

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### COURSE MODULE

#### Course Objective

1. To learn the python fundamentals
2. To read and write simple python programs
3. To develop Python programs with conditionals and loops.
4. To learn how to use functions, arrays and strings in python programs
5. To learn how to develop python programs using list, tuple and dictionary.

Sl. No.	Topic	Periods Required
1	Introduction to Algorithms, Building Blocks of Algorithms, Pseudo code and Flowcharts	2
2	Programming Language	1
3	Arithmetic Problem Solving	1
4	Indexing-Array Manipulation	1
5	Simple Strategies for Developing Algorithms	1
6	Python Language Features-Comments-Identifiers-Keywords-Variables and Assignment	1
7	Expressions and Statements, Indentation, Data types – Numbers	2
8	Strings, Lists, Sets, Tuples, Dictionaries, Data Type Conversions-Input and Output Statements	2
9	Basics of Python Programming-Arithmetic Operators, Comparison Operators, Assignment Operators	1
10	Bitwise Operators, Logical Operators, Membership Operators, Identity Operators	1
11	Operators Precedence-Basics of Functions, Parameters and Arguments.	1
12	If statement, If-else Statement, if-elif-else Statement, While loop, For loop, Break Statement, Continue Statement	1
13	Pass Statement-Keyword Arguments, Default Arguments, Variable Length Arguments, Anonymous Functions	1
14	Fruitful Functions, Global and Local Variables, Function Composition, Recursion Introduction to Numbers	2

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15	Number Type Conversion, Mathematical Functions, Random Number Functions, Trigonometric Functions	2
16	Mathematical Constants. Introduction to Strings, String Operations, Built-in String Methods.	2
17	Introduction to Lists, Basic List Operations, Built-in List Functions, List Methods-Introduction to Tuples, Basic Tuples Operations	2
18	Built-in Tuple Functions-Introduction to Dictionaries, Basic Dictionary Operations	2
19	Built-in Dictionary Functions, Built-in Dictionary Methods-Introduction to Sets, Basic Set Operations	3
20	Built-in Set Functions and Methods-List Comprehensions, Set Comprehensions, Dictionary Comprehensions	2
21	Creation of modules, Import Statement, From Import Statement, Using Python Packages, Namespace Introduction to PIP	2
22	Installing Packages via PIP-File Handling – File Path, Operations on Files-Classes, Self Variable	2
23	Constructors, Methods, Inheritance, Overriding Methods, Data Hiding-Errors and Exceptions, Error Handling	3
24	Handling on Exception, Try-finally Clause, Raising an Exception, User-Defined Exceptions-Standard Library	2
25	Why Testing is require?, Basic Concepts of Testing, Unit testing.	2

### Course Outcome

- CO1. Illustrate basic concepts of python programming
- CO2. Apply the knowledge of Python Programming elements to solve and debug logical Problems
- CO3. Demonstrate Programs using with conditionals and loops
- CO4 .Demonstrate Programs using functions, arrays and strings
- CO5. Analyze Various techniques used for sorting and to store and retrieve data in files

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### CO PO Mapping

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
The students will be able to CO1. Illustrate basic concepts of python programming	3	3	3					2		2	3	3
CO2. Apply the knowledge of Python Programming elements to solve and debug logical Problems	2	2	2									
CO3. Demonstrate Programs using with conditionals and loops.	3	2	3									

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**DEPARTMENT OF CSE**

**ACADEMIC YEAR 2017-2018**

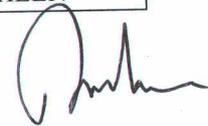
**ENROLLED STUDENTS NAMELIST FOR PYTHON FULL STACK**

**DATE: 05.02.2018 to 12.02.2018**

S.No	Register No	Name of the Student
1	311816104003	AFREEN BEGUM K
2	311816104004	AL MOHAMMED THOUFEEK B
3	311816104006	ARUN PRASANTH A P
4	311816104007	ASIISHA BEE H
5	311816104008	JAIPRAKASH J K
6	311816104009	JOHN ABISHAKE J
7	311816104010	KARTHIKEYAN B
8	311816104013	MOHAMED FASITH B
9	311816104014	MOHAMED HARAFATH S
10	311816104015	MOHAMED IRFAN M
11	311816104016	MOHAMED SARVATH KHAN B
12	311816104017	MOHAMED VASEEM S
13	311816104018	MOHAMMED FAYAZ AHMED M F
14	311816104019	MOHAMMED HUSSAIN Z
15	311816104021	NAVEEN KUMAR N
16	311816104022	PARANTHAMAN M
17	311816104024	RAMKUMAR S
18	311816104025	SABIRA MARIYAM B
19	311816104026	SAJID AHMED S
20	311816104027	SALIM MALIK S
21	311816104028	SANJAY KUMAR R
22	311816104029	SHAIKABBAS K
23	311816104030	SHAILESHSIVAM S
24	311816104031	SHAKEEL S J
25	311816104032	SHEIK ABDULLAH M
26	311816104033	SHYWAN T
27	311816104035	SULTHAN MOHAIDEEN N K
28	311816104036	SUMAIYA SARA A
29	311816104037	SWETHA S
30	311816104038	TABASSUM HAJIRA S
31	311816104039	THAIKA SHEIK ABDUL CADER SOOFI O A C
32	311816104040	VENKATESH D
33	311816104501	MOHAMMED SUMSUDHEEN

  
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**ACADEMIC YEAR 2017-2018**

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**DATE: 05.02.2018 to 12.02.2018**

S.No	Register No	Name of the Student
1	311816205001	AFRIN FATHIMA M
2	311816205002	DEEWAN FEROKKHAN A
3	311816205003	FARHEENBEGUM J
4	311816205004	HARI KRISHNAN P C
5	311816205005	MAHALAKSHMI P
6	311816205007	MOHAMED FAIZAL A
7	311816205008	NOUFAL AHMED N
8	311816205009	RAJA SURYA A
9	311816205010	RAKESH C
10	311816205011	SUHAIL RASHEED S
11	311816205012	THIYAGARAJAN R
12	311816205701	SUVIYA S
13	311816205702	ASHWINI A
14	311816205703	JAYASRI V
15	311816205704	TAMILSELVI A
16	311816205705	VINDHIYA V

  
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**DEPARTMENT OF CSE**  
**ATTENDANCE SHEET FOR PYTHON COURSE**  
**ACADEMIC YEAR (2017-2018)**

S.No	Name of the Student	Attendance of the Participants													
		05/02/2018		06/02/2018		07/02/2018		08/02/2018		09/02/2018		10/02/2018		12/02/2018	
		FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1	AFREEN BEGUM K	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	AL MOHAMMED THOUFEEK B	/	/	/	/	/	/	/	/	/	/	/	/	/	/
3	ARUN PRASANTH A P	/	/	a	a	a	/	/	/	/	/	a	/	/	/
4	ASIISHA BEE H	/	/	/	/	a	/	/	/	/	a	/	/	/	/
5	JAIPRAKASH J K	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6	JOHN ABISHAKE J	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7	KARTHIKEYAN B	/	/	a	a	/	/	/	/	/	/	/	/	/	/
8	MOHAMED FASITH B	/	a	/	/	/	/	/	/	/	/	/	/	/	/
9	MOHAMED HARAFATH S	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10	MOHAMED IRFAN M	a	a	a	/	/	/	/	a	a	/	/	/	/	/
11	MOHAMED SARVATH KHAN B	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	MOHAMED VASEEM S	/	/	/	/	/	/	/	/	/	/	/	/	/	/
13	MOHAMMED FAYAZ AHMED M F	/	/	/	/	/	/	/	/	/	/	/	/	/	/
14	MOHAMMED HUSSAIN Z	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15	NAVEEN KUMAR N	/	/	a	a	/	/	/	/	/	/	/	/	a	a
16	PARANTHAMAN M	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17	RAMKUMAR S	/	/	/	/	/	/	/	/	/	/	/	/	/	/
18	SABIRA MARIYAM B	/	/	/	/	/	/	/	/	/	/	/	/	/	/
19	SAJID AHMED S	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20	SALIM MALIK S	/	/	/	/	/	/	/	/	/	/	/	/	/	/
21	SANJAY KUMAR R	/	/	/	/	/	a	a	/	/	/	/	/	/	/
22	SHAIKABBAS K	/	/	/	/	/	/	/	/	/	/	/	/	/	/
23	SHAILESHSIVAM S	/	/	/	/	/	/	/	/	/	/	/	/	/	/
24	SHAKEEL S J	/	/	a	a	/	/	/	/	/	/	/	/	/	/
25	SHEIK ABDULLAH M	/	/	/	/	/	/	/	/	/	/	/	/	/	/
26	SHYWAN T	/	/	/	/	/	/	/	/	/	/	/	/	/	/
27	SULTHAN MOHAIDEEN N K	/	/	/	/	/	/	/	/	/	a	/	/	/	/

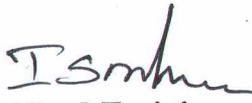
**PRINCIPAL**  
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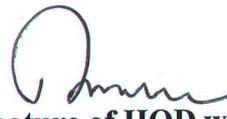


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28	SUMAIYA SARA A	/	/	/	/	/	/	/	/	/	/	/	/	/	/
29	SWETHA S	/	/	/	/	/	/	/	/	/	/	/	/	/	/
30	TABASSUM HAJIRAS	/	/	a	a	/	/	/	/	/	/	a	a	/	/
31	THAIKA SHEIK ABDUL CADER SOOFI O A C	/	/	a	a	/	/	/	/	/	/	/	/	/	/
32	VENKATESH D	/	/	/	/	/	/	/	/	/	/	/	/	/	/
33	MOHAMMED SUMSUDHEEN	32	/	/	/	/	/	/	/	/	/	/	/	/	/
<b>Total no.of Students Present</b>		32	31	26	27	31	32	32	32	32	30	31	32	32	32
<b>Total no.of Students Absent</b>		1	2	7	6	2	1	1	1	1	3	2	1	1	1
<b>Signature of the Coordinator</b>		IS													
<b>Signature of the HOD</b>															

  
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**DEPARTMENT OF IT**  
**ATTENDANCE SHEET FOR PYTHON COURSE**  
**ACADEMIC YEAR (2017-2018)**

S.No	Name of the Student	Attendance of the Participants													
		05/02/2018		06/02/2018		07/02/2018		08/02/2018		09/02/2018		10/02/2018		12/02/2018	
		FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1	AFRIN FATHIMA M	/	/	/	/	/	/	/	/	/	/	/	/	a	a
2	DEEWAN FEROZKHAN A	/	/	/	a	/	/	/	/	/	/	/	/	a	a
3	FARHEENBEGUM J	/	/	a	a	/	/	a	a	/	/	/	/	/	/
4	HARI KRISHNAN P C	/	/	/	/	/	/	/	/	/	/	a	a	/	/
5	MAHALAKSHMI P	/	/	/	/	/	/	a	a	/	/	/	/	/	/
6	MOHAMED FAIZAL A	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7	NOUFAL AHMED N	/	/	/	/	a	a	/	/	/	/	a	a	/	/
8	RAJA SURYA A	/	/	/	/	/	/	a	a	/	/	/	/	a	a
9	RAKESH C	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10	SUHAIL RASHEED S	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	THIYAGARAJAN R	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	SUVIYA S	/	/	/	/	/	/	/	/	/	/	/	/	/	/
13	ASHWINI A	/	/	/	/	/	/	/	/	/	/	/	/	/	/
14	JAYASRI V	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15	TAMILSELVI A	/	/	/	/	/	/	/	/	/	/	/	/	/	/
16	VINDHIYA V	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Total no.of Students Present		16	16	15	14	15	15	13	13	16	16	14	14	13	13
Total no.of Students Absent		-	-	1	2	1	1	3	3	-	-	2	2	3	3
Signature of the Coordinator		SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR
Signature of the HOD															

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*[Signature]*  
 Signature of HOD with date

