



Estd : 2008

# METHODIST

## COLLEGE OF ENGINEERING AND TECHNOLOGY

Approved by AICTE New Delhi | Affiliated to Osmania University, Hyderabad

Abids, Hyderabad, Telangana, 500001

Number of Certificate/diploma program introduced during last five years					
TIMELINE:2014-15 TO 2018-19					
DEPARTMENTS	2018-19	2017-18	2016-17	2015-16	2014-15
CIVIL	1	1	0	0	0
CSE	2	0	0	0	0
ECE	2	3	1	0	2
EEE	1	1	1	1	1
MECH(UG)	0	0	1	0	0
MECH(PG)-CAD CAM	0	0	0	1	0
MBA	0	0	0	0	0
CERTIFICATE PROGRAMS INTRODUCED YEARWISE	6	5	3	2	3
CERTIFICATE PROGRAMS INTRODUCED OVER LAST 5 YRS					19

### SUMMARY

- Total no. of certificate programs organized over past 5 years under 5- Engineering programs & MBA are summarised in above table
- These programs are conducted for 5 -6 days @ 6-7 hours per day, spread across 1-2 weeks/ months in a semester
- The Resource persons are drawn either from reputed training center/industry/ in-house expertise
- A significant improvement in the total number of courses from year to year is observed
- The Eventwise 1). schedule & syllabus, 2). Sample participation certificate, 3). Participants list are herewith attached

METHODIST COLLEGE OF ENGINEERING AND TECHNOLOGY

ABIDS, HYDERABAD

EEE Department

Date: 06/01/2017

TO

The Principal/Director,

MCET,

Hyderabad.

SUB: Minute of Meeting for approval for conduction of CERTIFICATE PROGRAMMES for the current semester -Reg

Respected sir,

The dept. of EEE is planning to conduct the following CERTIFICATE PROGRAMMES (workshops) for the current semester 2016-17 (II SEM) . The details are specified below. I request your kind approval for the same.

The syllabus is also attached for your perusal

Sl. no	Programme name	Dates	In collaboration with	coordinator
1.	FIVEDAY CERTIFICATE COURSE ON ELECTRICAL DESIGNING & AUTOMATION	APRIL 2017	ELECTRO MOTION TECHNOLOGIES	Mr. J.RAMESH Asst. Professor

Thanking you sir,

*Perini Heta  
Lauve*

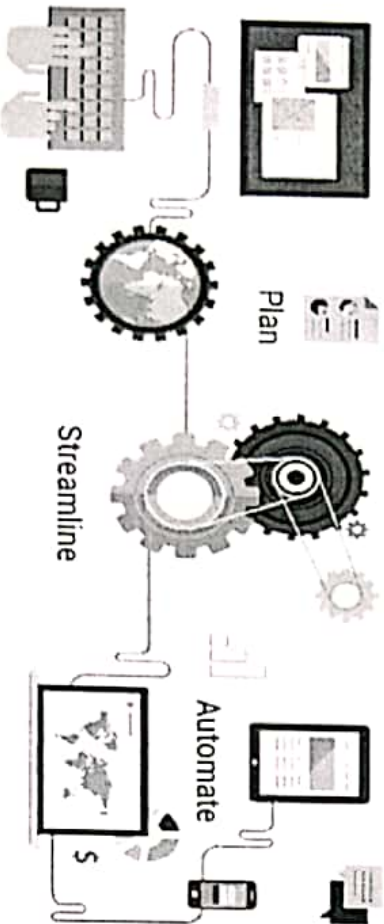
*for*  
*[Signature]*  
HOD-EEE

Head of Department  
Department of EEE  
Methodist College of Engg & Tech.  
Abids, Hyderabad-500 001.

### About EEE Department:

The Department of Electrical and Electronics Engineering was started in the year 2008 with an intake of 60, with an objective of imparting quality education in the Electrical and Electronics Engineering. EEE is the oldest of the engineering streams, and its applications are many. The number of career prospects for this group is huge, and it is the reason for many people to join this course. These students are offered with high salaried jobs, especially in the public sector. They are needed in power industry, electrical machine industries, etc. A number of private companies also offer lucrative job roles for these engineers.

