

# CMS COLLEGE OF ENGINEERING

(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](http://www.cmsgroupofinstitutions.in) Email: [cmscollegeofengg@gmail.com](mailto:cmscollegeofengg@gmail.com), [principal602@gmail.com](mailto:principal602@gmail.com)

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**ACADEMIC YEAR 2022-23**



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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING VALUE ADDED PROGRAM

2022-2023

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 BASE SECURITY	30	83	SELF-FRAMED PROGRAM
2	MACHINE LEARNNG	30	14	SELF-FRAMED PROGRAM



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

**CMS COLLEGE OF ENGINEERING,**  
NAMAKKAL-637 003





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DATE: 30.08.2022

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

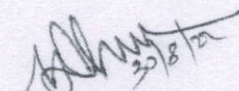
Namakkal-637003

Respected sir,

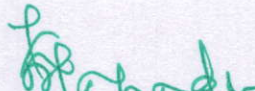
Sub: Request for permission to organize value added program – Reg.,

I wish to inform you that, we are planning to conduct value added program on “**DATA BASE SECURITY**” for B.E. Computer Science and Engineering students from 03.09.2022 to 03.12.22 and 10.12.2022 to 28.01.2023. In this regard, I kindly request you to avail permission to conduct the program successfully.

Thanking you

  
Yours Sincerely  
(S.DHINESH)



  
Dr. K. MAHADEVAN, B.E., M.E., Ph.D.  
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DATE: 18.08.2022

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

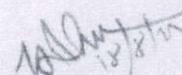
Namakkal-637003

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 "MACHINE LEARNING" for B.E. Computer Science and Engineering students from 27.08.2022 to 12.11.2022. In this regard, I kindly request you to avail permission to conduct the program successfully.

Thanking you

  
Yours Sincerely  
(S.DHINESH)



  
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DATE: 31.08.2022

## 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 BASE SECURITY**” from 03.09.2022 to 03.12.22 and 10.12.2022 to 28.01.2023. The session will be organized by **Mr. Venkatesan, Chief Executive Officer, Brain Insight**. All the students of II & I 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.**  
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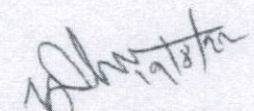
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DATE: 19.08.2022

## CIRCULAR

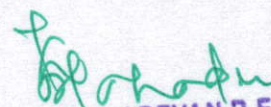
This is to bring to your kind notice that our Department of Computer Science and Engineering of CMS College of Engineering, Namakkal has planned to conduct a value added program on "MACHINE LEARNING" from 27.08.2022 to 12.11.2022. The session will be organized by Ms. Rajeshwari, HR And Admin, Leggett & Platt. All the students of III Year are intimated to attend the program without fail in order to enrich their knowledge.

  
HEAD OF THE DEPARTMENT

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2. HOD
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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### VALUE ADDED PRORAM- DATA BASE SECURITY

ACADEMIC YEAR: 2022-2023

#### STUDENTS NAME LIST

S.NO	REG NO	NAME
1	620521104001	ASHRAF ALI A
2	620521104006	DEEPIKA S
3	620521104008	GUNASEKARAN P
4	620521104009	JAYASURYA S
5	620521104011	KAVIYA S
6	620521104012	KEERTHANA M
7	620521104013	KUMARESAN R
8	620521104016	NANDHAKUMAR K
9	620521104017	NAVEENKUMAR P
10	620521104019	NIKITHA M
11	620521104020	NIVETHA R
12	620521104021	PRADHAP K
13	620521104022	PRAKASH S
14	620521104025	SABARI B
15	620521104026	SANJAI A



  
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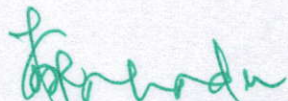
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16	620521104027	SANJAY P
17	620521104028	SUJILKUMAR M
18	620521104301	ANANTH S
19	620521104302	ARULMURUGAN S
20	620521104303	BOOBALAN S
21	620521104304	DINESH M
22	620521104306	KALAISELVAN R
23	620521104308	MEERA C
24	620521104310	SINEGA S
25	620521104311	SRIMATHI
26	620521104312	THIRUMANI M
27	620521104313	VENGATESAN S
28	620521104314	VINOTHKUMAR R

  
PROGRAM CO-ORDINATOR

  
HOD



  
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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### VALUE ADDED PRORAM - DATA BASE SECURITY