*[Signature]*

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**Assessment**

1. Which of the following commands will create a list?
  - a) list1 = list()
  - b) list1 = []
  - c) list1 = list([1, 2, 3])
  - d) all of the mentioned
  
2. What is the output when we execute list("hello")?
  - a) ['h', 'e', 'l', 'l', 'o']
  - b) ['hello']
  - c) ['llo']
  - d) ['olleh']
  
3. To shuffle the list(say list1) what function do we use?
  - a) list1.shuffle()
  - b) shuffle(list1)
  - c) random.shuffle(list1)
  - d) random.shuffleList(list1)
  
4. To add a new element to a list we use which command?
  - a) list1.add(5)
  - b) list1.append(5)
  - c) list1.addLast(5)
  - d) list1.addEnd(5)
  
5. Suppose list1 is [3, 4, 5, 20, 5, 25, 1, 3], what is list1.count(5)?
  - a) 0
  - b) 4
  - c) 1
  - d) 2
  
6. Which of the following is a Python tuple?
  - a) [1, 2, 3]
  - b) (1, 2, 3)



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- c) {1, 2, 3}
- d) {}
7. What is the data type of (1)?
- Tuple
  - Integer
  - List
  - Both tuple and integer
8. If  $a=(1,2,3,4)$ ,  $a[1:-1]$  is
- Error, tuple slicing doesn't exist
  - [2,3]
  - (2,3,4)
  - (2,3)
9. What type of data is:  $a=[(1,1),(2,4),(3,9)]$ ?
- Array of tuples
  - List of tuples
  - Tuples of lists
  - Invalid type
10. Suppose  $d = \{\text{"john":40, "peter":45}\}$ , to delete the entry for "john" what command do we use?
- `d.delete("john":40)`
  - `d.delete("john")`
  - `del d["john"]`
  - `del d("john":40)`
11. Which of the following statements create a dictionary?
- `d = {}`
  - `d = {"john":40, "peter":45}`
  - `d = {40:"john", 45:"peter"}`
  - All of the mentioned

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12. What is returned by `math.ceil(3.4)`?

- a) 3
- b) 4
- c) 4.0
- d) 3.0

13. What is the value of x if `x = math.factorial(0)`?

- a) 0
- b) 1
- c) error
- d) none of the mentioned

14. Which of these definitions correctly describes a module?

- a) Denoted by triple quotes for providing the specification of certain program elements
- b) Design and implementation of specific functionality to be incorporated into a program
- c) Defines the specification of how it is to be used
- d) Any program that reuses code

15. Program code making use of a given module is called a ----- of the module.

- a) Client
- b) Docstring
- c) Interface
- d) Modularity

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Sweetha. S

311816104037

12-02-2018.

### Assessment Test-1

1. Which of the following commands will create a list?

- a) list1 = list()
- b) list1 = []
- c) list1 = list([1, 2, 3]) X
- d) all of the mentioned

2. What is the output when we execute list("hello")?

- a) ['h', 'e', 'l', 'l', 'o'] ✓
- b) ['hello']
- c) ['llo']
- d) ['olleh']

3. To shuffle the list(say list1) what function do we use?

- a) list1.shuffle() ✓
- b) shuffle(list1)
- c) random.shuffle(list1)
- d) random.shuffleList(list1)

4. To add a new element to a list we use which command?

- a) list1.add(5)
- b) list1.append(5)
- c) list1.addLast(5) X
- d) list1.addEnd(5)

5. Suppose list1 is [3, 4, 5, 20, 5, 25, 1, 3], what is list1.count(5)?

- a) 0
- b) 4
- c) 1
- d) 2 ✓

12  
15  
S. Sathak

*S. Sathak*

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6. Which of the following is a Python tuple?
- a) [1, 2, 3]
  - b) (1, 2, 3)
  - c) {1, 2, 3}
  - d) {}
7. What is the data type of (1)?
- a) Tuple
  - b) Integer
  - c) List
  - d) Both tuple and integer
8. If a=(1,2,3,4), a[1:-1] is
- a) Error, tuple slicing doesn't exist
  - b) [2,3]
  - c) (2,3,4)
  - d) (2,3)
9. What type of data is: a=[[1,1),(2,4),(3,9)]?
- a) Array of tuples
  - b) List of tuples
  - c) Tuples of lists
  - d) Invalid type
10. Suppose d = {"john":40, "peter":45}, to delete the entry for "john" what command do we use?
- a. d.delete("john":40)
  - b. d.delete("john")
  - c. del d["john"]
  - d. del d("john":40)

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11. Which of the following statements create a dictionary?

- a) `d = {}`
- b) `d = {"john":40, "peter":45}`
- c) `d = {40:"john", 45:"peter"}`
- d) All of the mentioned

12. What is returned by `math.ceil(3.4)`?

- a) 3
- b) 4
- c) 4.0
- d) 3.0

13. What is the value of x if `x = math.factorial(0)`?

- a) 0
- b) 1
- c) error
- d) none of the mentioned

14. Which of these definitions correctly describes a module?

- a) Denoted by triple quotes for providing the specification of certain program elements
- b) Design and implementation of specific functionality to be incorporated into a program
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- d) Any program that reuses code

15. Program code making use of a given module is called a ----- of the module.

- a) Client
- b) Docstring
- c) Interface
- d) Modularity

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### DEPARTMENT OF CSE

Name of the Value Added Course : Python Full Stack				
Year/Sem: II/IV		Faculty Incharge:		Mr.A.Syed Ismail
Location: Computer Lab-II		Duration:		05-02-2018 to 12-02-2018
S.No	Name of the Student	Register No	Status of qualifying	Sign of Student
1	AFREEN BEGUM K	311816104003	Yes	
2	AL MOHAMMED THOUFEEK B	311816104004	Yes	
3	ARUN PRASANTH A P	311816104006	Yes	
4	ASIISHA BEE H	311816104007	Yes	
5	JAIPRAKASH J K	311816104008	Yes	
6	JOHN ABISHAKE J	311816104009	Yes	
7	KARTHIKEYAN B	311816104010	Yes	
8	MOHAMED FASITH B	311816104013	Yes	
9	MOHAMED HARAFATH S	311816104014	Yes	
10	MOHAMED IRFAN M	311816104015	Yes	
11	MOHAMED SARVATH KHAN B	311816104016	Yes	
12	MOHAMED VASEEM S	311816104017	Yes	
13	MOHAMMED FAYAZ AHMED M F	311816104018	Yes	
14	MOHAMMED HUSSAIN Z	311816104019	Yes	
15	NAVEEN KUMAR N	311816104021	Yes	
16	PARANTHAMAN M	311816104022	Yes	
17	RAMKUMAR S	311816104024	Yes	
18	SABIRA MARIYAM B	311816104025	Yes	
19	SAJID AHMED S	311816104026	Yes	
20	SALIM MALIK S	311816104027	Yes	
21	SANJAY KUMAR R	311816104028	Yes	
22	SHAIKABBAS K	311816104029	Yes	
23	SHAILESHSIVAM S	311816104030	Yes	
24	SHAKEEL S J	311816104031	Yes	
25	SHEIK ABDULLAH M	311816104032	Yes	
26	SHYWAN T	311816104033	Yes	
27	SULTHAN MOHAIDEEN N K	311816104035	Yes	
28	SUMAIYA SARA A	311816104036	Yes	
29	SWETHA S	311816104037	Yes	
30	TABASSUM HAJIRA S	311816104038	Yes	
31	THAIKA SHEIK ABDUL CADER SOOFI O A C	311816104039	Yes	
32	VENKATESH D	311816104040	Yes	
33	MOHAMMED SUMSUDHEEN	311816104501	Yes	

  
Head-Training

  
PRINCIPAL Signature of HOD with date  
MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING  
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Chennai-603 103.



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### DEPARTMENT OF IT

Name of the Value Added Course : Python Full Stack				
Year/Sem: II/IV		Faculty Incharge:		Mr.A.Syed Ismail
Location: Computer Lab-II		Duration:		05-02-2018 to 12-02-2018
S.No	Name of the Student	Register No	Status of qualifying	Sign of Student
1	AFRIN FATHIMA M	311816205001	Yes	
2	DEEWAN FEROZKHAN A	311816205002	Yes	
3	FARHEENBEGUM J	311816205003	Yes	
4	HARI KRISHNAN P C	311816205004	Yes	
5	MAHALAKSHMI P	311816205005	Yes	
6	MOHAMED FAIZAL A	311816205007	Yes	
7	NOUFAL AHMED N	311816205008	Yes	
8	RAJA SURYA A	311816205009	Yes	
9	RAKESH C	311816205010	Yes	
10	SUHAIL RASHEED S	311816205011	Yes	
11	THIYAGARAJAN R	311816205012	Yes	
12	SUVIYA S	311816205701	Yes	
13	ASHWINI A	311816205702	Yes	
14	JAYASRI V	311816205703	Yes	
15	TAMILSELVI A	311816205704	Yes	
16	VINDHIYA V	311816205705	Yes	

  
Head-Training

  
Signature of HOD with date

  
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### SUMMARY/OUTCOME REPORT

**Name of the Course:** Python Full Stack

**Name of the Coordinator:** Mr.A.Syed Ismail AP/CSE

**No. of Students Enrolled:** 49

**No. of Students Completed:** 49

I hereby affirm that the entire program contents in the ADD ON "Python Full Stack" listed in the Syllabus have been actually learned by the students as the part of the prescribed co-curricular activities through Certificate Program.

I confirmed that the Certificate program titled as Python Full Stack course was done by me in the beginning of this semester and program delivery with attendance of the students were recorded.

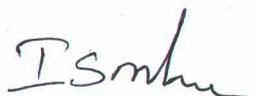
I confirm that all registered students for this certificate program were actively attended and learned well throughout the duration of this program. And all the students were successfully completed and eligible to receive the participation certificate.

**OUTCOME:** Students shall be able to gain knowledge in

- Basic concepts of python programming
- Python Programming elements to solve and debug logical Problems
- Coding programs using with conditionals and loops
- Writing programs using functions, arrays and strings
- Techniques used for sorting and to store and retrieve data in files

Name: Mr.A.Syed Ismail

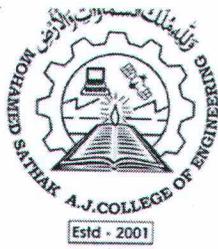
Designation: AP/CSE

  
Head Training

  
HOD

  
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Chennai-603 103.

Principal



# MOHAMED SATHAK

## A.J. COLLEGE OF ENGINEERING

# CERTIFICATE

## of Completion

This Certificate is awarded to

**PARANTHAMAN M**

for successfully completing the course of  
**PYTHON Full Stack**

On February 12 th, 2018

Course Duration: 40 Hours



**Mr.A. Syed Ismail**

Head -Training

**Mr. K. Suresh**

Head of the Department/CSE

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No.34.Rajiv Gandhi Salai (OMR), SIPCOT - IT Park  
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## A J COLLEGE OF ENGINEERING

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34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103

Department of  
Electrical and Electronics Engineering

*Organize*

A Course  
on

**INTRODUCTION TO PROGRAMMING LOGIC  
CIRCUIT (PLC) & SUPERVISORY CONTROL  
AND DATA ACQUISITION (SCADA)**

Co-Ordinator:

Mr.K.A.Mohamed Shahin Gani, AP/EEE

+91-9940004500/044-27470024

msajce.office@gmail.com

www.msajce-edu.in



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### DEPARTMENT OF EEE

#### Value Added Course Summary 2017-2018

**Course code and Name** : Introduction to PLC and SCADA  
**Course Duration** : 45 hours  
**Years offered** : III Year & IV Students 2017-2018  
**Course Instructors** : Mr.K.A.Mohamed Shahin Gani

#### Course Outcome's :

The Students will be outfitted with able understand the fundamental of PLC. Program a PLC with different logical languages. Various industrial applications of PLC's are studied. Able to understand the need of computer in Automation. Understand the basics of data conversion and data acquisition.

