

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.
Contact No: 98433 46065, 84899 10651.

Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com,principal602@gmail.com

# **ACADEMIC YEAR 2019-20**



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.
Contact No: 98433 46065, 84899 10651.

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# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING VALUE ADDED PROGRAMS

ACADEMIC YEAR: 2019-2020

S.NO	NAME OF VALUE ADDED PROGRAMS OFFERED	DURATION (HOURS)	NUMBER OF STUDENTS COMPLETING THE COURSE IN THE YEAR	TYPE OF VALUE ADDED PROGRAMS
1	DATA SCIENCE	30	52	SELF- FRAMED PROGRM
2	WEB DEVELOPMENT	30	08	SELF- FRAMED PROGRM



Dr.K.MAHADEVAN, B.E., M.E., Ph.D. PRINCIPAL



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.
Contact No: 98433 46065, 84899 10651.

Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com,principal602@gmail.com

DATE: 04.07.2019

#### FROM

S.Dhinesh

Head of the Department

Department of Computer Science and Engineering

CMS College of Engineering

Namakkal-637003

TO

The Principal

CMS College of Engineering

Namakkal-637003

### Respected sir,

Sub: Request for permission to organize value added program - Reg.,

I wish to inform you that, we are planning to conduct value added program on "DATA SCIENCE" for B.E. Computer Science and Engineering students from 13.07.2019 to 14.09.2019. In this regard, I kindly request you to avail permission to conduct the program successfully.

Thanking you

Yours Sincerely

(S.DHINESH)



DEK. MAHADEVAN, B.E., M.E., Ph.D.

CMS COLLEG NAMAKA

RING.



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DATE: 04.07.2019

### FROM

S.Dhinesh

Head of the department

Department of Computer Science and Engineering

CMS College of Engineering

Namakkal-637003

TO

The Principal

CMS College of Engineering

Namakkal-637003

Respected sir,

Sub: Request for permission to organize value added program - Reg.,

I wish to inform you that, we are planning to conduct value added program on "WEB DEVELOPMENT" for B.E. Computer Science and Engineering students from 13.07.2019 to 14.09.2019 In this regard, I kindly request you to avail permission to conduct the program successfully.

Thanking you

Yours Sincerely (S.DHINESH)

NAMAKKAL 3

Dr.K.MAMADEVAN, B.E., M.E., Ph.D. PRINCIPAL CMS COLLEGE OF ENGINEERING,

NAMAKKAL-637 003



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Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com.principal602@gmail.com

DATE: 06.07.2019

### CIRCULAR

This is to bring to your kind notice that our Department of Computer Science and Engineering of CMS College of Engineering Namakkal has planned to conduct a value added program on "Data Science" from 13.07.2019 to 14.09.2019. The session will be organized by Mr.M.Karthick Managing Director, Infinite Bullseye. All the students of III & IV Year are intimated to attend the program without fail in order to enrich their knowledge.

HEAD OF THE DEPARTMENT

Copy to

- 1. The Principal
- 2. HOD
- 3. Notice Board

Dr.K.MAHADEVAN, B.E., M.E., Ph.D. PRINCIPAL CHIS COLLEGE OF ENGINEERING,

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Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com.principal602@gmail.com

DATE: 06.07.2019

### CIRCULAR

This is to bring to your kind notice that our Department of Computer Science and Engineering of CMS College of Engineering Namakkal has planned to conduct a value added program on "Web Development" from 13.07.2019 to 14.09.2019. The session will be organized by Mr.K.SENTHILKUMAR, CEO, and THIRSTY CROWZ. All the students of II Year are intimated to attend the program without fail in order to enrich their knowledge.

HEAD OF THE DEPARTMENT

Copy to

1. The Principal

2. HOD

3. Notice Board

NAMARKAM 8 PH

Dr.K.MAHADEVAN,B.E.,M.E.,Ph.D.
PRINCIPAL



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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR: 2019-2020

### VALUE ADDED PROGRAM-DATA SCIENCE

### STUDENTS NAME LIST

S.NO	REG NO	NAME
1	620517104001	AARTHI P
2	620517104003	AKASH K
3	620517104006	AMUTHA M
4	620517104008	DHARSHINI S
5	620517104009	DINESH A
6	620517104010	EVANGELIN EMIMA GRACE S
7	620517104014	ISWARYA P
8	620517104016	KARTHICKKUMAR G
9	620517104017	KARTHIKA K
10	620517104018	KASTHURI A
11	620517104020	KAVIYARASU K
12	620517104021	KIRUBALAN A
13	620517104022	LAKSHMI A
14	620517104023	MANIVEL M
15	620517104024	MANORANJITHAM M
16	620517104025	MATHESH R
17	620517104029	NANDHINI P
18	620517104031	PAVITHRA E
19	620517104033	POOVARASAN L
20	620517104034	PRATHIBA R
21	620517104035	PRIYADHARSHINI E
22	620517104036	RAMYA M
23	620517104038	RESHMA R
24	620517104040	SAHANAVARSHNI C S
25	620517104042	SANGAVI S
26	620517104044	SANJAY S