ACADEMIC YEAR: 2022-2023

#### STUDENTS NAME LIST

S.NO	REG NO	NAME
1	620522104001	AROCKIABALA A
2	620522104002	ARUNPANDIAN E
3	620522104003	BALACHANDRAN M
4	620522104004	BALAJI B
5	620522104005	BALAJI B
6	620522104006	BALAJI J
7	620522104008	BHARATHI S
8	620522104009	DEEPAN P
9	620522104010	DEVAVARSHINI D
10	620522104012	DHANUSH H
11	620522104013	DHANYASRI S
12	620522104014	DHARSHINI S
13	620522104015	DHIVAKAR D
14	620522104016	GUNA P
15	620522104017	JAYADURGA S
16	620522104018	JEEVANANTHAM L



  
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17	620522104019	JESTIN J
18	620522104020	KANAGAVEL K
19	620522104021	KATHIRVEL N
20	620522104022	KISHORE KANNAN M
21	620522104023	KOWSIKA S
22	620522104024	KRISHNARAJ I
23	620522104025	KUMUTHA M
24	620522104026	MANIKANDAN M
25	620522104027	MANIKANDAN R
26	620522104028	MANIKANDAN S
27	620522104029	MUKILAN K
28	620522104030	NANDHINI K
29	620522104031	NANDHINI S
30	620522104032	NAVEEN KUMAR M
31	620522104033	NAVEENKUMAR P
32	620522104034	NISHANTH M
33	620522104035	NITHISKIMAR P
34	620522104036	PANDIPRIYA E
35	620522104037	POOJA M



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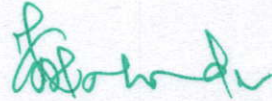
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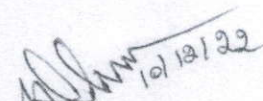
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36	620522104039	RAGUL M
37	620522104040	RAGUL V
38	620522104043	SABARIKARTHICK M
39	620522104044	SABARIVASAN I
40	620522104045	SATHEESH M
41	620522104046	SATHISH R
42	620522104047	SATHISH S
43	620522104048	SHANMUGAVEL M
44	620522104049	SOWBAKIYA B
45	620522104050	SRIKANTH E
46	620522104051	SUGUMAR M
47	620522104052	SURENDHAR M
48	620522104053	SURESH S
49	620522104054	THIYAGARAJAN S
50	620522104055	VASIKARAN S
51	620522104056	VIGNESHWARAN S
52	620522104057	VIJAY M
53	620522104058	VISHALI G
54	620522104059	YOKESH T
55	620522104060	YUVARAJ S



PROGRAM CO-ORDINATOR

  
Dr. K. MAHADEVAN, B.E., M.E., Ph.D.  
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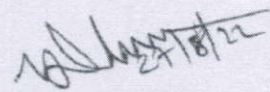
## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR: 2022-2023

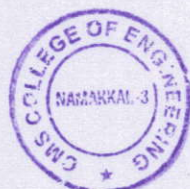
### VALUE ADDED PROGRAM- MACHINE LEARNING

#### STUDENTS NAME LIST

S.NO	REG NO	NAME
1	620520104003	SURYA PRAKASH T
2	620520104305	ASHOK V
3	620520104306	BASKAR V
4	620520104308	ELAVARASI P
5	620520104310	JAYAPRIYA S
6	620520104311	JAYARAJ R
7	620520104312	KAVIN KUMAR S
8	620520104314	MEENATCHI K
9	620520104315	MERCY P
10	620520104316	MONISHA N
11	620520104321	SARANYA V
12	620520104323	SARUMATHI J
13	620520104325	STALIN K
14	620520104327	SUVISTHA K

  
PROGRAM CO-ORDINATOR

  
HOD



  
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# CMS


## COLLEGE OF ENGINEERING

Approved by AICTE, Delhi and Affiliated to Anna University  
Cms Nagar, Ernapuram Post, Namkkal Dt, pin 637003, Tamilnadu

**ORGANIZED BY**

**DEPARTMENT OF COMPUTER  
SCIENCE AND ENGINEERING**

**MACHINE LEARNING**



**DATE : 27/8/2022 to 12/11/2022**

**VENUE: CMSCE LECTURE HALL**



  
**Dr. K. MAHADEVAN, B.E., M.E., Ph.D.**  
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**Organised By**

**DEPARTMENT OF COMPUTER  
SCIENCE ENGINEERING**

**DATA BASE SECURITY**

**DATE : 03/09/2022 To 03/09/2022**

**VENUE: CMSCE LECTURE HALL**



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

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING VALUE ADDED PROGRAM DATA BASE SECURITY SYLLABUS

### Course Objectives

- Introduce the database and its security issues.
- Compare in details the various state of-art database security methods and techniques.
- Learn in detail the security features in databases.
- Understand the database monitoring tools.