**Course Type** : Self Framed Value Added Course  
Theory and Practical with Hands on Sessions

**Assessment Mode** : Attendance : 45 Hours

Number of Participants : 51

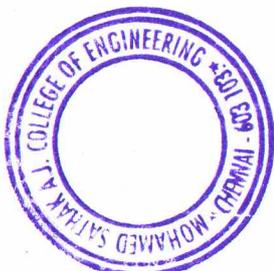
Scheme of Exam : Offline

Date of Exam:26/8/2017

  
Course Coordinator

  
HoD





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Chennai-603 103.



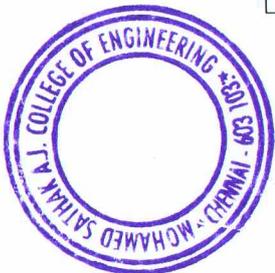
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### Department of EEE

### Introduction to PLC and SCADA

S.No	Reg. No. of the Student	Student Name
1	311815105001	M.Abul Abul Hasan
2	311815105002	A.R.Abdul Saleem
3	311815105004	S.S.Anuvanth
4	311815105005	R.M. Dinesh kumar
5	311815105006	U. Harshad Ahemed
6	311815105007	K.S. Iqlas Ahamed
7	311815105008	S. Manimaran
8	311815105009	S. Manobalan
9	311815105010	S.Meena
10	311815105012	H.Mohamed Ibrahim
11	311815105014	J. Mohamed Muneer
12	311815105015	M.H.Mohamed Rifhath
13	311815105016	A.Mohammed Sultan
14	311815105017	M. Mohideen Abdul kader
15	311815105019	S.Nisar Ahmed
16	311815105020	A.Noor Mohamed
17	311815105021	M. Prakash
18	311815105023	S.Sabarigirivasan
19	311815105024	S.B. Sanjeevi
20	311815105025	R.Santhosh Kumar
21	311815105027	S.Shaik Fathhullah
22	311815105028	Shaik Umar
23	311815105029	S. Syed Mohamed Buhari
24	311815105301	M.Ganesh
25	311815105302	M. Haneen Ahamed
26	311815105303	S.Mohamed Asif
27	311815105304	A.Mohamed Rasith
28	311814105002	Abutalib.S
29	311814105003	Brindha.M
30	311814105004	Deepika.U



  
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### Department of EEE

#### Introduction to PLC and SCADA

31	311814105006	Fatahunissa.J
32	311814105007	Hashim Md. Zabran N.F
33	311814105008	Jabar Ali A
34	311814105010	Mohamed Ihsan.A
35	311814105011	Md. Javeeth Nasim. S
36	311814105012	Mohammed Faiz
37	311814105013	Mohammad Hashim
38	311814105014	Nabeel.N
39	311814105015	Nomon Juneed N
40	311814105016	Parvez Aalam.A
41	311814105017	Pathmanaban M
42	311814105018	Rosalinda.N
43	311814105019	Shaik Md. Ashar P. S. A
44	311814105021	Srinivasan.V
45	311814105022	Sriram R
46	311814105023	Syed Moosa.T
47	311814105024	Vignesh.B
48	311814105302	Irfan Suber
49	311814105303	Javith. B
50	311814105304	Mohammed Fazil.T
51	311814105305	Mohamed Haja Shariff.A

  
Course Coordinator

  
HoD



  
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**DEPARTMENT OF EEE**

From

Dr. R. Murugan,  
Associate Professor,  
Department of Electrical and Electronics Engineering,  
Mohamed Sathak A J College of Engineering,  
Chennai – 603103.

To

The Principal,  
Mohamed Sathak A J College of Engineering,  
Chennai – 603103.

Respected Madam/Sir,

Sub: Permission for conducting ADD on course – reg.

  
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With reference to the above cited subject, we have proposed to conduct ADD on courses for the students of EEE department. The selected courses are useful to the students for learning the emerging technical fields.

Kindly provide the permission for the same.

Year/Sem	Title	Dates
III/V-EEE	Introduction to Programming Logic Circuit (PLC) & Supervisory Control and Data Acquisition (SCADA)	21/08/2017 to 26/08/2017
IV/VII-EEE		

Thanking you

Place: Chennai

Date:



  
Your's faithfully

Principal



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**DEPARTMENT OF EEE**

From

Dr.R.Murugan

Associate Professor,

Department of Electrical and Electronics Engineering

Mohamed Sathak A.J.College of Engineering,

Chennai- 603103.

*M.M.* PRINCIPAL  
MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING  
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KANCHIPURAM DT.

Respected Madam/Sir,

Sub: Assigning of faculty for ADD ON course curriculum design for the academic year 2017-2018 reg.

Ref: Letter of Requisition for the appointment of faculty for ADD on course curriculum design for the academic year 2017-2018 Dated: 21/08/2017 to 26/08/2017. The undersigned appreciates the department for proposing to conduct such kind of programme. As per your recommendation and referring to the above subject. I am pleased to nominate the following faculty members for ADD on course curriculum design.

The above listed faculty is hereby instructed to design the curriculum taking in to consideration the thrust areas of the respective field and ensure it should enhance the employability opportunities for the students.

Title	Name of the Faculty
Introduction to Programming Logic Circuit (PLC) & Supervisory Control and Data Acquisition (SCADA)	Mr.K.A.Mohamed Shahin Gani AP/EEE



Principal



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**DEPARTMENT OF EEE**

Date:26/07/2017

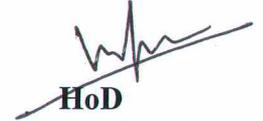
Ref:01/MSAJCE/EEE/ODD/2017-2018

**CIRCULAR**

Our department is organizing a “ADD ON” on Introduction to Programming Logic Circuit (PLC) & Supervisory Control and Data Acquisition (SCADA) during 21/08/2017 to 26/08/2017. The following III & IV Year EEE Students register with Mr.K.A.Mohamed Shahin Gani AP/EEE on or before 3/08/2017.

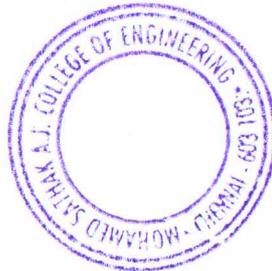
The session schedule is as follows

**Timing** : 9.00 AM to 3.30 PM  
**Company Name** : EMBware Technologies & Components  
**Resource Person** : K. A. MOHAMED SHAHIN GANI  
**Venue** : MSAJCE

  
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COPY TO: EEE  
Dept. of EEE  
III & IV Year EEE





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## DEPARTMENT OF EEE

### COURSE MODULE

#### Course Objectives:

1. Students will be able to describe typical components of a Programmable Logic Controller.
2. Students will be able to explain and apply the concept of electrical ladder logic, its history, and its relationship to programmed PLC instruction.
3. Students will be able to design and program a small, automated industrial production line.
4. Students will be able to use timer, counter, and other intermediate programming functions.

#### MODULE-1

##### 1. Basics Of PLC

Definition and History of PLC-PLC advantage and disadvantages- Over all PLC systems CPU and Programmer/Monitors-PLC input and output models – Architecture- PLC Programming language – Relay logic.

#### MODULE-2

##### 2. PLC Programming

Programming of Timers – Introduction - ON delay, OFF delay, Retentive Timers – PLC Timer functions – Examples of timer function Industrial application. Programming Counters – up/down counter – Combining counter.

#### MODULE-3

##### 3. PLC Data Handling Functions

PLC Program Control Instructions: Master Control Reset - Skip – Jump and Move Instruction. Sequencer instructions - Types of PLC Analog modules and systems, PLC analog signal processing – BCD or multi bit data processing.

#### MODULE-4

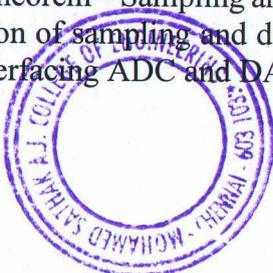
##### 4. Computer Control – Introduction

Need of computer in a control system-Functional block diagram of a computer control system-Data loggers- Supervisory computer control- Direct digital control-Digital control interfacing-SCADA.

#### MODULE-5

##### 5. Data Acquisition Systems

Sampling theorem – Sampling and digitizing – Aliasing – Sample and hold circuit – Practical implementation of sampling and digitizing – Definition, design and need for data acquisition systems – Interfacing ADC and DAC with Microprocessor / Multiplexer.



  
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## DEPARTMENT OF EEE

### Course Outcomes:

The students will be able to

- CO1. Understand the fundamental of PLC
- CO2. Program a PLC with different logical languages
- CO3. Various industrial applications of PLCs are studied.
- CO4. Able to understand the need of computer in Automation.
- CO5. Understand the basics of data conversion and data acquisition



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**DEPARTMENT OF EEE**

**CO PO Mapping**

Course Outcome	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Understand the fundamental of PLC	3	3	3					2		2	3	3
Program a PLC with different logical languages	2	2	2									
Various industrial applications of PLCs are studied	3	2	3									
Able to understand the need of computer in Automation	3	3	3					2		2	3	3
Understand the basics of data conversion and data acquisition	3	3										3



  
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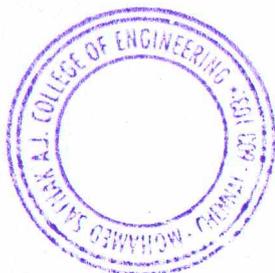
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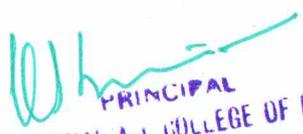
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### DEPARTMENT OF EEE SCHEDULE

<b>21/8/2017</b> <b>Day 1</b>	Definition and History of PLC-PLC advantage and disadvantages- Over all PLC systems CPU and Programmer/Monitors-PLC input and output models
<b>22/8/2017</b> <b>Day 2</b>	Programming of Timers – Introduction - ON delay, OFF delay, Retentive Timers – PLC Timer functions – Examples of timer function Industrial application. Programming Counters
<b>23/8/2017</b> <b>Day 3</b>	PLC Program Control Instructions: Master Control Reset - Skip – Jump and Move Instruction. Sequencer instructions - Types of PLC Analog modules and systems, PLC analog signal processing – BCD or multi bit data processing.
<b>24/8/2017</b> <b>Day 4</b>	Need of computer in a control system-Functional block diagram of a computer control system-Data loggers
<b>25/8/2017</b> <b>Day 5</b>	Sampling theorem – Sampling and digitizing – Aliasing – Sample and hold circuit – Practical implementation of sampling and digitizing – Definition, design and need for data acquisition systems
<b>26/8/2017</b> <b>Day 6</b>	Supervisory computer control- Direct digital control-Digital control interfacing-SCADA- Interfacing ADC and DAC with Microprocessor / Multiplexer



  
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**DEPARTMENT OF EEE**

**Assessment**

1) Programming language for PLC is \_\_\_\_\_.

- A. Function block diagram
- B. Statement list
- C. Ladder
- D. all the above

2) Ladder logic programming consists primarily of:

- A. Virtual relay contacts and coils
- B. Logic gate symbols with connecting lines
- C. Function blocks with connecting lines
- D. Text-based code

3) In PLC programming, a retentive function is one that:

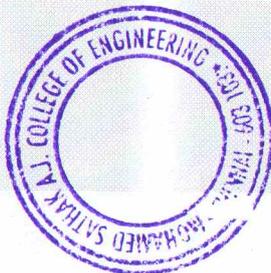
- A. Defaults to the "on" state
- B. Comes last in the program
- C. Defaults to the "off" state
- D. Is not reset after a power cycle

4) In a PLC, the scan time refers to the amount of time in which \_\_\_\_\_

- A. the technician enters the program
- B. timers and counters are indexed by
- C. one "rung" of ladder logic takes to complete
- D. the entire program takes to execute

5) What is the largest integer number that a PLC counter function can reach if it uses a 16 bit register?

- A. 32,768
- B. 65,535
- C. 65,536
- D. 65,537



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6) The difference between online and offline PLC programming is \_\_\_\_\_.