ORK.MAHADEVAN, B.E., M.E., Ph.D.
PRINCIPAL



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27	620517104049	SUSANTHIKA B	
28	620517104050	VEERAKUMAR N	
29	620517104051	VIGNESH C	
30	620517104701	PRIYA A	
31	620517104702	THAMARAI SELVI M	
32	620517104703	DHARSHINI C	
33	620517104704	ANISHA V	
34	620516104002	BACKIYALAKSHMI.B	
35	620516104003	DEIVANAI.M	
36	620516104004	ELANTHAMIZHAN.T	
37	620516104006	GEETHA.L	
38	620516104007	GUNASELVI.S	
39	620516104010	JENIFAR.B	
40	620516104011	KADHARVALI.S	
41	620516104012	KARTHICK.T	
42	620516104013	KAVIYA.N	
43	620516104015	MANIKANDAN.A	
44	620516104016	MANIKANDAN.P	
45	620516104017	MOHAN RAJU.R	
46	620516104018	NANDHINI.G	
47	620516104019	PAVITHRA.M	
48	620516104020	PRADEEPA.P	
49	620516104022	PRIYANKA.M	
50	620516104023	RADHA.K	
51	620516104024	RAJESHWARI.C	
52	620516104028	SATHYA.S	
53	620516104032	SRIDHAR.A	
54	620516104033	SUBASRI.J	
55	620516104034	TAMILSELVAN.R	
56	620516104035	TAMILSELVAN.V	
57	620516104036	VEMBU.S	
58	620516104041	VISHWANATHAN.G	

PROGRAM CO-ORDINATOR

MALAHAM 3) PM

Or.K.MAHADEVAN, B.E., M.E., Ph.D.
PRINCIPAL



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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### VALUE ADDED PROGRAM -WEB DEVELOPMENT ACADEMIC YEAR: 2019-2020

STUDENTS NAME LIST

S.NO	REG NO	NAME
1	620518104001	ANISHA.B
2	620518104002	ARTHI.M
3	620518104004	GOKUL.M
4 .	620518104006	MANJULA.K
5	620518104007	MANOVADHANA.M
6	620518104008	MUTHURAGAVAN.P
7	620518104009	PREETHI.R
8	620518104010	SUBBULAKSHMI.P
9	620518104011	SURYA.M
10	620518104012	VIGNESH.M

PROGRAM CO-ORDINATOR

HOD

· PIFETANDA

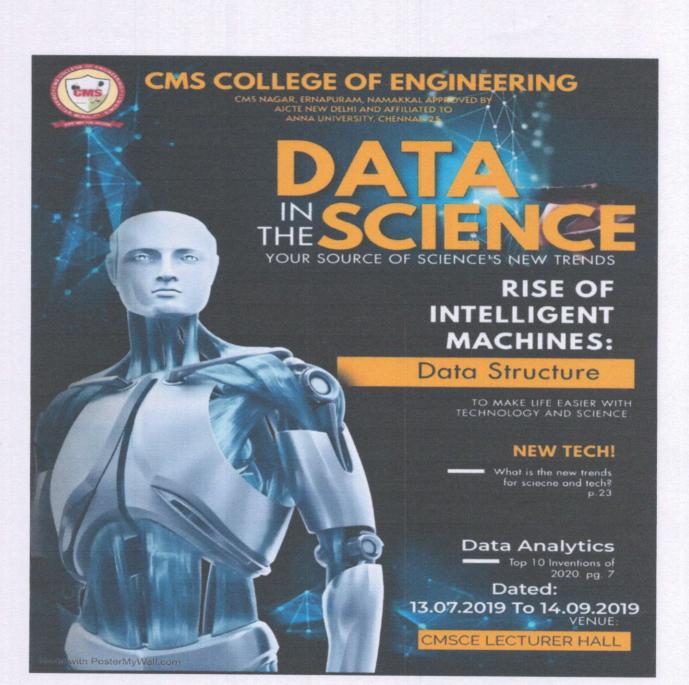
Dr.K.MAHADEVAN, B.E., M.E., Ph.D.
PRINCIPAL
CMS COLLEGE OF ENGINEERING,
NAMAKKAL-637 003





(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
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# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING VALUE ADDED PROGRAM WEB DEVELOPMENT SYLLABUS

### Unit I HTML

History of the Internet and World Wide Web – HTTP, SMTP, POP3, MIME, Understanding roles of Web Browsers and Web Servers. Structure of HTML, Text formatting, Text styles, hyper link, image, and tables.

### Unit II Frames, Forms and CSS

Frames, Forms and controls, Embedding audio, video and animated files in HTML, CSS – Understanding CSS, Internal CSS, External CSS, Font Properties, Text Properties, Color and Background properties, Table properties, Numbering and List Properties.

Unit III JavaScript

Data types and literals, operators, conditional statements, loop constructs, reserved words; core Objects Array Object, Date Object; Functions passing value to JavaScript functions, user defined functions, Handling old browsers, java script events, formatting cookie, retrieving cookie value from the cookie file, removing a cookie, animations using events.

#### Unit IV ASP & XML

ASP – Working of ASP – Request and Response Objects – File System Objects – Session tracking and cookies – ADO – Access a Database from ASP – XML– Structure in Data – Name spaces – DTD – Vocabularies – Accessing Webservers – IIS – Apache web server.

Unit V PHP & MySQL

Why PHP and MySQL - Server-Side Web Scripting - Getting Started with PHP - Adding PHP to HTML -Syntax and Variables - Control and Functions

- Passing Information between Pages - Strings - Arrays and Array Functions - Numbers - MySQL Database Administration - PHP/MySQL Functions - Displaying Queries in Tables - Building Forms from Queries.