### Expected Outcome

Students who successfully complete this course will be able to:-

- Understand and characterize modern techniques of database information security threats and techniques for database security assessment.
- Analyze information in a database to identify information security incidents.
- Understand and use the main tools for database management systems monitoring.
- Apply build-in database functions to enable database integrity support.
- Create a plan for vulnerabilities detection and identification in databases.

### UNIT-I

Introduction-Database System Applications, Purpose of Database Systems, View of Data - Data Abstraction, Instances and Schemas, ER diagrams, Introduction to the Relational Model - Querying relational data, Form of Basic SQL Query - Examples of Basic SQL Queries.

### UNIT-II

Introduction to database security issues The role of databases in information systems. Access control management features. Cryptographic data protection. SQL language features, Statistical databases.

### UNIT-III

Database security methods and techniques- Access control to database objects: tables, attributes, records. Triggers, views, data masking.



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## UNIT-IV

Cryptographic methods of protection. Escaping queries to a database. Change Tracking. Data integrity in the databases. Database backups.

## UNIT-V

Security features in databases- SQL statements for access control. Integrity (domain, attributes, tables, referential). Database monitoring tools.

PROGRAM CO-ORDINATOR

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### VALUE ADDED PROGRAM

### MACHINE LEARNING

### SYLLABUS

#### Course Objective:

To impart knowledge on

- ✓ Know basic data engineering concepts and supporting libraries in python
- ✓ Study about regression and frequent pattern mining
- ✓ Understand basic classification algorithms and its implementation
- ✓ Study about clustering techniques
- ✓ Know neural network based machine learning algorithms

#### Unit I DATA ENGINEERING USING PYTHON

Data pre-processing libraries in python – Numpy – Pandas – Matplotlib – Scikit learning libraries basics - Selecting rows and columns – Impute techniques – Missing values handling – Removing outliers – Data reduction – Data Transformation – Principal Component Analysis – Data random generation – Data Sampling – Splitting data into Training and testing – Hold out – Cross validation – Bootstra

#### Unit II REGRESSION AND FREQUENT PATTERN ANALYSIS

Introduction to Regression analysis - Least Square Method – Linear Regression – Non-linear regression – Logistic regression – Univariate – Multivariate – Model evaluation – Accuracy-precision – Recall – F1 – Confusion matrix – Frequent pattern analysis – market basket analysis – Apriori algorithm implementation

#### Unit III BASIC CLASSIFICATION TECHNIQUES

K Nearest Neighbour – Decision tree – Random forest – AdaBoost – Naïve Bayes – Support Vector Machine – Python implementation and Model evaluation

#### Unit IV CLUSTERING TECHNIQUES

K Means – kMeans++ – Hierarchical clustering – DBScan – Spectral Clustering – Implementation and evaluation using Python



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





# CMS COLLEGE OF ENGINEERING

(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](http://www.cmsgroupofinstitutions.in) Email: [cmscollegeofengg@gmail.com](mailto:cmscollegeofengg@gmail.com), [principal602@gmail.com](mailto:principal602@gmail.com)

## Unit V NEURAL NETWORK BASED TECHNIQUES

Perceptron – Feedforward Neural Network – Backpropagation based Classification Model building – Stochastic Gradient Descent – Neural network based clustering – Self organizing Maps – Python based implementation and evaluation

### Course Outcome:

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

- Apply data engineering concepts to prepare the data for analysis
- Create regression and frequent pattern mining models
- Implement basic classification algorithmic models
- Implement various clustering models
- Design and develop neural network based machine learning models

PROGRAM CO-ORDINATOR

HOD



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

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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING VALUE ADDED PROGRAMS

2022-2023

S.NO	NAME OF VALUE ADDED PROGRAMS OFFERED	DURATION (HOURS)	NUMBER OF STUDENTS COMPLETING THE COURSE IN THE YEAR	TYPE VALUE ADDED PROGRAMS
1	ROBOTICS	30	27	SELF-FRAMED PROGRAM
2	PLC ,SCADA&DCS	30	2	SELF-FRAMED PROGRAM