- A. whether the PLC is running or stopped
- B. whether the programming PC has internet connectivity
- C. the type of programming cable used
- D. where the edited program resides

7) A good application for a timed interrupt in a PLC program would be:

- A. A communications function block
- B. A PID function block
- C. A math function block
- D. A motor start/stop rung

8) What is the full form of SCADA?

- A. Supervisory Control And Document Acquisition
- B. Supervisory Control And Data Acquisition
- C. Supervisory Column And Data Assessment
- D. Supervisory Control And Data Assessment

9) What is SCADA?

- A. Software
- B. Process
- C. System
- D. Hardware

10) Which of the following is the heart of a SCADA system?

- A. PLC
- B. HMI
- C. Alarm Task
- D. I/O Task



  
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11) Which of the following is not the component of a SCADA system?

- A. Database server
- B. I/O System
- C. PLC Controller
- D. Sparger Controller

12) The control in SCADA is \_\_\_\_\_ control.

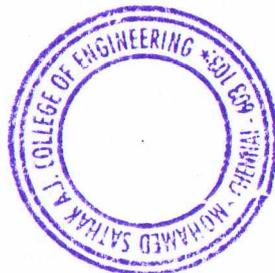
- A. Online
- B. Direct
- C. Supervisory
- D. Automatic

13) There are \_\_\_\_\_ levels present in a complex SCADA system.

- A. 3
- B. 5
- C. 4
- D. 6

14) Which of the following is an example of the SCADA system?

- A. Emerson Delta V
- B. Honeywell Plant Scape
- C. Yokogawa CENTUM
- D. Power studio Deluxe



  
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### Assessment

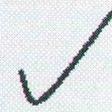
1) Programming language for PLC is \_\_\_\_\_.

- A. Function block diagram
- B. Statement list
- C. Ladder
- D. all the above



2) Ladder logic programming consists primarily of:

- A. Virtual relay contacts and coils
- B. Logic gate symbols with connecting lines
- C. Function blocks with connecting lines
- D. Text-based code



3) In PLC programming, a retentive function is one that:

- A. Defaults to the "on" state
- B. Comes last in the program
- C. Defaults to the "off" state
- D. Is not reset after a power cycle



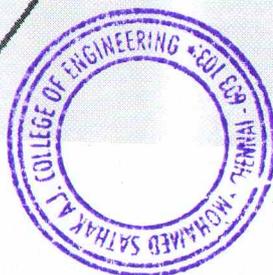
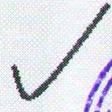
4) In a PLC, the scan time refers to the amount of time in which \_\_\_\_\_

- A. the technician enters the program
- B. timers and counters are indexed by
- C. one "rung" of ladder logic takes to complete
- D. the entire program takes to execute



5) What is the largest integer number that a PLC counter function can reach if it uses a 16 bit register?

- A. 32,768
- B. 65,535
- C. 65,536
- D. 65,537



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6) The difference between online and offline PLC programming is \_\_\_\_\_.

- A. whether the PLC is running or stopped
- B. whether the programming PC has internet connectivity
- C. the type of programming cable used
- D. where the edited program resides



7) A good application for a timed interrupt in a PLC program would be:

- A. A communications function block
- B. A PID function block
- C. A math function block
- D. A motor start/stop rung



8) What is the full form of SCADA?

- A. Supervisory Control And Document Acquisition
- B. Supervisory Control And Data Acquisition
- C. Supervisory Column And Data Assessment
- D. Supervisory Control And Data Assessment



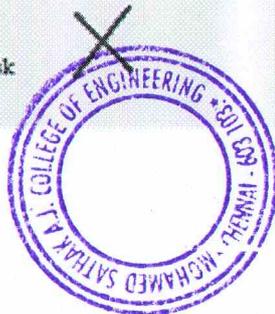
9) What is SCADA?

- A. Software
- B. Process
- C. System
- D. Hardware



10) Which of the following is the heart of a SCADA system?

- A. PLC
- B. HMI
- C. Alarm Task
- D. I/O Task



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11) Which of the following is not the component of a SCADA system?

- A. Database server
- B. I/O System
- C. PLC Controller
- D. Sparger Controller

12) The control in SCADA is \_\_\_\_\_ control.

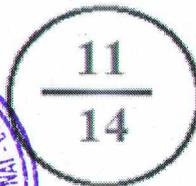
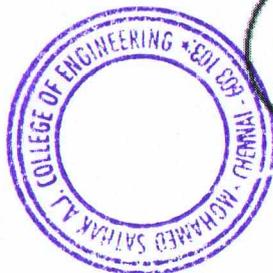
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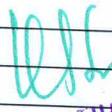
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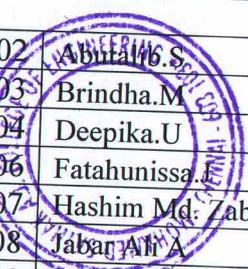


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<b>III EEE</b>			
1	311815105001	M.Abul Abul Hasan	Yes
2	311815105002	A.R.Abdul Saleem	Yes
3	311815105004	S.S.Anuvanth	Yes
4	311815105005	R.M. Dinesh kumar	Yes
5	311815105006	U. Harshad Ahemed	Yes
6	311815105007	K.S. Iqlas Ahamed	Yes
7	311815105008	S. Manimaran	Yes
8	311815105009	S. Manobalan	Yes
9	311815105010	S.Meena	Yes
10	311815105012	H.Mohamed Ibrahim	Yes
11	311815105014	J. Mohamed Muneer	Yes
12	311815105015	M.H.Mohamed Rifhath	Yes
13	311815105016	A.Mohammed Sultan	Yes
14	311815105017	M. Mohideen Abdul kader	Yes
15	311815105019	S.Nisar Ahmed	Yes
16	311815105020	A.Noor Mohamed	Yes
17	311815105021	M. Prakash	Yes
18	311815105023	S.Sabarigirivasan	Yes
19	311815105024	S.B. Sanjeevi	Yes
20	311815105025	R.Santhosh Kumar	Yes
21	311815105027	S.Shaik Fathhullah	Yes
22	311815105028	Shaik Umar	Yes
23	311815105029	S. Syed Mohamed Buhari	Yes
24	311815105301	M.Ganesh	Yes
25	311815105302	M. Haneen Ahamed	Yes
26	311815105303	S.Mohamed Asif	Yes
27	311815105304	A.Mohamed Rasith	Yes
<b>IV EEE</b>			
28	311814105002	Abilath S.	Yes
29	311814105003	Brindha.M	Yes
30	311814105004	Deepika.U	Yes
31	311814105006	Fatahunissa.J	Yes
32	311814105007	Hashim Md. Zabran N.F	Yes
33	311814105008	Jabar Ali A	Yes
34	311814105010	Mohamed Ihsan.A	Yes
35	311814105011	Md. Javeeth Nasim. S	Yes

  
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37	311814105013	Mohammad Hashim	Yes
38	311814105014	Nabeel.N	Yes
39	311814105015	Nomon Juneed N	Yes
40	311814105016	Parvez Aalam.A	Yes
41	311814105017	Pathmanaban M	Yes
42	311814105018	Rosalinda.N	Yes
43	311814105019	Shaik Md. Ashar P. S. A	Yes
44	311814105021	Srinivasan.V	Yes
45	311814105022	Sriram R	Yes
46	311814105023	Syed Moosa.T	Yes
47	311814105024	Vignesh.B	Yes
48	311814105302	Irfan Suber	Yes
49	311814105303	Javith. B	Yes
50	311814105304	Mohammed Fazil.T	Yes
51	311814105305	Mohamed Haja Shariff.A	Yes



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23	311815105029	S. Syed Mohamed Buhari	P	P	P	P	P	P	6	100
24	311815105301	M.Ganesh	P	P	P	P	P	P	6	100
25	311815105302	M. Haneen Ahamed	P	P	P	P	P	P	6	100
26	311815105303	S.Mohamed Asif	P	P	P	P	P	P	6	100
27	311815105304	A.Mohamed Rasith	P	P	P	P	P	P	6	100
28	311814105002	Abutalib.S	P	P	P	P	P	P	6	100
29	311814105003	Brindha.M	P	P	P	P	P	P	6	100
30	311814105004	Deepika.U	P	P	P	P	P	P	6	100
31	311814105006	Fatahunissa.J	P	P	P	P	P	P	6	100
32	311814105007	Hashim Md. Zabran N.F	P	P	P	P	P	P	6	100
33	311814105008	Jabar Ali A	P	P	P	P	P	P	6	100
34	311814105010	Mohamed Ihsan.A	P	P	P	P	P	P	6	100
35	311814105011	Md. Javeeth Nasim. S	P	P	P	P	P	P	6	100
36	311814105012	Mohammed Faiz	P	P	P	P	P	P	6	100
37	311814105013	Mohammad Hashim	P	P	P	P	P	P	6	100
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50	311814105304	Mohammed Fazil.T	P	P	P	P	P	P	6	100
51	311814105305	Mohamed Haja Shariff.A	P	P	P	P	P	P	6	100

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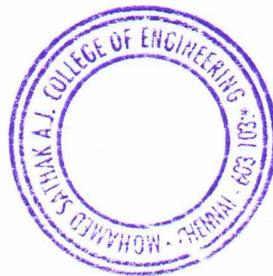


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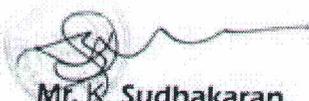
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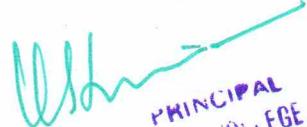


  
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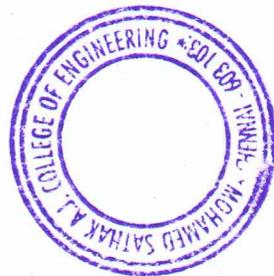
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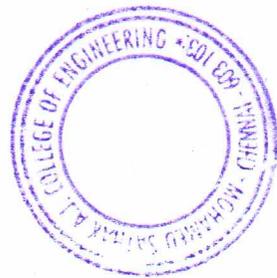
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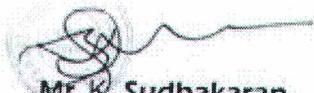
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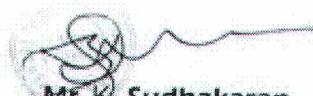
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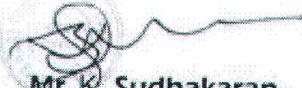
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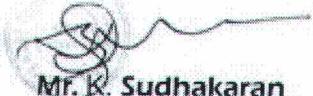
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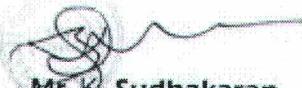
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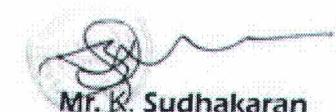
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*ASHAR P. S. A*  
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MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING  
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*MR. R. SUDHAKARAN*  
MR. R. Sudhakaran  
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*[Handwritten Signature]*  
MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING  
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KANCHIPURAM DT

*[Handwritten Signature]*  
**Mr. R. Sudhakaran**  
Proprietor, EmBware Technologies & Components

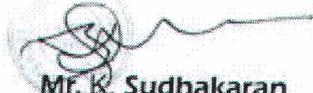
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*K. Sathak*  
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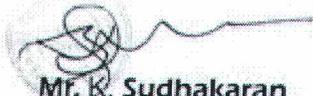
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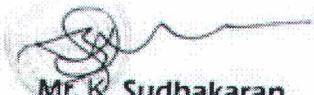
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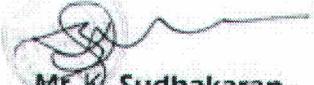
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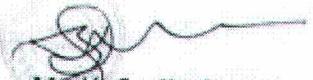
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**Mr. K. Sudhakaran**

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Siruseri IT Park, Egattur, Chennai 603 103

**DEPARTMENT OF MECHANICAL ENGINEERING**

From ,

Mr.Ganesamoorthy,  
Professor,  
Department of Mechanical Engineering,  
Mohamed Sathak A.J.College of Engineering,  
Chennai – 603103.