Course Outcomes

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

- · Develop a dynamic webpage by the use of java scriptand DHTML.
- · Create web pages using DHTML and Cascading Stylessheets.
- Build dynamic web pages using JavaScript (client sideprogramming)
- Write a well formed / valid XML document.

PROGRAM CO-ORDINATOR

MAKAAKKA! 3

Dr.K.MAHADEVAN, B.E., M.E., Ph.D.
PRINCIPAL
CMS COLLEGE OF ENGINEERING,
NAMAKKAL-637 003

SHOD

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# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING VALUE ADDED COURSE DATA SCIENCE SYLLABUS

### Objectives:

- To gain knowledge in the basic concepts of Data Analysis
- To acquire skills in data preparatory and preprocessing steps.
- > To understand the mathematical skills in statistics.
- > To understand the concepts of Artificial Intelligence Roles and Skills in Data Science.
- > To understand the role of Data Science in Real-time applications

#### UNIT I INTRODUCTION

Need for data science – benefits and uses – facets of data – data science process – setting the research goal – retrieving data – cleansing, integrating, and transforming data – exploratory data analysis – building the models – presenting and building applications.

#### UNIT II DESCRIBING DATA - I

Frequency distributions – Outliers – relative frequency distributions – cumulative frequency distributions – frequency distributions for nominal data – interpreting distributions – graphs – averages – mode – median – mean – averages for qualitative and ranked data – describing variability – range – variance – standard deviation – degrees of freedom – interquartile range – variability for qualitative and anked data

### UNIT III DESCRIBING DATA - II

Normal distributions – z scores – normal curve problems – finding proportions – finding scores – more about z scores – correlation – scatter plots – correlation coefficient for quantitative data – computational formula for correlation coefficient – regression – regression line – least squares regression line – standard error of estimate – interpretation of r2 – multiple regression equations – regression toward the mean.

### UNIT IV AI: ROLES AND SKILLS AI:

Cognitive Computing: Learning Perceptions – Terminologies - Machine Learning – Neural Networks – Deep Learning - NLP – Speech Processing – Big Data and AI – EthicsAI Research - Advanced Applications – AI Myths – Data Science Roles Data Scientist, Data Architect, Data Analyst – Machine Learning Engineer – Skills.

Gr.K.MAHADEVAN, B.E., M.E., Ph.D. PRINCIPAL



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### UNIT V DATA SCIENCE USE CASES

Data Science Use cases Specifications and Discussion – Data Sources Identification – Data Types –Data Classification – Data Characteristics of Big V"s – Data Science P"s – Applications of AI: Domains: Customer Insights – Behavioral Analysis — Marketing – Retails – Insurance – Risk and Security –Health care – Supply Chain Logistics.

PROGRAM CO-ORDINATOR

Dr.K.MAHADEVAN, B.E., M.E., Ph.D.
PRINCIPAL



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### DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

VALUE ADDED PROGRAM

ACADEMIC YEAR: 2019-2020

S.NO	NAME OF VALUE ADDED PROGRAM OFFERED	DURATION (HOURS)	NUMBER OF STUDENTS COMPLETING THE COURSE IN THE YEAR	TYPE OF VALUE ADDED PROGRAM
1	PCB DESIGN AND IC MANUFACTURING	30	20	SELF- FRAMED PROGRM



Dr.K.MAHADEVAN, B.E., M.E., Ph.D.
PRINCIPAL CMS COLLEGE OF ENGINEERING,

NAMAKKAL-637 003



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Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com,principal602@gmail.com

DATE:04.07.2019

#### FROM

K.Periyasamy

Head of the Department

Department of Electronics and Communication Engineering

CMS College of Engineering

Namakkal-637003

TO

The Principal

CMS College of Engineering

Namakkal-637003

### Respected sir,

Sub: Request for permission to organize value added program - Reg.,

I wish to inform you that, we are planning to conduct value added program on PCB DESIGN AND IC MANUFACTURING for B.E. Electronics and Communication Engineering students from 13.07.2019 to 14.09.2019. In this regard, I kindly request you to avail permission to conduct the program successfully.

Thanking you

(K.PERIYASAMY)

Dr.K.MAHADEVAN, B.E., M.E., Ph.D. PRINCIPAL GMS COLLEGE OF ENGINEERING,

NAMAKKAL-637 003



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Contact No: 98433 46065, 84899 10651.

Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com,principal602@gmail.com

DATE: 06.07.2019

### CIRCULAR

This is to bring to your kind notice that our Department of Electronics and communication Engineering of CMS College of Engineering Namakkal has planned to conduct a value added program on "PCB DESIGN AND IC MANUFACTURING" from 13.07.2019 to 14.09.2019. The session will be organized by Dr.M.Pallikonda Rajasekaran, Dean, Kalasalingam Academy of Research And Education. All the students of III & IV Year are intimated to attend the program without fail in order to enrich their knowledge.

HEAD OF THE DEPARTMENT

Copy to

- 1. The Principal
- 2. HOD
- 3. Notice Board

NAMAKKAL-3) FOR

OK. MAHADEVAN, B.E., M.E., Ph.D.