  
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DATE: 30.08.2022

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

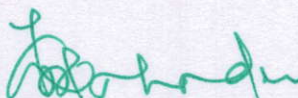
Respected sir,

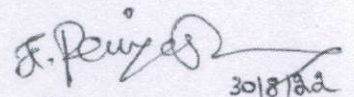
Sub: Request for permission to organize value added program – Reg.,

I wish to inform you that, we are planning to conduct value added program on “ROBOTICS” for B.E. Electronics and Communication Engineering students from 03.09.2022 to 03.12.22 and 10.12.2022 to 28.01.2023. 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.  
PRINCIPAL  
CMS COLLEGE OF ENGINEERING,  
NAMAKKAL-637 003

  
30/8/22  
Yours Sincerely  
(K.PERIYASAMY)





# CMS COLLEGE OF ENGINEERING

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CMS Nagar, Eranapuram Post, Namakkal Dt., Pin : 637 003. Tamilnadu, India.

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DATE: 18.08.2022

**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 “PLC, SCADA & DCS” for B.E. Electronics and Communication Engineering students from 27.08.2022 to 12.11.2022. In this regard, I kindly request you to avail permission to conduct the program successfully.

Thanking you

*K. Periyasamy* 18/8/22

Yours Sincerely

(K.PERIYASAMY)



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

CMS COLLEGE OF ENGINEERING,  
NAMAKKAL-637 003





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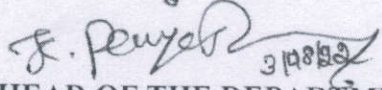
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DATE: 31.08.2022

## 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 **"ROBOTICS"** from 03.09.2022 to 03.12.22 and 10.12.2022 to 28.01.2023. The session will be organized by **"Dr.S.Manimaran,HOD, PSNA College of Engineering And Technology"**. All the students of II & I 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  
CMS COLLEGE OF ENGINEERING  
NAMAKKAL-637 003





# CMS COLLEGE OF ENGINEERING

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DATE: 19.08.2022

## 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 "PLC, SCADA & DCS" from 27.08.2022 to 12.11.2022. The session will be organized by Dr.K.Somasundaram, HOD, Chennai Institute of Technology. All the students of III Year are intimated to attend the program without fail in order to enrich their knowledge.

*S. Periyasamy* 19/8/22  
HEAD OF THE DEPARTMENT

Copy to

1. The Principal
2. HOD
3. Notice Board



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





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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### VALUE ADDED PROGRAM- ROBOTICS

ACADEMIC YEAR: 2022-2023

### STUDENTS NAME LIST

S.NO	REG NO	NAME
1	620521106001	ARTHI K
2	620521106301	ARKESH J
3	620521106302	KALAIVANI R
4	620521106303	PAPPIAH P
5	620521106304	PRASATH D
6	620521106305	SOUNDARYA S R

*A. Nil* 3/9/22  
PROGRAM CO-ORDINATOR

*K. P. Princy* 5/7/22  
HOD



*K. Mahadevan*  
Dr. K. MAHADEVAN, B.E., M.E., Ph.D.  
PRINCIPAL  
CMS COLLEGE OF ENGINEERING,  
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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

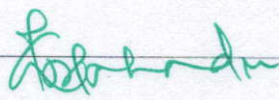
### VALUE ADDED PROGRAM- ROBOTICS

ACADEMIC YEAR: 2022-2023

### STUDENTS NAME LIST

1	620522106001	CHANDRAN.S
2	620522106002	DHANUSH.A
3	620522106004	DHINESH.D
4	620522106006	GUNAL .S
5	620522106007	JAYABHARATHI.D
6	620522106008	JAYAVARMAN.G
7	620522106009	KIRUTHIKA.S
8	620522106010	LAKSHMANAN.S
9	620522106011	LATHIKA.T
10	620522106013	MANIMARAN.M
11	620522106014	MANIVEL.V
12	620522106015	NITHISHKUMAR.G
13	620522106016	NITHYA.V
14	620522106017	PRAKASH.R
15	620522106018	PRASANNA VENKATESH.S
16	620522106019	RAMAN.S
17	620522106020	ROSHNI.K



  
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18	620522106021	SATHISH.M 23.02.2005
19	620522106022	SATHISH.M 10.03.2005
20	620522106023	SATHYASRI.B
21	620522106024	SRIDHARANIDHARAN.D
22	620522106025	SURESH.R
23	620522106026	SWETHA.S

*A. Nil...* 10/10/22  
PROGRAM CO-ORDINATOR

*J. Princy...* 10/10/22  
HOD



*Dr. K. Mahadevan*  
Dr. K. MAHADEVAN, B.E., M.E., Ph.D.  
PRINCIPAL  
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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### VALUE ADDED PROGRAM- PLC, SCADA & DCS