To

The Principal,  
Mohamed Sathak A.J.College of Engineering,  
Chennai – 603103.

Respected Madam/Sir,

Sub: Permission for conducting ADD on course – reg.

With reference to the above cited subject, we have proposed to conduct ADD on courses for the students of Mechanical department. The selected courses are useful to the students for learning the emerging technical fields.

Kindly provide the permission for the same.

Year/Sem	Title	Dates
IV/VII-Mechanical	CAD Modeling using CATIA V5	19.06.2017 to 28.06.2017

Thanking you

Place : Chennai

Date : 01.07.2017

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

Your's faithfully

**Head of the Department**  
**Department of Mechanical Engineering**  
**Mohamed Sathak A.J.College of Engineering**  
Egattur, Chennai - 603 103.





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**DEPARTMENT OF MECHANICAL ENGINEERING**

From ,

Mr.Ganesamoorthy,  
Professor,  
Department of Mechanical Engineering,  
Mohamed Sathak A.J.College of Engineering,  
Chennai – 603103.

Respected Madam/Sir,

Sub: Assigning of faculty for VAC course curriculum design for the academic year 2017-2018-Reg

Ref: Letter of Requisition for the appointment of faculty for ADD on course curriculum design for the academic year 2017-2018 Dated: 19.06.2017 to 28.06.2017.

The undersigned appreciates the department for proposing to conduct such kind of programme. As per your recommendation and referring to the above subject. I am pleased to nominate the following faculty members for ADD on course curriculum design.

The above listed faculty is hereby instructed to design the curriculum taking in to consideration the thrust areas of the respective field and ensure it should enhance the employability opportunities for the students.

Title	Name of the Faculty
CAD Modeling using CATIA V5	Mr.S.Bharath AP/MECH

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





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**DEPARTMENT OF MECHANICAL ENGINEERING**

Ref:MSAJCE/VAC01MECH/2017-2018

Date: 10.07.2017

**CIRCULAR**

Our department is organizing a "ADD ON " on CAD Modeling using CATIA V5 during 19.06.2017 to 28.06.2017.. The following IV Year Mechanical Students register with Mr.S.Bharath AP/MECH on or before 15.06.2017.

The session schedule is as follows

**Timing: 9.00 AM to 1.00 PM**

**Location : CAD Laboratory**

**HoD**

Head of the Department  
Department of Mechanical Engineering  
Mohamed Sathak A.J.College of Engineering  
Egattur, Chennai - 603 103.

Copy To:

Dept. of Mechanical

IV Year Mechanical



**PRINCIPAL**

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



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## DEPARTMENT OF MECHANICAL ENGINEERING

### COURSE MODULE

#### Course Objectives:

The Students will acquire to

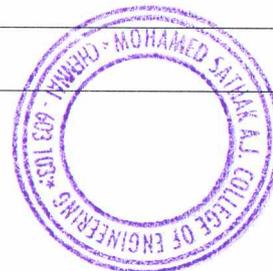
- Understand basis of graphical representation in the general context of Industrial Engineering.
- Apply expression and communication for the design, creation, definition and development of an industrial installation and/or product making practical use of the current technologies
- Create design shapes with 3D modeling, assembly, sheet metal design and visualization features
- Learn the implementation of solid modeling and get hands-on experience with the real world projects

#### MODULE

1	Surface Modeling & Assembly - An Overview
2	Wireframe & Surface design
3	Surfaces – Sweep - Multi section - surfaces - Trim operations - Generative shape design
4	Introduction to Assembly - Bottom up approach
5	Top down approach
6	Inserting of components
7	Assembly constrains
8	Introduction to Drafting
9	Visual Realism
10	Digital mockup Kinematics
11	Simple Mechanism Analysis
12	Introductio to Sheet Metal Design
13	Generative sheet metal design
14	Sheet metal design
15	Sketching
16	Lofted bend
17	Jog feature

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18	Forming tools
19	Swept flange
20	Pattern and Drafting



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---

## DEPARTMENT OF MECHANICAL ENGINEERING

### Course Outcome

Students will able to

- Interpret and/or convey the technical information in an industrial drawing
- Apply graphical representation techniques using traditional metric geometry and Know, identify, interpret and apply the current standards
- do assembly designing, sheet metal designing, and template based designing
- perform visual analysis and validation which will give them high quality performance insights for product decisions

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**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CO PO Mapping**

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Interpret and/or convey the technical information in an industrial drawing	3	3			3			2		2	3	2
Apply graphical representation techniques using traditional metric geometry and Know, identify, interpret and apply the current standards			2	2	2	2						
do assembly designing, sheet metal designing, and template based designing		3			3			2		2	3	
perform visual analysis and validation which will give them high quality performance insights for product decisions			2	2	2	2						

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### DEPARTMENT OF MECHANICAL ENGINEERING

Sl. No.	Topic	T / R*	Periods Required	Mode of Teaching
		Book		
1	Surface Modeling & Assembly - An Overview	T	2	PPT
2	Wireframe & Surface design	T	2	Practical
3	Surfaces – Sweep - Multi section - surfaces - Trim operations - Generative shape design	T	2	Practical
4	Introduction to Assembly - Bottom up approach	T	2	PPT
5	Top down approach	T	2	Practical
6	Inserting of components	T	2	Practical
7	Assembly constrains	T	2	Practical
8	Introduction to Drafting	T	2	PPT
9	Visual Realism	T	2	Practical
10	Digital mockup Kinematics	T	3	Practical
11	Simple Mechanism Analysis	T	3	Practical
12	Introductio to Sheet Metal Design	T	2	PPT
13	Generative sheet metal design	T	3	PPT
14	Sheet metal design	T	3	Practical
15	Sketching	T	3	Practical
16	Lofted bend	T	2	Practical
17	Jog feature	T	2	Practical
18	Forming tools	T	2	Practical
19	Swept flange	T	2	Practical
20	Pattern and Drafting	T	2	Practical

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## DEPARTMENT OF MECHANICAL ENGINEERING

Quiz / Mini Projects / Model Developed if any	
Nil	
Text / Reference Books	
1	1. Notes on 3D Modelling and CAD Practice. Teachers of the Department of Graphic Expression. University College of Engineering of Vitoria-Gasteiz. 2010
2	2. DASSAULT SISTEMES Users Guide Part Design / Wireframe and surfaces // Assembly design / Generative drafting /CATIA V5.
Website / URL References	
1	<a href="https://nptel.ac.in/courses/112/102/112102102/">https://nptel.ac.in/courses/112/102/112102102/</a>

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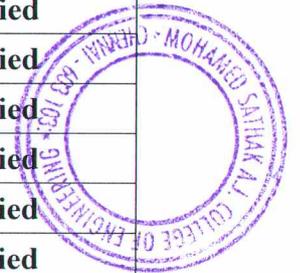
### DEPARTMENT OF MECHANICAL ENGINEERING

Sl.No	Name of the Student	Register No.	Status of Qualifying
1	Ahamed Ahil Shaik A	311814114002	Qualified
2	Ajithkumar R S	311814114003	Qualified
3	Al Bahir A	311814114004	Qualified
4	Anand A R	311814114005	Qualified
5	Arun A R	311814114006	Qualified
6	Arunkumar P	311814114007	Qualified
7	Arun Kumar A	311814114008	Qualified
8	Arunvanan K	311814114009	Qualified
9	Ayyappan A	311814114010	Qualified
10	Balaji S	311814114012	Qualified
11	Clinton J Knox	311814114013	Qualified
12	Deepak Guru S	311814114014	Qualified
13	Dharani P	311814114015	Qualified
14	Dominic Bro M	311814114016	Qualified
15	Gopinathan M	311814114018	Qualified
16	Hakkimullah A	311814114021	Qualified
17	Jagan C	311814114023	Qualified
18	Jamal Shagul Aameedh J M	311814114024	Qualified
19	Jayaseelan R V	311814114025	Qualified
20	Jaya Surya B	311814114026	Qualified
21	Jaya Surya S	311814114027	Qualified
22	Kannan A	311814114029	Qualified
23	Kannan R	311814114030	Qualified
24	Karan S	311814114031	Qualified
25	Karthik K	311814114032	Qualified
26	Karthikeyan U	311814114033	Qualified
27	Karthik Kumar D J	311814114034	Qualified
28	Kavi Surjit Arasu M	311814114035	Qualified
29	Kumaresan M	311814114036	Qualified



30	Manigandan J	311814114037	Qualified
31	Md Ateeq Ul Huq A	311814114038	Qualified
32	Mizsal Ahamed K	311814114040	Qualified
33	Mohamed Azarudeen S	311814114042	Qualified
34	Mohamed Azeem S	311814114043	Qualified
35	Mohamed Ibrahim S S	311814114044	Qualified
36	Mohamed Nooh Imran M	311814114045	Qualified
37	Mohamed Riyas B	311814114046	Qualified
38	Mohamed Salih A	311814114047	Qualified
39	Mohamed Shagul Rilwan S	311814114048	Qualified
40	Mohamed Sheik Irfan K	311814114049	Qualified
41	Mohammed Falah A	311814114050	Qualified
42	Mohammed Javed H	311814114051	Qualified
43	Mohammed Rafiq N	311814114052	Qualified
44	Muthurajan R	311814114053	Qualified
45	Nishathul Hasan M	311814114054	Qualified
46	Orsonnithinraj A	311814114055	Qualified
47	Periyar Selvam K	311814114056	Qualified
48	Prasanna Raj S	311814114057	Qualified
49	Prasanth T	311814114058	Qualified
50	Pravinkumar S	311814114059	Qualified
51	Premkumar V	311814114060	Qualified
52	Sabeeskumar M	311814114061	Qualified
53	Sadaam Hussain T	311814114062	Qualified
54	Sathishkumar G	311814114064	Qualified
55	Sathishkumar M	311814114065	Qualified
56	Sivan Raja M	311814114067	Qualified
57	Subash M	311814114068	Qualified
58	Sundaravadivel S	311814114070	Qualified
59	Sunil S	311814114071	Qualified
60	Surendran S	311814114072	Qualified
61	Syed Mudhassir S	311814114073	Qualified
62	Syed Raseen Ahamed H	311814114074	Qualified
63	Tamilmuthu S	311814114075	Qualified
64	Thabrez Muhammed	311814114076	Qualified
65	Udayaprakash S	311814114077	Qualified
66	Udhaya Kumar D	311814114078	Qualified