PRINCIPAL
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# DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING VALUE ADDED PROGRAM- PCB DESIGN AND IC MANUFACTURING ACADEMIC YEAR: 2019-2020 STUDENTS NAME LIST

S.NO	REG NO	NAME
1	620517106001	ABINAYA S
2	620517106002	ABINAYA.T
3	620517106003	AJITH KUMAR.P
4	620517106010	GIRIJA.R
5	620517106013	KIRUTHIGA DEVI A
6	620517106014	MALLESWARI.K
7	620517106016	NANTHINI.R
8	620517106020	SARANYA.R
9	620517106022	SHARMILADEVI R
10	620517106023	SUJITHRA.P
11	620517106027	VIJAYALAKSHMI.M
12	620517106701	MALATHI K
13	620516106001	ABARNA.K
14	620516106003	ANJALI.A
15	620516106005	BIRUNTHA.S
16	620516106007	DIVYA.M
17	620516106008	MADHUMATHI.S
18	620516106009	MATHESH.L
19	620516106010	MURUGAMMA.M
20 .	620516106011	PAVITHRA.C
21	620516106014	PRIYADHARSHINI.R
22	620516106016	SATHASIVAN.D
23	620516106017	SATHYA.G
24	620516106019	SOUNDHARYA.S

PROGRAM CO-ORDINATOR

13.7.19

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& Penya Istaling

Dr.K.MAHADEVAN, B.E., M.E., Ph.D.
PRINCIPAL
CMS COLLEGE OF ENGINEERING,

MAMAKKAL-637 003



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Cms Nagar, Ernapuram Post, Namkkal Dt, pin 637003, Tamilnadu

# **ORGANIZED BY**

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

PCB DESIGN AND IC MANUFACTURING

DATE: 13/07/2019 to 14/09/2019

**VENUE: CMSCE LECTURE HALL** 





Dr.K.MAHADEVAN,B.E.,M.E.,Ph.D.



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# DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING VALUE ADDED COURSE PCB DESIGN AND IC MANUFACTURING SYLLABUS

### UNIT I:

Printed circuit Board Design: Study of Packages of Electronic Components. History of Printed Circuit Boards . Various types of Printed Circuit Boards-Single Sided Boards, Double Sided Plated through Hole Boards, multilayer Boards.

### UNIT II:

Printed Circuit Board Design Methods: Rules for single and Double Sided Board. Schematic diagram Entry in PCB Design tool/S/W. Layout Design, Routing methods. Guideline for Artwork Generation. Generation of various Manufacturing Documents/ Output file generation. Component Library management in PCB Design tool.

#### UNIT III

Printed Circuit Board Manufacturing Methods: Method of Screen Printing for pattern transfer. Method of Wet film and Dry film for single and Double Sided Board Manufacturing. Method of Solder-mask and Legend Printings. Plating and Etching Techniques. Mechanical methods required in manufacturing of PCBs like punching, drilling, milling and routing.

### JNIT IV

Study Soldering Techniques: Materials used in Soldering Process. Soldering Methods –Manual and Mass soldering Techniques. Tools for soldering and de-soldering. Study of soldering defect and rectification. Testing for quality Control.

### UNIT V:

PCB Assembly Techniques: Components Preparation Method-Lead Forming methods. Leaded through hole assembly and Surface Mount Assembly. Mixed Assembly Techniques of through hole and SMDs. Manual Assembly method, Semiautomatic and automatic Assembly method. Study of Tools used in assembly process.:



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PRINCIPAL



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### LEARNING OUTCOMES

- 1. Students will acquire the basic level knowledge. and will understand the packages of Electronic components, types of PCBs and history of PCBs.
- 2. Students will understand the rules before PCB Designing, the flow of computer aided design packages and will Acquire the importance of manufacturing documents (output file generation)
- 3. Understand the basic concept of thermal analysis and understanding how to design PCB for Manufacturing and assembly point of view.
- 4. Acquire the basic level knowledge required to understand Film Master generation method, material used for manufacturing, cleaning methods of base material.
- 5. Understand the methods for manufacturing of PCBS. Type of material used for manufacturing. Understand the mechanical method in manufacturing.

PROGRAM CO-ORDINATOR

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Dr.K.MAHADEVAN.B.E.,M.E.,Ph.D.
PRINCIPAL
GMS COLLEGE OF ENGINEERING,
NAMAKKAL-637 003



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### DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING VALUE ADDED PROGRAMS

2019-2020

S.NO	NAME OF VALUE ADDED PROGRAMS OFFERED	DURATION (HOURS)	NUMBER OF STUDENTS COMPLETING THE COURSE IN THE YEAR	TYPE OF VALUE ADDED PROGRAMS
1	INDUSTRIAL AUTOMATION	30	4	SELF-FRAMED PROGRM
2	SIMULATION SOFTWARE EE	30	14	SELF-FRAMED PROGRM



Dr. K. MAHADEVAN, B.E., M.E., Ph.D. PRINCIPAL GMS COLLEGE OF ENGINEERING.

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CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.
Contact No: 98433 46065, 84899 10651.

Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com.principal602@ gmail.com

DATE: 04.07.2019

### **FROM**

G.Suresh

Head of the Department

Department of Electrical and Electronics Engineering

CMS College of Engineering

Namakkal-637003

TO

The Principal

CMS College of Engineering

Namakkal-637003

### Respected sir,

Sub: Request for Permission to organize value added program - Reg.,

I wish to inform you that, we are planning to conduct value added program on "INDUSTRIAL AUTOMATION" for B.E. Electrical and Electronics Engineering students from 13.07.2019 to 14.09.2019. In this regard, I kindly request you to avail permission to conduct the program successfully.