Due to this requirement, Methodist gives a special preference to EEE, and we had built a special base for this group. The laboratories, faculty, etc. for this group are of top notch, and we chalk out various industrial tours, seminars workshops, etc. for the benefit of our students. EEE is one of the core streams of engineering, and it is required in any case. Hence the demand for this group never decreases, and it is the steadiest stream ever.



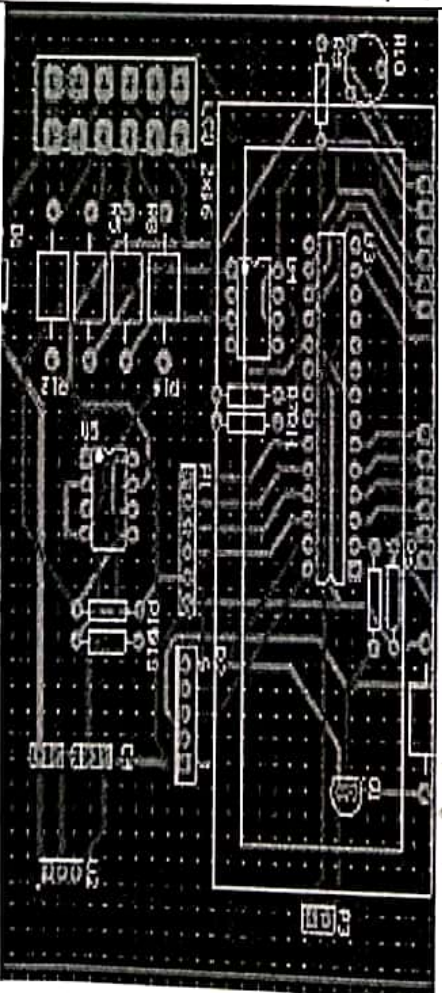
**Speaker:**  
Person from ElectRoMation Technologies

## FIVE DAY CERTIFICATE COURSE ON ELECTRICAL DESIGNING & AUTOMATION

Organized by

*Department of Electrical & Electronics Engineering*

03-04-2017  
&  
07-04-2017



**METHODIST COLLEGE OF ENGINEERING AND TECHNOLOGY**  
(Affiliated to Osmania University)  
King Koli Road, Abids, Hyderabad, Telangana


Head of Department  
Department of EEE  
Methodist College of Engineering and Technology  
Abids, Hyderabad

**METHODIST COLLEGE OF ENGINEERING & TECHNOLOGY**  
**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

**CERTIFICATE COURSE ON ELECTRICAL DESIGNING & AUTOMATION**

**SCHEDULE**

	Times	Activity/Session	Location
DAY1	9.30AM	Registration,	Seminar hall
	10.00AM	Welcome & Introductions	
	11.00-12.30 PM	Presentation on important aspect of automation control	
	12.30-1.00pm	lunch	
	1.00-4.00PM	Practice session on computers by using matlab software	Simulation lab
DAY2	9.30AM	Welcome & Introductions	Seminar hall
	10.00-12.30 PM	Presentation on modeling, design, analysis, simulation, operation, control	
	12.30-1.00pm	LUNCH	
	1.00-4.00PM	Programing work	Simulation lab
DAY3	10.00-12.30 PM	FUNDAMENTALS OF PLC SOFTWARE	Seminar hall
	12.30-1.00pm	LUNCH	
	1.00-4.00PM	USING LADDER LOGIC FOR SIMPLE DIGITAL FUNCTIONS & practice session	Simulation lab
DAY4	10.00-12.30 PM	LEARN REGISTERS IN PLC SYTEM	Seminar hall
	12.30-1.00pm	LUNCH	
	1.00-4.00PM	HANDS ON TRAINING VARIOUS PARAMETERS	Simulation lab
DAY5	10.00-12.30 PM	Presentation on design and implementation of computer-based industrial information systems"	Seminar hall
	12.30-1.00pm	LUNCH	
	1.00-4.00PM	Coding and Simulink practice session	Simulation lab
	4.00-4.15PM	VOTE OF THANKS	

  
 Head of Department  
 Department of EEE  
 Methodist College of Engineering & Technology  
 Hyderabad-500 084

# Syllabus of Automation and electrical Design

## HAZARDOUS AREAS

- Introduction: explosion consequences and Risk assessment
- Properties of flammable materials
- Definitions
- Classification system: sources of release and zoning
- Classification of apparatus: grouping and Temperature