ACADEMIC YEAR: 2022-2023

#### STUDENTS NAME LIST

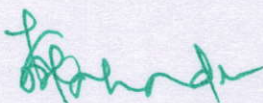
S.NO	REG NO	NAME
1	620520106302	BALAMURUGAN.R
2	620520106303	BELAGIRI.M
3	620520106308	MANIMARAN.C
4	620520106312	NISHANTHI.E
5	620520106313	RAGHINI.K
6	620520106315	SIVA.M

A. Nil 27/8/22

PROGRAM CO-ORDINATOR

J. R. R. 27/8/22  
HOD



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

Namakkal, Eranapuram-637003

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Organized By

## ELECTRONICS AND COMMUNICATION ENGINEERING ROBOTICS

DATE: 03/09/2022 to 03/12/2022



VENUE: CMSCE LECTURE HALL



  
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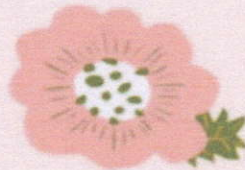
## CMS COLLEGE OF ENGINEERING Namakkal, ERANAPURAM -637003

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**Organized By**

**ELECTRONICS AND  
COMMUNICATION  
ENGINEERING**

**PLC, SCADA & DCS**

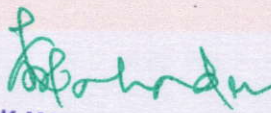


**27/8/2022 to 12/11/2022**



**VENUE: CMSCE  
LECTURE HALL**



  
**Dr. K. MAHADEVAN, B.E., M.E., Ph.D.**  
PRINCIPAL  
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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### VALUE ADDED COURSE

### ROBOTICS

### SYLLABUS

#### Course Objectives:

- To familiarize the students with the basic principles of robotics
- To introduce the Various Parts of Robots and Fields of Robotics
- To acquaint the students with the knowledge of applications of robotics.
- To prepare the students for understanding Planning and control in Robotics.

#### Unit-I Introduction of Robotics

Historical development of Robotics, Definitions of Industrial Robot, Type and Classification of Robots, Asimov's laws of robotics, Methodology of robotics

#### Unit-II Principles of Robotics

Robot configurations, Robot Components, Robot Degrees of Freedom, Work volume and work envelope, Robot Joints and symbols, Robot Coordinates, Robot Reference Frames, Resolution, accuracy and precision of Robot, Work cell control

#### Unit-III Robotics in Inspection

Robots for Inspection: Robotic vision systems, image representation, object recognition and categorization, depth measurement.

#### Unit-IV Industrial Applications of Robotics

Introduction of processes like Coating, Deburring, cleaning, Die Casting, Molding, Material handling, Picking, Palletizing, Packaging, hospitals and patient care, sports and recreation, defense and surveillance industry, home automation, mining industry.

#### Unit-V Planning and control in Robotics

Trajectory planning, position control, force control, Robot programing methods, hybrid control, Industrial and medical robotics: application in manufacturing processes



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## Course Outcomes:

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

1. Understand basics of robotics, types, classification and methodology.
2. Acquire the skills in understanding principles of robotics.
3. Acquire the skills in understanding robotics in inspection.
4. Develop skills in understanding industrial robotics.
5. Identifying opportunities for robotics to enhance productivity in manufacturing. 6. Learn Socio-economic aspects of Robotics.

A. Nithya 3/9/22  
PROGRAM CO-ORDINATOR

J. Princy 3/9/22  
HOB



  
Dr. K. MAHADEVAN, B.E., M.E., Ph.D.  
PRINCIPAL  
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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING VALUE ADDED COURSE PLC, SCADA & DCS SYLLABUS

### COURSE OBJECTIVES

- To provide the Fundamentals of PLC, PLC programming concepts, PLC applications
- To provide in-depth understanding of DCS, SCADA, and Computer Controlled Systems which are used in automation of various machines, processes and systems in industries

### UNIT 1 BASICS OF PROGRAMMABLE LOGIC CONTROLLER (PLC).

Definition- overview of PLC systems - Input/ Output modules - Power supplies - I/O slots, General PLC programming procedures - programming on-off outputs, Auxiliary commands and functions - creating ladder diagrams from process control descriptions - Ladder logic for traffic light control system. PLC basic programming - digital logic Gates - Boolean algebra. Basic PLC functions- register basics - timer functions - counter functions.