Thanking you

(G.Suresh)

Dr. K. MAHADEVAN, B.E., M.E., Ph.D.





(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25) CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.

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DATE: 04.07.2019

### FROM

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Head of the Department

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CMS College of Engineering

Namakkal-637003

TO

The Principal

CMS College of Engineering

Namakkal-637003

### Respected sir,

Sub: Request for Permission to organize value added program - Reg.,

I wish to inform you that, we are planning to conduct value added program on "SIMULATION SOFTWARE EE" for B.E. Electrical and Electronics Engineering students from 13.07.2019 to 14.09.2019. In this regard, I kindly request you to avail permission to conduct the program successfully.

Thanking you

Dr.K.MAHADEVAN, B.E., M.E., Ph.D.

(G.Suresh)

PRINCIPAL

CMS COLLEGE OF ENGINEERING,

NAMAKKAL-637 UL





(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.
Contact No: 98433 46065, 84899 10651.

Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com.principal602@gmail.com

DATE: 06.07.2019

### CIRCULAR

This is to bring to your kind notice that our Department of Electrical and Electronics Engineering of CMS College of Engineering, Namakkal has planned to conduct a value added program on "Simulation Software EE" from 13.07.2019 to 14.09.2019. The session will be organized by DR.B.MEENAKSHI SUNDARAM, DEAN, SETHU INSTITUTE OF TECHNOLOGY. All the students of III & IV Year are intimated to attend the program without fail in order to enrich their knowledge.

HEAD OF THE DEPARTMENT

Copy to

- 1. The Principal
- 2. HOD
- 3. Notice Board

E LANGER TO SO

Dr.K.MAHADEVAN, B.E., M.E., Ph.D.
PRINCIPAL
CMS COLLEGE OF ENGINEERING,

NAMAKKAL-637 003



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.

Contact No: 98433 46065, 84899 10651.

Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com,principal602@ gmail.com

DATE: 06.07.2019

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HEAD OF THE DEPARTMENT

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- 3. Notice Board

NAMANKAL-S) THE

Dr.K.MAHADEVAN,B.E.,M.E.,Ph.D.



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Contact No: 98433 46065, 84899 10651.

Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com.principal602@ gmail.com

### DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

**ACADEMIC YEAR: 2019-2020** 

# VALUE ADDED PROGRAM- INDUSTRIAL AUTOMATION STUDENTS NAME LIST

S.NO	REG NO	NAME
1	620518105001	KARTHI N
2	620518105003	RAJAMANICKAM V
3	620518105005	SRIDHAR M
4	620518105007	SURESH G

D. Padis/19

PROGRAM CO-ORDINATOR

Hools.

NAMARKAL-3) TO NO AMARKAL-3 TO

Dr.K.MAHADEVAN,B.E.,M.E.,Ph.D. PRINCIPAL



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.
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Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com,principal602@\_gmail.com

# DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING VALUE ADDED PROGRAM- SIMULATION SOFTWARE EE

ACADEMIC YEAR: 2019-2020 STUDENTS NAME LIST

S.NO	REG NO	NAME
1	620517105003	ARJUN S
2	620517105004	DHINATHAYALAN
3	620517105008	MANIKANDAN M
4	620517105013	SUBASH R
5	620516105002	DEVARAJ K
6	620516105003	DHANASEKAR
7	620516105005	GNANASEKAR B
8	620516105007	GOKULNATH R
9	620516105010	NANDHINI K
10	620516105011	NITHIYAN R
11	620516105012	PRAVEENKUMAR P
12	620516105013	RAGUL R
13	620516105015	RANJITH K
14	620516105019	THANGARASU G
15	620516105022	VIDHYAPATHI M
16	620516105023	VIJAYALAKSHMI S
17	620516105024	VISHWARAKSHAIYA M

D. Pantis/1/19

PROGRAM CO-ORDINATOR

for D

Dr.K.MAHADEVAN, B.E., M.E., Ph.D.



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.
Contact No: 98433 46065, 84899 10651.

Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com,principal602@gmail.com

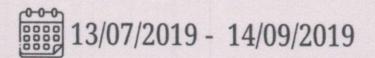
### CMS COLLEGE OF ENGINEERING

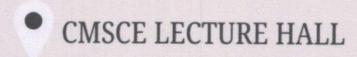
APPROVED BY AICTE, DELHI AND AFFILATED TO ANNA UNIVERSITY CMS NAGAR, ERANAPURAM POST, NAMAKKAL (dT), PIN 637 003

# **ORGANIZED BY**

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

# INDUSTRIAL AUTOMATION







Dr.K.MAHADEVAN, B.E., M.E., Ph.D. PRINCIPAL



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.

Contact No: 98433 46065, 84899 10651.

Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com,principal602@gmail.com

### CMS COLLEGE OF ENGINEERING

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### **ORGANIZED BY**

# AND ELECTRONICS ENGINEERING SIMULATION SOFTWARE

DATE: 13/07/2019-14/09/2019

VENUE: CMSCE LECTURE HALL



Dr.K.MAHADEVAN,B.E.,M.E.,Ph.D.



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.
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# DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINERING VALUE ADDED COURSE SIMULATION SOFTWARE EE SYLLABUS

### Course objectives:

To provide the knowledge of discrete and continuous system, random numbers generation, queuing system and computer system simulation.