## PLC PROGRAMMING AND DESIGN

### INTRODUCTION

- Introduction and brief history of PLCs and alternative control systems

### ABOUT OF FUNDAMENTALS OF PLC SYSTEM

- Block diagram of typical PLC
- PLC processor module – memory organisation
- Input and output section - module types
- Calculation of DI/DO and AI/AO
- Selection of Communication

### FUNDAMENTALS OF PLC SOFTWARE

- Methods of representing Logic, Boolean Algebra, instruction code and graphical presentation
- Fundamental ladder logic instruction set with Different make PLC
- Comparison of different manufacturers, memory and data representation and instruction code

### USING LADDER LOGIC FOR SIMPLE DIGITAL FUNCTIONS

- Why ladder logic programming and Comparison of relay ladder diagrams
- The concept of the 'scan' and how to apply it
- Contact 'normal' states
- Positive and negative logic
- Basic Boolean functions

### LEARN REGISTERS IN PLC SYSTEM

- Number systems
- Types of register data
- Timers and counters
- it shift and rotate
- Table functions

### HANDS ON TRAINING VARIOUS PARAMETERS

- Practical methods to improve quality:
- ### ADVANCED CONTROL WITH PLCS
- Examples, drive logic and alarm handling
  - Use of advanced programming functions

### BATCH PROCESSES AND SEQUENTIAL CONTROL

- Step advance
- Fault detection and Recovery
- Multiple recipes or alternative paths
- Sequential function charts

## PID CONTROL

- The importance of timing and scan time
- When PID is not always appropriate
- Intermittent measurements
- Long transport delays
- Interface standards, RS-232, RS-422/423 and RS-485
- Protocols, Modbus and DH+
- Local Area Networks, Ethernet
- Monitoring communication links and simple watchdog timers

### Fundamentals of IEC 61131-3

- Function block diagrams
- Ladder diagrams
- Instruction list
- Sequential function chart

## THEORY OF PROCESS CONTROL

- Processes, controllers and tuning
- PID Controllers - P, I and D modes of operation
- Load disturbances and offset
- Speed, stability and robustness
- Gain, dead time and time constants
- Process noise and feedback controllers

## BACKGROUND TO SCADA

- SCADA concepts and terminology
- Typical SCADA architectures

## SCADA HARDWARE

- I/O Servers
- Historians
- RTUs
- Firewalls
- Component-level redundancy

## SCADA SOFTWARE

- Commercially-available SCADA software
- Configuration

## APPLICATION OF PROTOCOLS IN SCADA

- TCP/IP
- MODBUS
- DNP3

## ETHERNET APPLICATIONS IN SCADA

- Components
- Network redundancy

## WIRELESS APPLICATIONS IN SCADA

- Terrestrial microwave
- Cellular

  
Head of Department  
Department of EEE  
Rajshree Education Society's Institute of Technology  
Warananagar, Pune-411 004

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King Koti Road, Abids, Hyderabad - 500001

Department of Electrical & Electronics Engineering  
 FIVE DAY CERTIFICATE COURSE ON ELECTRICAL DESIGNING &  
 AUTOMATION (DURING 03 APRIL TO 07 APRIL 2017)