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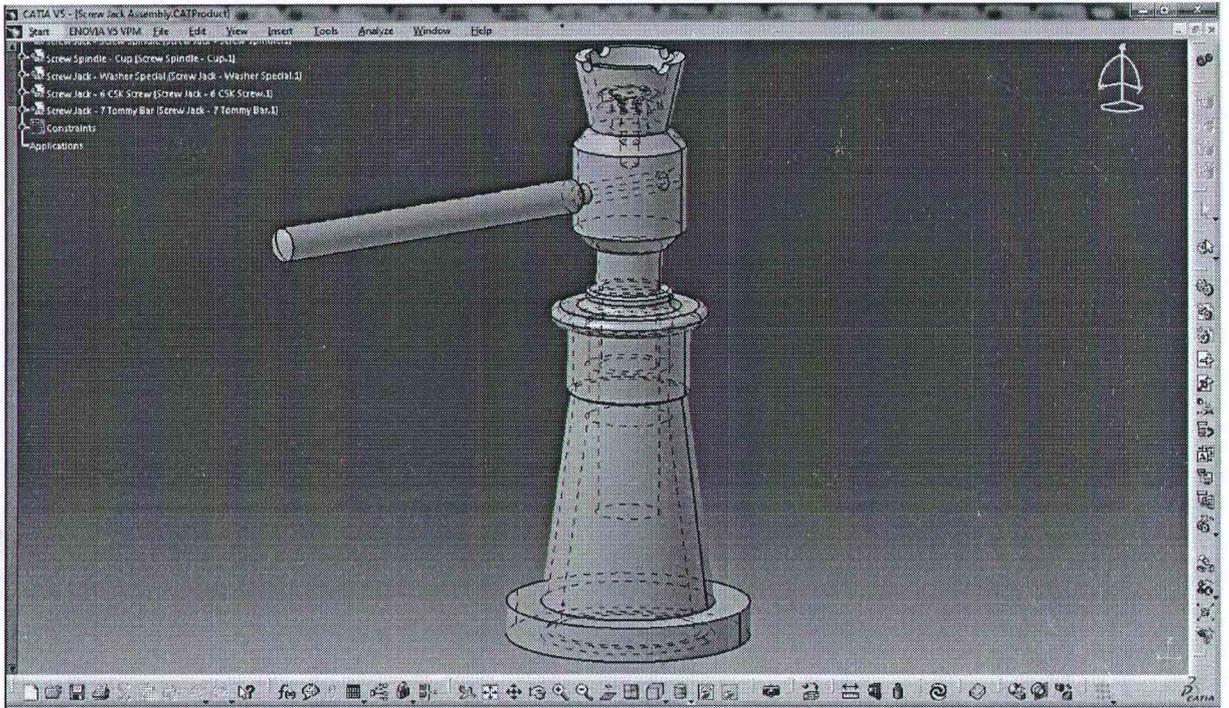
67	Vignesh P (1996-07-06)	311814114081	<b>Qualified</b>
68	Vignesh P (1997-05-05)	311814114082	<b>Qualified</b>
69	Vinothkumar K	311814114083	<b>Qualified</b>
70	Yasin Purinath K	311814114084	<b>Qualified</b>
71	Abdul Kareem L	311814114301	<b>Qualified</b>
72	Haroon Ahamed S	311814114305	<b>Qualified</b>
73	Krishna Kumar E	311814114306	<b>Qualified</b>
74	Mohamed Saleem S	311814114307	<b>Qualified</b>
75	Mohammed Fahim Tharik S	311814114309	<b>Qualified</b>
76	Salman Akram M	311814114312	<b>Qualified</b>
77	Sirajudeen S	311814114314	<b>Qualified</b>
78	Thoufichussain B	311814114315	<b>Qualified</b>
79	Vignesh Rr	311814114316	<b>Qualified</b>
80	Rizwan S	311814114701	<b>Qualified</b>
81	Mohammedumarfarook B	311814114702	<b>Qualified</b>
82	Abdulsubakhan C	311814114703	<b>Qualified</b>
83	Mohamed Hasir M	311814114901	<b>Qualified</b>

*(Handwritten signature)*

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Chennai-603 103.







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Chennai-603 103.



**Mohamed Sathak**  
**A.J. College of Engineering**  
 ISO 9001:2008 Certified Institution  
 Rajiv Gandhi Satai (OMR), Inside Sipcot IT Park, Siruseri, Chennai 603103



# CERTIFICATE

of Completion

Proudly presented to

**Ahamed Ahil Shaik A**

has successfully completed the professional training program on  
**CAD Modeling using CATIA V5**

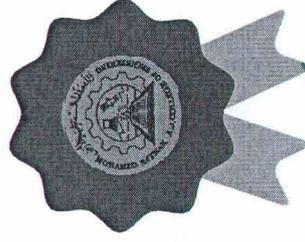
Course Completed on : 28-JUN-2017

Course Duration : 45 Hours

*S. Bharath*

**Mr.S.BHARATH**

Head-Training



*W*

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

*Ganesamoorthy*

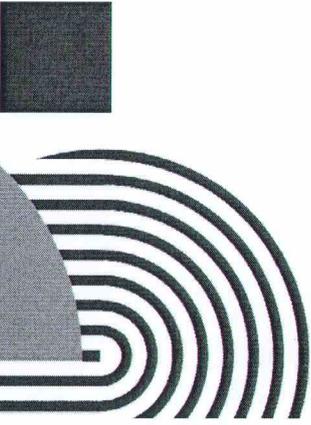
**MR.GANESAMOORTHY**

Head of the Department





**Mohamed Sathak  
A.J. College of Engineering**  
ISO 9001:2008 Certified Institution  
Rajiv Gandhi Salai (OMR), Inside Sipcot IT Park, Siruseri, Chennai 603103



# CERTIFICATE

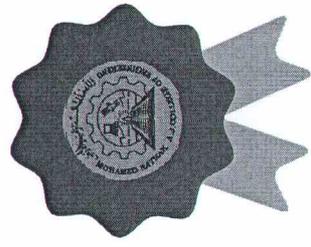
of Completion  
Proudly presented to  
**Ajithkumar R S**

has successfully completed the professional training program on  
**CAD Modeling using CATIA V5**

Course Completed on : 28-JUN-2017

Course Duration : 45 Hours

*S. Bharath*  
**Mr.S.BHARATH**  
Head-Training



*Ganesamoorthy*  
**Mr.GANESAMOORTHY**  
Head of the Department

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Rajiv Gandhi Salai (OMR), Inside Sipcot IT Park, Siruseri, Chennai 603103



# CERTIFICATE

of Completion

Proudly presented to

**Al Bahir A**

has successfully completed the professional training program on

**CAD Modeling using CATIA V5**

Course Completed on : 28-JUN-2017

Course Duration : 45 Hours

*S. Bharath*

**Mr.S.BHARATH**  
Head-Training



*W. Ganeshamoorthy*

**PRINCIPAL**  
**MR. GANESAMOORTHY**  
34, Rajiv Gandhi Road (OMR), Siruseri, T. E. S. S. K.  
Chennai-603 103

Head of the Department



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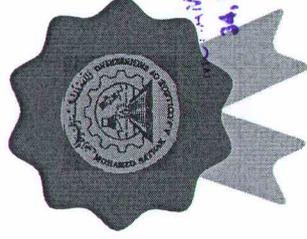
**Anand A R**

has successfully completed the professional training program on

## CAD Modeling using CATIA V5

Course Completed on : 28-JUN-2017

Course Duration : 45 Hours



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PRINCIPAL OF ENGINEERING  
MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING  
Siruseri, IT Park  
Chennai-603103.  
**Mr. GANESAMOORTHY**



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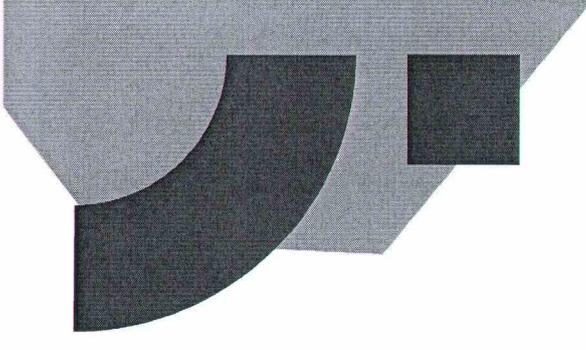
**Mr. S. BHARATH**

Head-Training

Head of the Department



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# CERTIFICATE

of Completion

Proudly presented to

**Arun A R**

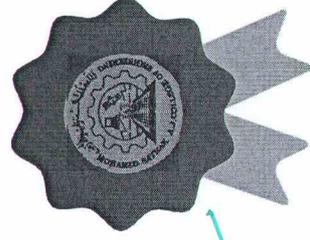
has successfully completed the professional training program on  
**CAD Modeling using CATIA V5**

Course Completed on : 28-JUN-2017

Course Duration : 45 Hours

*S. Bharath*

**Mr.S.BHARATH**  
Head-Training



*Mr. Ganesamoorthy*

**Mr.GANESAMOORTHY**  
Head of the Department

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**DEPARTMENT OF MECHANICAL ENGINEERING**

From ,

Mr.Ganesamoorthy,  
Professor,  
Department of Mechanical Engineering,  
Mohamed Sathak A.J.College of Engineering,  
Chennai – 603103.

To

The Principal,  
Mohamed Sathak A.J.College of Engineering,  
Chennai – 603103.

Respected Madam/Sir,

Sub: Permission for conducting ADD on course – reg.

With reference to the above cited subject, we have proposed to conduct ADD on courses for the students of Mechanical department. The selected courses are useful to the students for learning the emerging technical fields.

Kindly provide the permission for the same.

Year/Sem	Title	Dates
III/V-Mechanical	CNC Programming	19.06.2017 to 27.06.2017

Thanking you

Place : Chennai

Date : 01.07.2017

Your's faithfully

Head of the Department  
Department of Mechanical Engineering  
Mohamed Sathak A.J.College of Engineering  
Egattur, Chennai - 603 103.

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**DEPARTMENT OF MECHANICAL ENGINEERING**

From ,

Mr.Ganesamoorthy,  
Professor,  
Department of Mechanical Engineering,  
Mohamed Sathak A.J.College of Engineering,  
Chennai – 603103.

Respected Madam/Sir,

Sub: Assigning of faculty for VAC course curriculum design for the academic year 2017-2018-Reg

Ref: Letter of Requisition for the appointment of faculty for ADD on course curriculum design for the academic year 2017-2018 Dated: 19.06.2017 to 27.06.2017.

The undersigned appreciates the department for proposing to conduct such kind of programme. As per your recommendation and referring to the above subject. I am pleased to nominate the following faculty members for ADD on course curriculum design.

The above listed faculty is hereby instructed to design the curriculum taking in to consideration the thrust areas of the respective field and ensure it should enhance the employability opportunities for the students.

Title	Name of the Faculty
CNC Programming	Mr.Venkat Raman AP/MECH

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**DEPARTMENT OF MECHANICAL ENIGINEERING**

Ref:MSAJCE/VAC02MECH/2017-2018

Date: 10.07.2017

**CIRCULAR**

Our department is organizing a "ADD ON " on CNC Programming during 19.06.2017 to 27.06.2017.. The following III Year Mechanical Students register with Mr.Venkat Raman AP/MECH on or before 15.06.2017.

The session schedule is as follows

**Timing: 9.00 AM to 1.00 PM**

**Location : ANSYS Laboratory**

**HoD**

Head of the Department  
Department of Mechanical Engineering  
Mohamed Sathak A.J.College of Engineering  
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Dept. of Mechanical

IV Year Mechanical



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## DEPARTMENT OF MECHANICAL ENGINEERING

### COURSE MODULE

#### Course Objectives:

The Students will acquire to

- Understand fundamental principles of CAM and CNC Process
- Expertise in geometric modeling techniques, data structure design and algorithms for solid modeling
- Understand knowledge of machining theory, automated CNC machining, and process control.
- Apply the concept to product design and manufacturing
- Exposure to CNC Coding and CAM Simulation softwares

### MODULE

1	Introduction & CNC Process Overview
2	Introduction to CNC lathe - Coordinate system of CNC lathe
3	Preparatory functions (G codes)
4	Miscellanies functions (M codes)
5	Manual part programming (linear and circular)
6	Tool nose radius compensation
7	Rough cutting cycle and finishing cycle
8	Pattern repeating cycle - Drilling cycle - Grooving cycle
9	Tread cutting cycle - Tapping cycle - Boring cycle
10	Computer Aided Part programming
11	Introduction to CNC machining Centre
12	Coordinate system - Preparatory functions (G codes) – Miscellanies functions (M codes)
13	Manual part programming (linear and circular)

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14	Cutter radius compensation
15	Tool length compensation
16	Canned cycle (drilling and boring) operations
17	Computer Aided Part programming
18	Selection of tools for CNC turning
19	Exercise - I
20	Exercise - II



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## DEPARTMENT OF MECHANICAL ENGINEERING

### Course Outcome

Students will able to

- Concepts and underlying theory of modeling and the usage of models in different engineering applications
- Create accurate and precise geometry of complex engineering systems and use the geometric models in different engineering applications
- Compare the different types of modeling techniques and explain the central role solid models play in the successful completion of CAD/CAM-based product development
- Understand the basic concepts of CNC programming and machining