### **UNIT-I Introduction to Simulation**

- 1. System, model and simulation
- 2. Discrete and continuous systems
- 3. Model of a system
- 4. Types of models
- 5. Steps in simulation study
- 6. Model development life cycle
- 7. Advantage and disadvantage of simulation
- 8. Limitations of the simulation techniques
- 9. Areas of application

### **UNIT-II Continuous system simulation**

- 1. Differential and partial differential equations
- 2. Continuous system models
- 3. Analog computer
- 4. Analog Methods
- 5. Hybrid simulation
- 6. Digital-Analog simulators
- 7. Continuous System simulation languages (CSSLs)
- 8. Feedback systems

### UNIT-III Verification and validation of simulation models and Analysis of simulation output

- 1. Verification and validation
- 2. Verification of simulation models
- 3. Calibration and validation of models
- 4. Estimation methods
- 5. Simulation run statistics
- 6. Replication of runs
- 7. Elimination of Initial bias

Dr.K.MAHADEVAN, B.E., M.E., Ph.D.
PRINCIPAL
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ONS COLLEGE OF ENGINEERING,
NAMAKKAL-637 003





(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.

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### UNIT-IV Simulation software

- 1. simulation in Java
- 2. simulation in GPSS
- 3. Simulation in SSF
- 4. Other simulation software

### UNIT-V Simulation of computer systems

- 1. Simulation tools
- 2. High Level computer-system simulation

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- 3. CPU simulation
- 4. Memory Simulation

PROGRAM CO-ORDINATOR

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NAMARKAL-3 PH

Dr.K.MAHADEVAN,B.E.,M.E.,Ph.D.
PRINCIPAL
CMS COLLEGE OF ENGINEERING,

NAMAKKAL-637 003



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
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# DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINERING VALUE ADDED PROGRAM INDUSTRIAL AUTOMATION SYLLABUS

#### OBJECTIVES:

- To inculcate sound understanding of industrial automation among students.
- To impart the knowledge on the basic concepts, programming and interfacing of PLC as a member in industrial automation.

### UNIT I: PLC

Introduction, types, leading hardware and software, logic development, important instruction, Industrial real applications, Industrial I/Ps & O/Ps, PLC wiring & Industrial project development.

### UNIT II: SCADA

Introduction, interfacing with PLC, screen development, digital & analog data configuration, analog data scaling, driver selection and configuration, tag creation and configuration & Industrial project development.

#### UNIT III: HMI / MMI

Introduction, interfacing with PLC, screen development, digital & analog data configuration, analog data scaling, password level, screen display & Industrial project development.

#### UNIT IV: AC DRIVE

Introduction, hardware, parameter setting, speed, direction, acceleration and deceleration time control of induction motor, interfacing with PLC, multispeed & multidirectional control project.

#### UNIT V: ANALOG

Introduction to analog signal, standard signal type, block diagram, ATD and DTA conversion program and wiring, Interface with SCADA.

### Course Outcome:

A value-added course on "Industrial Automation" would likely focus on enhancing students' knowledge and skills in the latest technologies and methodologies used in industrial automation systems.

PROGRAM CO-ORDINATOR

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Dr.K.MAHADEVAN, B.E., M.E., Ph.D.
PRINCIPAL
CMS COLLEGE OF ENGINEERING,
NAMAKKAL-637 U.



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.
Contact No: 98433 46065, 84899 10651.

Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com.principal602@ gmail.com

# DEPARTMENT OF MECHANICAL ENGINEERING VALUE ADDED PROGRAMS

2019-2020

S.NO	NAME OF VALUE ADDED PROGRAMS OFFERED	DURATION (HOURS)	NUMBER OF STUDENTS COMPLETING THE COURSE IN THE YEAR	TYPE OF VALUE ADDED PROGRAMS
1	CNC PROGRAMMING	30	6	SELF- FRAMED PROGRM
2	CATIA	30	49	SELF- FRAMED PROGRM



Dr.K.MAHADEVAN,B.E.,M.E.,Ph.D.
PRINCIPAL
GMS COLLEGE OF ENGINEERING,
NAMAKKAL-637 003



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.
Contact No: 98433 46065, 84899 10651.

Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com.principal602@gmail.com

DATE: 04.07.2019

#### FROM

G.Gopal

Head of the Department

Department of Mechanical Engineering

CMS College of Engineering

Namakkal-637003

TO

The Principal

CMS College of Engineering

Namakkal-637003

### Respected sir,

Sub: Request for Permission to organize value added program - Reg.,

I wish to inform you that, we are planning to conduct value added program on "CNC PROGRAMMING" for B.E. Mechanical Engineering students from 13.07.2019 to 14.09.2019. In this regard, I kindly request you to avail permission to conduct the program successfully.

Thanking you

(G.Gopal)

NAMAKKAL-3

Dr.K.MAHADEVAN, B.E., M.E., Ph.D.
PRINCIPAL



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.
Contact No: 98433 46065, 84899 10651.

Website: www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com,principal602@gmail.com

DATE: 04.07.2019

#### **FROM**

G.Gopal

Head of the Department

Department of Mechanical Engineering

CMS College of Engineering

Namakkal-637003

TO

The Principal

CMS College of Engineering

Namakkal-637003

### Respected sir,

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I wish to inform you that, we are planning to conduct value added program on "CATIA" for B.E. Mechanical Engineering students from 13.07.2019 to 14.09.2019. In this regard, I kindly request you to avail permission to conduct the program successfully.