## LIST OF PARTICIPANTS

S.No	Roll No	Name	SIGNATURE
1	160713734001	CH PRAGNA	Pragna
2	160713734002	V K SHINEY PRIYANKA	Priyanka
3	160713734003	G SARITHA	Saritha
4	160713734004	K PRASHANTHI	Prashanthi
5	160713734005	MD ABDUL SOHAIL	MD Abdul
6	160713734006	J CHARANRAJ	Charan
7	160713734008	B SRAVAN	Sraavan
8	160713734010	MD RAWOOF KHAN	Rawoof
9	160713734011	T SAIBABA	Saibaba
10	160713734012	M SREEKANTH	Sreekanth
11	160713734013	G MALLIKARJUN	Mallikarjun
12	160713734014	MD ALI KHAN	Ali Khan
13	160713734015	MD AAMAR KHAN	Amar Khan
14	160713734016	M MAHESHWAR REDDY	Maheshwara
15	160713734017	M BHARATHKUMAR	Bharath Kumar
16	160713734018	G VIVEK	Vivek
17	160713734020	SHAIK YOUSF	Shaik Yousef
18	160713734021	SYED AMIR	Syed Amir
19	160713734023	S PAVAN KUMAR REDDY	S. Pavan Kumar
20	160713734024	MD JUNAID AHMED	M. D Ahmed
21	160713734025	K SUSHMITHA	Sushmitha
22	160713734027	N PREM CHAND	Prem Chand
23	160713734032	K VAMSHIDHAR	Vamshidhar
24	160713734033	MD MUJAHID HUSSAIN	Mujahid Hussain
25	160713734034	MOHD UMED	Mohd Umed
26	160713734037	SYED AHMED BASHEERUDDIN	Syed Ahmed
27	160713734038	E AJAY KUMAR	Ajay Kumar
28	160713734041	MD KHAJA MUQIMUDDIN	Muqimuddin
29	160713734061	V.VINAY	V. Vinay
30	160713734301	BOJJA VENKATESH	Venkatesh
31	160713734302	K ARUN KUMAR	Arun Kumar
32	160713734303	SRIMALA SAGAR	Srimala Sagar
33	160713734304	M VIJAY NAIK	Vijay Naik
34	160713734305	PADALA SUMESHNATH	Sumeshnath
35	160713734306	MAINAM SRIVILAS	Mainam
36	160713734307	KALAVALA UDAY BHASKAR	Uday
37	160713734309	SRINAM NIKHIL	Srinam

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## LIST OF PARTICIPANTS

S.NO	ROLL NO	NAME	SIGNATURE
1	160714734001	Pankaj Kamle	Kamle
2	160714734002	Earla Srinivas	Earla
3	160714734003	Chada Meher Krishna	Meher Krishna
4	160714734004	Md Mustafa Javeed	Javeed
5	160714734006	Mahmoud Suleman Zubedi	Zubedi
6	160714734007	Dorothy Benedict	Benedict
7	160714734008	B Sai Sridevi	Sridevi
8	160714734009	Md Mubasher Ahmed Khan	Khan
9	160714734010	Bethi Vinay Reddy	Reddy
10	160714734011	Syed Nehal Abrar	Abrar
11	160714734012	Mohammed Almas Khan	Khan
12	160714734013	Mohd Sami Uddin	Sami
13	160714734014	Gajawada Sai Suraj	Suraj
14	160714734016	Mohammed Zubairuddin	Zubairuddin
15	160714734017	Mohd Ameen	Ameen
16	160714734019	Pinnenti Satish	Satish
17	160714734021	Bachu Meghanath Reddy	Reddy
18	160714734022	Mir Faraaz Ali	Faraaz Ali
19	160714734025	Mohd Abdul Muneeb	Abdul
20	160714734026	Tarigonda Mukthiyar Basha	Basha
21	160714734028	Chinthakindi Bharadwaj	Bharadwaj
22	160714734035	Maliha Maheen	Maheen
23	160714734036	Kyatham Saikiran	Saikiran
24	160714734039	Muniganti Aditya Sai	Sai
25	160714734040	Mohammed Ikram Ahmed	Ahmed
26	160714734031	Syed Faiz Uddin	Uddin
27	160714734310	Pochampalli Shrivya	Shrivya
28	160714734312	Namani Vinay	Vinay
29	160714734313	Bhuma Phani Bhushan	Bhushan
30	160714734314	Thipparthi Aravind Sai	Sai
31	160714734315	T Mahesh Hemanth Kumar	Hemanth
32	160714734317	Shaik Farzuab Musakkir	Musakkir
33	160714734318	Syed Imran Ahmed	Imran

INCHARGE

HOD/EEE  
 Head of Department  
 Department of EEE  
 Methodist College of Engg & Tech.  
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(Affiliated to O.U. & Approved by AICTE)

King Koti Road, Abids, Hyderabad – 500 001, Telangana, INDIA



## Certificate of Participation

Certified that Mr/Ms Gajawada Sai Suraj Bearing R.No: 160714734014  
of II Semester EEE Branch, Participated in Certification Courses  
on 3<sup>rd</sup> April - 7<sup>th</sup> April during April 2017.  
in Collaboration with Electro Motion Technologies.

  
Director

  
HOD

Principal