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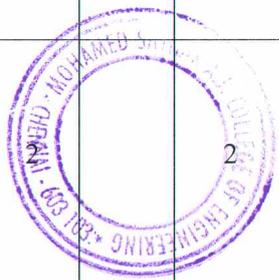
**DEPARTMENT OF MECHANICAL ENGINEERING**

**CO PO Mapping**

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
concepts and underlying theory of modeling and the usage of models in different engineering applications	3	3			3			2		2	3	2
Create accurate and precise geometry of complex engineering systems and use the geometric models in different engineering applications			2	2	2	2						
Compare the different types of modeling techniques and explain the central role solid models play in the successful completion of CAD/CAM-based product development		3			3					2	3	
Understand the basic concepts of CNC programming and machining			2	2	2	2						

*Handwritten signature in green ink*

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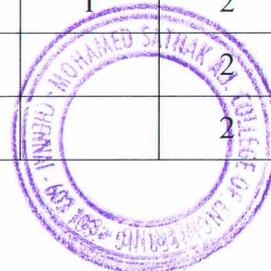
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### DEPARTMENT OF MECHANICAL ENGINEERING

Sl. No.	Topic	T / R*	Periods Required	Mode of Teaching
		Book		
1	Introduction & CNC Process Overview	T	2	PPT
2	Introduction to CNC lathe - Coordinate system of CNC lathe	T	2	Practical
3	Preparatory functions (G codes)	T	2	Practical
4	Miscellanies functions (M codes)	T	2	Practical
5	Manual part programming (linear and circular)	T	2	Practical
6	Tool nose radius compensation	T	2	Practical
7	Rough cutting cycle and finishing cycle	T	2	Practical
8	Pattern repeating cycle - Drilling cycle - Grooving cycle	T	2	Practical
9	Tread cutting cycle - Tapping cycle - Boring cycle	T	2	Practical
10	Computer Aided Part programming	T	3	Practical
11	Introduction to CNC machining Centre	T	3	PPT
12	Coordinate system - Preparatory functions (G codes) – Miscellanies functions (M codes)	T	2	Practical
13	Manual part programming (linear and circular)	T	3	Practical
14	Cutter radius compensation	T	3	Practical
15	Tool length compensation	T	3	Practical
16	Canned cycle (drilling and boring) operations	T	2	Practical
17	Computer Aided Part programming	T	2	Practical
18	Selection of tools for CNC turning	T	2	Practical
19	Exercise - I		2	Practical
20	Exercise - II		2	Practical

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## DEPARTMENT OF MECHANICAL ENGINEERING

Quiz / Mini Projects / Model Developed if any	
Nil	
Text / Reference Books	
1	1. Tien Chien Chang, "Computer Aided Manufacturing", Pearson Publication
2	2. P. Radhakrishnan "Computer Numerical Control", New Central Book Agency
Website / URL References	
1	<a href="https://nptel.ac.in/courses/112/102/112102103/">https://nptel.ac.in/courses/112/102/112102103/</a>

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### DEPARTMENT OF MECHANICAL ENGINEERING

Sl.No	Name of the Student	Register No.	Status of Qualifying
1	Aabith Hussain J	311815114001	Qualified
2	Abdul Raziq A	311815114002	Qualified
3	Abishanth A	311815114003	Qualified
4	Adhithyan S	311815114005	Qualified
5	Ahamed Asmi S	311815114006	Qualified
6	Ahamed Mubashir N	311815114007	Qualified
7	Ahamed Owise M	311815114008	Qualified
8	Ahamed Ridwan J	311815114009	Qualified
9	Arulkumar S	311815114010	Qualified
10	Arunkumar J	311815114011	Qualified
11	Arvindhan D	311815114012	Qualified
12	Ashok Kumar S	311815114013	Qualified
13	Azarudeen A	311815114014	Qualified
14	Babu R	311815114015	Qualified
15	Bharathi D	311815114016	Qualified
16	Denit Kumar A	311815114017	Qualified
17	Dhanaraj M	311815114018	Qualified
18	Dharmaseelan G	311815114020	Qualified
19	Dhinaharan R	311815114021	Qualified
20	Dinesh R	311815114022	Qualified
21	Fahad Nizamuddin F	311815114024	Qualified
22	Gokulakrishnan S	311815114025	Qualified
23	Gopalakrishnan R	311815114026	Qualified
24	Govindaraj P	311815114027	Qualified
25	Gowthamraj R K	311815114028	Qualified
26	Grace Samson G P	311815114029	Qualified
27	Halilur Rahman B	311815114030	Qualified
28	Harish Babu R	311815114031	Qualified
29	Himayathulla N	311815114032	Qualified

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311815114031

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30	Hisham Mohamed Gani H	311815114033	<b>Qualified</b>
31	Imthiyas N	311815114034	<b>Qualified</b>
32	Inbasekaran R	311815114035	<b>Qualified</b>
33	Jalaludeen S	311815114036	<b>Qualified</b>
34	Jaya Kumar S	311815114037	<b>Qualified</b>
35	Jinson L	311815114038	<b>Qualified</b>
36	Jishnu Madhav	311815114039	<b>Qualified</b>
37	Kader Firthouse A M Y B	311815114040	<b>Qualified</b>
38	Kasimuthuraja K	311815114041	<b>Qualified</b>
39	Kishore S	311815114042	<b>Qualified</b>
40	Madhan K	311815114043	<b>Qualified</b>
41	Mohamed Ameenul Rahman N	311815114044	<b>Qualified</b>
42	Mohamed Aslam B	311815114045	<b>Qualified</b>
43	Mohamed Azharuddin S	311815114046	<b>Qualified</b>
44	Mohamed Basim S	311815114047	<b>Qualified</b>
45	Mohamed Faiz S	311815114048	<b>Qualified</b>
46	Mohamed Fasil S	311815114049	<b>Qualified</b>
47	Mohamed Jafer M Z	311815114051	<b>Qualified</b>
48	Mohamed Javid S	311815114052	<b>Qualified</b>
49	Mohamed Kasim S	311815114053	<b>Qualified</b>
50	Mohamed Mahasin J	311815114054	<b>Qualified</b>
51	Mohamed Niyas M	311815114055	<b>Qualified</b>
52	Mohamed Sameer S	311815114056	<b>Qualified</b>
53	Mohamed Yusuf Jamal M A	311815114057	<b>Qualified</b>
54	Mohammed Azarudin M	311815114058	<b>Qualified</b>
55	Mohammed Mukthar H	311815114059	<b>Qualified</b>
56	Mohammed Mustafa H	311815114060	<b>Qualified</b>
57	Mohamudulkathir P	311815114061	<b>Qualified</b>
58	Mohammed Asif Khadiri F	311815114062	<b>Qualified</b>
59	Mohideen Basith S	311815114063	<b>Qualified</b>
60	Mohideen Irfan I	311815114064	<b>Qualified</b>
61	Mohammed Roshan V P	311815114065	<b>Qualified</b>
62	Munish Kumar M	311815114066	<b>Qualified</b>
63	Nagooraniba M	311815114067	<b>Qualified</b>
64	Nagutha M A	311815114068	<b>Qualified</b>
65	Naresh Kumar B	311815114069	<b>Qualified</b>
66	Naveen Kumar R	311815114071	<b>Qualified</b>

  
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67	Navin Kumar P	311815114072	Qualified
68	Noorulameen J	311815114073	Qualified
69	Pandi Durai N	311815114074	Qualified
70	Pradeepkumar K	311815114075	Qualified
71	Raghul Gandhi R	311815114077	Qualified
72	Rajarajan K	311815114078	Qualified
73	Raj Kumar R	311815114079	Qualified
74	Rishabeshwaran S	311815114080	Qualified
75	Safeeq Ahamed S	311815114081	Qualified
76	Santhoshrajan M	311815114082	Qualified
77	Saran M	311815114083	Qualified
78	Saravanan M	311815114084	Qualified
79	Shaik Muzzamil Basha	311815114085	Qualified
80	Siddharth M	311815114086	Qualified
81	Sidharth Balu S	311815114087	Qualified
82	Subash A	311815114088	Qualified
83	Syed Abdul Rahman A	311815114089	Qualified
84	Syed Abdul Razak A	311815114090	Qualified
85	Syed Salman S	311815114091	Qualified
86	Syed Sulaiman T	311815114092	Qualified
87	Syed Thjammul Hussain F	311815114093	Qualified
88	Umar Shariff M O	311815114094	Qualified
89	Vivek K	311815114095	Qualified
90	Abuthahir K	311815114301	Qualified
91	Arun K	311815114302	Qualified
92	Junaith B	311815114303	Qualified
93	Mohammed Azarudeen A	311815114304	Qualified
94	Mohammed Jaffer Ali H	311815114305	Qualified
95	Raj Mohamed P	311815114306	Qualified
96	Sanaula K R	311815114307	Qualified
97	Shaik Ijasnasim Psm	311815114308	Qualified
98	Younus Sharef R	311815114309	Qualified
99	Kaaviya G	311815114502	Qualified
100	Azirkhan S	311815114701	Qualified
101	Zuhail N	311815114702	Qualified
102	Jeganath Krishnan S G	311815114703	Qualified

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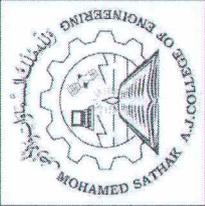
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G0 G90 G43 Z20 F200 S1800 M4 M8 M42.  
N10 G82 G99 X40 Y40 Z2 I-5 K300  
N20 X-40  
N30 Y-40  
N40 X40  
G80  
G0 G44 Z100  
G0 G90 G43 Z20 F200 S1050 M4 M42  
G81 G99 X40 Y40 Z2 I-35  
X-40 Y-40  
G0 G44 Z100  
G0 G90 G43 Z20 F200 S950 M4 M41  
G81 G99 X-40 Y40 Z2 I-35  
G0 X40 Y-40  
G0 G44 Z100  
G0 G90 G43 Z20 F100 S500 M4 M41  
G85 G99 X-40 Y40 Z2 I-30 K200  
X40 Y-40  
G80  
G0 G44 Z100  
G0 G90 G43 Z20 F450 S300 M4 M41  
G84 G99 X40 Y40 Z2 I-35 K200  
X-40 Y-40  
G80  
G0 G44 Z100  
G0 G90 G43 Z20 F250 S1600 M4 M42  
N50 G87 G98 X0 Y0 Z2 I-5 J-30 K30 B5 D2 H200 L-1  
N60 G88 G98 X0 Y0 Z-3 I-10 J-25 B5 D2 H200 L1  
G80  
G0 G44 Z100  
M30

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Chennai-603 103.





# CERTIFICATE

of COMPLETION

This Certificate presented to

**Aabith Hussain J**

for completing the course on

## CNC PROGRAMMING

Course Completed on: 27-Jun-2017

Course Duration : 45 Hours

*Venkat Raman*

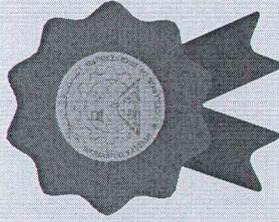
Mr.S.VENKAT RAMAN

Head-Trainer

*Ganesamoorthy*

Mr.GANESAMOORTHY

Head of The Department



*Ushini*

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MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING  
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Chennai-603 103.



MSAJCE

# CERTIFICATE

of COMPLETION

This Certificate presented to

**Abdul Raziq A**

for completing the course on

## CNC PROGRAMMING

Course Completed on: 27-Jun-2017

*Venkat Raman*

Mr.S.VENKAT RAMAN

Head-Trainer

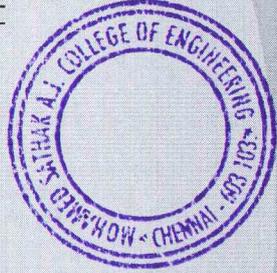
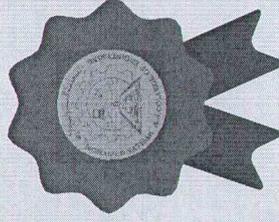
*Vh*

Course Duration : 45 Hours

*Ganesamoorthy*

Mr.GANESAMOORTHY

Head of The Department



**PRINCIPAL**  
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING  
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Chennai-603 103.