Thanking you

Yours Sincerely

(G.Gopal)

NAMARKAL-3 PH

Dr.K.MAHADEVAN, B.E., M.E., Ph.D. PRINCIPAL

GMS COLLEGE OF ENGINEERING,

NAMAKKAL-637 003



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Contact No: 98433 46065, 84899 10651.

Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com,principal602@gmail.com

DATE: 06.07.2019

### CIRCULAR

This is to bring to your kind notice that our Department of Mechanical Engineering of CMS College of Engineering Namakkal has planned to conduct a value added program on "CNC PROGRAMMING" from 13.07.2019 to 14.09.2019. The session will be organized by Dr.P.Selvaraj Assistant Professor, Department Of Mechanical Engineering, Paavai College of Engineering. All the students of II Year are intimated to attend the program without fail in order to enrich their knowledge.

HEAD OF THE DEPORTMENT

Copy to

- 1. The Principal
- 2. HOD
- 3. Notice Board

Dr.K.MAHADEVAN,B.E.,M.E.,Ph.D.
PRINCIPAL
CMS COLLEGE OF ENGINEERING,
NAMAKKAL-637 003





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DATE: 06.07.2019

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This is to bring to your kind notice that our Department of Mechanical Engineering of CMS College of Engineering Namakkal has planned to conduct a value added program on "CATIA" from 13.07.2019 to 14.09.2019. The session will be organized by "Dr.Jafrey Dainel James Assistant PROFESSOR, Department of Mechanical Engineering, K.Ramakrishna Engineering College". All the students of III and IV Year are intimated to attend the program without fail in order to enrich their knowledge.

HEAD OF THE DEPARTMENT

Copy to

1. The Principal

2. HOD

3. Notice Board

OR.K.MAHADEVAN, B.E., M.E., Ph.D.
PRINCIPAL
PRINCIPAL
GNS COLLEGE OF ENGINEERING,
NAME
R37 003





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Contact No: 98433 46065, 84899 10651.

Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com,principal602@ gmail.com

### DEPARTMENT OF MECHANICAL ENGINEERING

### VALUE ADDED PROGRAM- CATIA

ACADEMIC YEAR: 2019-2020

### STUDENTS NAME LIST

S.NO	REG NO	NAME
1	620516114001	ARULNANDAN.S
2	620516114002	ARUNRAJ.V
3	620516114003	BALAGURU.K
4	620516114004	BALAMURUGAN.R
5	620516114005	DINESH.K
6	620516114006	GOPALAKRISHNAN.M
7	620516114012	MAHESH KUMAR.E
8	620516114013	MANIKANDAN.R
9	620516114014	MANOJ.R
10	620516114015	MOHAMED HARUN RAZEETH.M
11	620516114016	MOHAMED SHARIF.M
12	620516114017	MUNIVEL.S
13	620516114020	NIRMAL RAJ.N
14	620516114022	POOVARASAN.A
15	620516114023	POWELL JOHN THOMAS
16	620516114027	RADHAKRISHNAN.M
17	620516114029	SABARINATHAN.P
18	620516114030	SAKTHIVEL.A
19	620516114032	SANTHOSH.S
20	620516114033	SARAVANAKUMAR.N
21	620516114034	SARAVANAN.J
22	620516114036	SATHISH KUMAR.K
23	620516114037	SATHISH KUMAR.S
24	620516114038	SATHYAMOORTHY.S(18/3/99)
25	620516114039	SATHYAMOORTHY.S (8/1/99)
26	620516114041	SIVARAMACHANDRAN.P
27	620516114042	SORUPKEERTHI.S
28	620516114043	SURESH.R



Dr.K.MAHADEVAN, B.E., M.E., Ph.D.
PRINCIPAL



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)

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Contact No: 98433 46065, 84899 10651.

Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com.principal602@gmail.com

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620516114049	VIGNESH.S(21/6/1999)
620516114301	GOKUL.P
620516114302	SAKTHIVEL.S
620517114001	AJITH KUMAR M
620517114003	ALLWIN V
620517114004	ARIVUMANI V
620517114006	BALAMURUGAN B
620517114007	BHARATHI P
620517114008	CHANDRU T
620517114012	ELAMBARUTHI B
620517114013	GEORGEFERNANDEZ J
620517114014	GOKUL BALAN M
620517114015	HARI HARAN S
620517114016	KARUNAKARAN.S
620517114018	KUMARAVEL.G
620517114021	MOHANDASS M
620517114023	MUTHUMANI K
620517114025	PAZHANIBARATHI P
620517114027	POOVARASAN.M
620517114028	PRABHAKARAN K
620517114032	PRIYADHARSHAN M
620517114033	RANJITH A
620517114034	SANTHOSH KUMAR.S
620517114038	THAMIZHARASAN.E
	VENKATESH.C
620517114040	VINOTH KUMAR K
	620516114049 620516114301 620516114302 620517114001 620517114003 620517114004 620517114006 620517114007 620517114012 620517114013 620517114014 620517114015 620517114018 620517114018 620517114021 620517114021 620517114023 620517114023 620517114023 620517114024 620517114033 620517114034 620517114034 620517114038 620517114039

PROGRAM CO-ORDINATOR

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Dr.K.MAHADEVAN, B.E., M.E., Ph.D. PRINCIPAL