MSAJCE

# CERTIFICATE

of COMPLETION

This Certificate presented to

**Abishanth A**

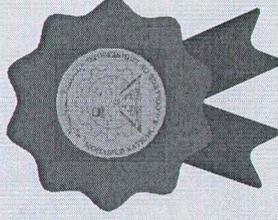
for completing the course on

## CNC PROGRAMMING

Course Completed on: 27-Jun-2017

*Venkat Raman*

Mr.S.VENKAT RAMAN  
Head-Trainer



Course Duration : 45 Hours

*Ganesamoorthy*

Mr.GANESAMOORTHY  
Head of The Department



*Wh*

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MSAJCE

# CERTIFICATE

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This Certificate presented to

**Adhithyan S**

for completing the course on

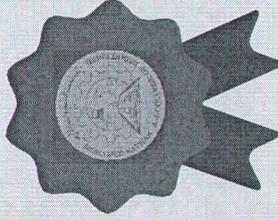
# CNC PROGRAMMING

Course Completed on: 27-Jun-2017

*Venkat Raman.*  
Mr.S.VENKAT RAMAN  
Head-Trainer

Course Duration : 45 Hours

*Ganesamoorthy*  
Mr.GANESAMOORTHY  
Head of The Department



*Whin*

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# CERTIFICATE

of COMPLETION

This Certificate presented to

**Ahamed Asmi S**

for completing the course on

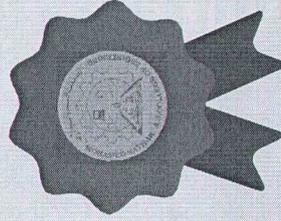
## CNC PROGRAMMING

Course Completed on: 27-Jun-2017

*Venkat Raman*

Mr.S.VENKAT RAMAN

Head-Trainer



Course Duration : 45 Hours

*Ganesamoorthy*

Mr.GANESAMOORTHY

Head of The Department



*Principal*

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**DEPARTMENT OF SCIENCE & HUMANITIES**

From ,

Dr. M.Muralidharan  
Associate Professor  
Department of S&H  
Mohamed Sathak A.J.College of Engineering,  
Chennai – 603103.

To

The Principal,  
Mohamed Sathak A.J.College of Engineering,  
Chennai – 603103.

Respected Madam/Sir,

Sub: Permission for conducting ADD ON course – reg.

With reference to the subject mentioned below, we have proposed to conduct ADD ON courses for all the I Year students. The selected courses will be useful to the students for learning the emerging technical fields.

Kindly provide permission for the same

Year / Sem	Title	Dates
I Year / II Sem	PC Hardware & Network Troubleshooting problems	05/03/2018 to 11/03/2018

Thanking you

Place: Chennai

Date: 22/02/2018

Your's faithfully

PRINCIPAL  
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From,

Dr. S. Sivasubramanian

Associate Professor

Department of Computer Science and Engineering

Mohamed Sathak A.J.College of Engineering,

Chennai- 603103.

Respected Madam/Sir,

Sub: Assigning of faculty for ADD ON course curriculum design for the academic year 2017-2018 reg.

Ref: Letter of Requisition for the appointment of faculty for ADD ON course curriculum design for the academic year 2017-2018 Dated: 05/03/2018 to 11/03/2018

The undersigned appreciates the department for proposing to conduct such kind of programme. As per your recommendation and referring to the above subject. I am pleased to nominate the following faculty members for ADD ON course curriculum design.

The above listed faculty is hereby instructed to design the curriculum taking into consideration the thrust areas of the respective field and ensure it should enhance the employability opportunities for the students.

Title	Name of the Faculty
PC Hardware & Network Troubleshooting problems	Mrs. V. Subapriya AP/CSE

  
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**DEPARTMENT OF SCIENCE & HUMANITIES**

Ref:01/MSAJCE/S&H/EVEN/2017-2018

Date:22/02/2018

**CIRCULAR**

It is hereby informed to all the 1<sup>st</sup> year students that the Value-Added Course“**PC Hardware & Network Troubleshooting Problems**” during 05/03/2018 to 11/03/2018. All are advised to attend the training course without fail.

The session schedule is as follows

**Timing: 9.00 AM to 3.30 PM**

**Resource Person: Mrs. V. Subapriya**

<b>Venue</b>	4 <sup>th</sup> Floor Auditorium	TF- 403	TF- 306	TF- 411
<b>Faculties</b>	Mrs.V.Subapriya	Mrs. V. Indumathi	Mr.R.Vigneshwar	Mrs. J. Vimala

  
**HoD**

COPY TO: S&H

Dept. of S&H

I Year

  
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## **DEPARTMENT OF SCIENCE & HUMANITIES**

### **COURSE MODULE**

#### **Course Objectives:**

- 1.To Identify characterize / define a problem.
- 2.To acquire knowledge about basic networking topologies, models.
- 3.To acquire basic knowledge in various networking devices like routers, switches, hubs.
- 4.To acquire knowledge about PC assembling, trouble shooting and maintenance.
5. To generate basic knowledge of servers and network security.

#### **MODULE-1: Introduction and basic networking concepts**

Software and hardware – Input / Output devices - Network technologies – LAN, WAN, MAN, PAN, CAN – Networking model – OSI model – TCP/ IP model- Networking adapters

#### **MODULE-2: Introduction to various networking devices**

Routers – switches – Modems – hubs – Wired and wireless technology

#### **MODULE-3: Inside the PC and Network basic**

Opening the PC and identification – Study of different blocks – Assembling and disassembling – setting IP addresses

#### **MODULE-4: Network configuration**

Sharing files and folders – Network troubleshooting – PING test, ipconfig

#### **MODULE-5: Introduction to servers and network security**

Types of servers- Basics of internet and Intranet – Types of internet connection – cloud application – Audio video conferencing – VOIP

#### **Course Outcomes:**

The students will be able to

- CO1. Student should able to know about hardware, software and network technologies.
- CO2. Students will have in-depth knowledge about networking devices.
- CO3. The student will able to know the basic of computer assembling and troubleshooting.
- CO4. Students will have brief knowledge about network troubleshooting
- CO5. The student will able to know the basic of servers and network security.

  
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### CO PO Mapping

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Hardware and software of system and network technologies	3	2	2	3				3		3	3	3
Have in-depth knowledge of networking devices.	3	3	3	2	2							
Basic of computer assembling and troubleshooting	3	2	3		3							
knowledge about network troubleshooting.	3	3	3	2	3			2		3	3	3
Basic of servers and network security	3	2										3

  
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**DEPARTMENT OF SCIENCE & HUMANITIES**

S.No	Title	Topics to be Covered	T/R Books	Periods Required	Remarks
1	Computer Basics	Hardware & Software	T1/Website	1	PPT
		Input / Output devices	T1/Website	2	BB
2	Network technologies	LAN, MAN, WAN	T1/Website	1	PPT
		PAN, CAN	T1/Website	2	BB
3	Networking model	OSI model	T1/Website	2	BB/PPT
		TCI / IP Model	T1/Website	2	BPPT
4	Networking devices	Routers, switches	T1/Website	2	PPT
		Hubs & modems	T1/Website	2	BB
5	Wired and wireless technologies	Network, cable	T1/Website	2	PPT
		Satellite communication, wifi	T1/Website	2	PPT

6	Inside the PC	Opening and Identification of PC	T1/Website	2	BB
		Study of different blocks	T1/Website	2	BB
7	Network basic	Assembling and disassembling	T1/Website	3	PPT
		Setting IP Address	T1/Website	2	PPT

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



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8	Network configuration	Sharing files and folders	T1/Website	2	PPT
9	Network troubleshooting	PING test & IP config	T1/Website	2	BB
10	Basics of servers	File server, email server	T1/Website	2	PPT
		Proxy server	T1/Website	2	BB

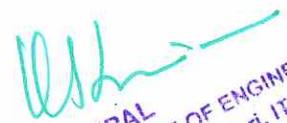
11	Types of network connections	Dialup, Broadband, 2G, 3G, 4G, 5G,	T1/Website	1	PPT
		Search engines	T1/Website	2	BB
12	VOIP	Audio video conferencing	T1/Website	1	PPT
		Cloud applications	T1/Website	2	PPT

### Text / Reference Books

- |   |  |
|---|--|
| 1 | PC Hardware: the complete reference 1.Craig zacker ( Author) 2. John Rourke (Author) |
|---|--|

### Website / URL References

- |   |   |
|---|---|
| 1 | <a href="https://www.academia.edu/35218609/Computer_Networking_and_Hardware_Concepts">https://www.academia.edu/35218609/Computer_Networking_and_Hardware_Concepts</a> |
| 2 | <a href="https://bie.tg.nic.in/Pdf/computerHardware.pdf">https://bie.tg.nic.in/Pdf/computerHardware.pdf</a>   |

  
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### Assessment

1. A program that contains nothing but strings of zeros and ones is called
  - a) Machine language program
  - b) Assembly language program
  - c) Interrupted program
  - d) Binary language program
  
2. All computer programs for a machine is called-----
  - a) Software
  - b) Firmware
  - c) Hardware
  - d) None
  
3. How many bits are used in the data bus?
  - a) 8
  - b) 9
  - c) 12
  - d) 16
  
4. Identify the device used to boost up the weak signal.
  - a) Modem
  - b) Router
  - c) Hub
  - d) Repeater
  
5. Which topology has the highest reliability?
  - a) Mesh
  - b) Ring
  - c) Bus
  - d) Star
  
6. HTML is used for?
  - a) Web page
  - b) High level program
  - c) Web server
  - d) None
  
7. What is the website's front page is called?
  - a) Browser page
  - b) Home page
  - c) Search page
  - d) Bookmark

  
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- 
8. A layer which is the binary data protocol layer
- Stub layer
  - Transport protocol
  - Remote layer
  - Skeleton layer
9. An object acting as a gateway for the client side
- Skeleton
  - Stub
  - Remote
  - Server
10. RMI uses stub and skeleton for communication with the ----- object
- Client
  - Remote
  - Server
  - Any
11. The equipment needed to allow home computers to connect the internet is called
- Modem
  - Gateway
  - Peripheral
  - Monitor
12. The process of keeping addresses in memory for future use is called
- Routing
  - Resolving
  - Caching
  - None
13. The server on the internet is also known as
- Hub
  - Host
  - Gateway
  - Repeater
14. The communication protocol used by internet is
- HTTP
  - TCP /IP
  - WWW
  - FTP
15. Website is a collection of
- HTML documents
  - Graphic files
  - Audio video file
  - All the above

  
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16. Internet is governed by

- a) I & B
- b) IETF
- c) Inter NIC
- d) None

17. The ground station in VSAT communication is called

- a) HTTP
- b) Hub
- c) Multiplexer
- d) None

18. Which of the following networking solution is suitable for networking in a building?

- a) WAN
- b) MAN
- c) LAN
- d) None

19. For a small website, one needs to buy space from the

- a) ISP
- b) Telephone exchanger
- c) Network administrator
- d) None

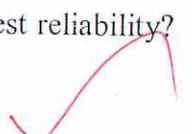
20. The internet standard is

- a) MIME
- b) BIN HEX
- c) UNENCODING
- d) None

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**DEPARTMENT OF SCIENCE & HUMANITIES**  
**Assessment**

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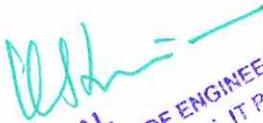
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5	Abdul Rahuman A	311817114005	Qualified
6	Abdul Wahab A	311817114006	Qualified
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17	Gandhi Subash K	311817114018	Qualified
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104	Mohamedhanaz N	311817205004	Qualified
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