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
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# DEPARTMENT OF MECHANICAL ENGINEERING VALUE ADDED PROGRAM- CNC PROGRAMMING ACADEMIC YEAR: 2019-2020 STUDENTS NAME LIST

S.NO	REG NO	NAME
1	620518114001	ANBUMARAN,G
2	620518114002	ARAVINTH.K
3	620518114003	JANAVIGNESH.S
4	620518114005	KATHIK.Y
5	620518114008	MUSARAF.N
6	620518114010	RAMAKRISHNAN.N
7	620518114012	SANTHOSH.B
8	620518114017	VALLARASU.R

PROGRAM CO-ORDINATOR

9 9 mm 13 107/19

GEOFENG 2 CONTRACTOR OF THE STATE OF THE STA

Dr.K.MAHADEVAN, B.E., M.E., Ph.B. PRINCIPAL



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25) CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.

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Website:www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com,principal602@gmail.com



Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25) CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637003. Tamilnadu, india

# Organised By

# DEPARTMENT OF MECHANICAL ENGINEERING

Value Added Course (VAC) on CATIA PROGRAMMING

VENUE: LECTURE HALL CMSCE

DATE: 13.07.2019 to 14.9.2019

CONTENO

Dr.K.MAHADEVAN,B.E.,M.E.,Ph.D. PRINCIPAL



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25) CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.

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Dr.K.MAHADEVAN, B.E., M.E., Ph.D...
PRINCIPAL
GMS COLLEGE OF ENGINEERING,
NAMAKKAL-637 003



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# DEPARTMENT OF MECHANICAL ENGINEERING VALUE ADDED PROGRAM- CNC PROGRAMMING SYLLABUS

### Course Objective:

To impart knowledge on

- > To impart training in New product development in CNC Machining
- > To give exposure to GD & T Drawing study
- > To impart knowledge in CNC machine selection based on the product
- > To give insight in Cutting Tool selection & cutting parameter calculation
- > To provide exposure to CAM Software

#### Course Outcome:

At the end of the course, the students will be able to

- ➤ Identify each process involved in New Product Development
- Generate NC code from the CAM system
- Create process plan in CNC Machining application

### Unit I INTRODUCTION

Process involved in New Product development - CNC Machining - CAM System

### Unit II DRAWING STUDY

Drawing layout - Type of projection - Type of views -Type of Tolerance Limits & Fits - Geometrical Dimensioning & tolerance - Surface finish Symbols.

### Unit III PROCESS PLANNING

Process – 4M Process Planning –axis –Type of CNC Machine – CNC machine selection – Process flow – Process sheet-preparation – Cutting tool selection for Turning & Milling – Cutting parameter calculation – G Codes & M codes –Different type of operation in Turning & Milling –Basics of Fixture Designing - Advanced technology in CNC Machining

### Unit IV COSTING & METROLOGY

Costing - Cost estimation for CNC machining process - Machine Hour rate -RFQ Preparation, Gauges & Measuring Instruments

### Unit V CAM SYSTEM

Basic of CAM system – Introduction to Edge cam Software –Interface between CAD to CAM – NC code Generation – 2 axis Turning Module – Turn Mill Module (X,Z,C,Y), 3 axis Milling Module – 4th axis Milling Module – Introduction to 5 Axis.

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PROGRAM CO-ORDINATOR

Dr. K. MAHADEVAN, B. E., M. E., Ph. Q



(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25)
CMS Nagar, Eranapuram Post, Namakkal Dt., Pin: 637 003. Tamilnadu, India.
Contact No: 98433 46065, 84899 10651.

Website: www.cmsgroupofinstitutions.in Email:cmscollegeofengg@gmail.com,principal602@gmail.com

# DEPARTMENT OF MECHANICAL ENGINEERING VALUE ADDED PROGRAM - CATIA SYLLABUS

**Unit-1 Introduction** 

CATIA as CAD software: Concept of Parametric Modeling, Feature Based Modeling, User Interface, Mouse operations, File types and Management, drawing profiles. Major user industries of Catia. Why Catia is preferred?

Unit-2 Sketcher

Profile toolbar, operation (corner, chamfer, relimitations, transformations, project 3D element), constriants, types of constraints, workbench-sketch tools, tools (Sketch solving status, sketch analysis, output feature), visualization toolbar, user selection filter.

Unit-3 Modelling of Machined Component

Material Addition and Removal (Pad, Pocket, Shaft, and Groove), Sketch and Positioned Sketch, Types of Fillets, Types of Chamfer, Types of Hole-s (Plane, Axes, Points), Simple Draft. Frequently used commands for Machined components in Catia / Creo

**Unit-4 Drafting** 

To Drafting & Detailing Theory:- (types Generative – Interactive), Initial Drafting setting, Sheet Background, Views (ortho, ISO), Dimensions (Types- Generate Dimension & Create Dimension). (Aux, Section, Details, Clipping, Broken), View properties, DATUMS & Tolerance

Unit-5 Wire-frame Modeling

Point, Line, Planes, Curves, Circle-Conic, STANDARD EXAMPLES. Use of wire frame modeling

PROGRAM CO-ORDINATOR

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Dr.K.MAHADEVAN, B.E., M.E., Ph.D.
PRINCIPAL
CMS COLLEGE OF ENGINEERING,
NAMAKHAL 207 003