### UNIT 2 PLC INTERMEDIATE FUNCTIONS

Arithmetic functions - number comparison functions - skip and MCR functions - data move systems. PLC Advanced intermediate functions- utilizing digital bits - sequencer functions - PLC Advanced functions: alternate-programming languages - operation. PLC-PID functions -PLC installation - trouble shooting and maintenance-controlling a robot - processes with PLC - design of inter locks and alarms using PLC. Use of PC as PLC - Application of PLC - Case Study of Bottle Filling System, Field Bus and HART Protocol

### UNIT 3 DISTRIBUTED CONTROL SYSTEMS (DCS)

Evolution of DCS - building blocks - different architectures-comparison of architectures- detailed descriptions and functions of local control units - basic elements & functions-operator stations - data highways - redundancy concepts.

### UNIT 4 DISTRIBUTED CONTROL SYSTEMS: COMMUNICATION FACILITIES AND APPLICATIONS.

DCS communication Facilities - communication system requirements - architectural issues - protocol issues - communication system standards - operator interfaces - low level and high level operator interfaces - Operator Displays - Engineering interfaces - low level and high level engineering interfaces - Applications of DCS - oil and gas (extraction, production and storage)



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## UNIT 5 COMPUTER CONTROLLED SYSTEMS

Basic building blocks of Computer controlled systems - SCADA - data acquisition System - supervisory Control - Direct digital Control - software - Velocity algorithm & Position algorithm

A. N. *[Signature]* 27/8/22  
PROGRAM CO-ORDINATOR

*[Signature]* 27/8/22  
HOD



*[Signature]*  
Dr. K. MAHADEVAN, B.E., M.E., Ph.D.  
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## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING VALUE ADDED PROGRAMS

2022-2023

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	MATLAB	30	10	SELF-FRAMED PROGRAM
2	ETAP	30	4	SELF-FRAMED PROGRAM



  
Dr. K. MAHADEVAN B.E., M.E., Ph.D  
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DATE: 18.08.2022

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 "MATLAB" for B.E. Electrical and Electronics Engineering students from 27.08.2022 to 12.11.2022. In this regard, I kindly request you to avail permission to conduct the program successfully.

Thanking you

*Wsf/22*  
Yours Sincerely  
(G.SURESH)



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





# CMS COLLEGE OF ENGINEERING

(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](http://www.cmsgroupofinstitutions.in) Email: [cmscollegeofengg@gmail.com](mailto:cmscollegeofengg@gmail.com), [principal602@gmail.com](mailto:principal602@gmail.com)

DATE: 30.08.2022

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

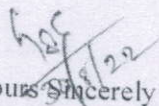
Namakkal-637003

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 "ETAP" for B.E. Electrical and Electronics Engineering students from 03.09.2022 to 03.12.22. In this regard, I kindly request you to avail permission to conduct the program successfully.

Thanking you

  
Yours Sincerely  
(G.SURESH)



  
Dr. K. MAHADEVAN, B.E., M.E., Ph.D.  
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DATE: 19.08.2022

## 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 "MATLAB" from 27.08.2022 to 12.11.2022. The session will be organized by **Dr.A.Subramani Professor, Department of Electrical And Electronics Engineering, VSA Group Of Institutions**. All the students of III Year are intimated to attend the program without fail in order to enrich their knowledge.

HEAD OF THE DEAPRTMENT

Copy to

1. The Principal
2. HOD
3. Notice Board



**Dr.K.MAHADEVAN, B.E., M.E., Ph.D**  
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**CMS COLLEGE OF ENGINEERING,**  
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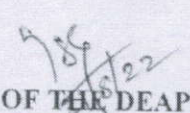
Contact No: 98433 46065, 84899 10651.

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DATE: 31.08.2022

## 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 "ETAP" from 03.09.2022 to 03.12.22. The session will be organized by **Dr.P.Malarvizhi Assistant Professor, Department of Electrical And Electronics Engineering, Gnanamani College of Technology.** 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
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## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

### VALUE ADDED PROGRAM- MATLAB

ACADEMIC YEAR: 2022-2023

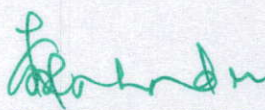
### STUDENTS NAME LIST

S.NO	REG NO	NAME
1	620520105301	ABINAYA A
2	620520105302	ANANTHABABU G
3	620520105303	ARIPRIYA G
4	620520105305	ARUNKUMAR S
5	620520105306	BABY K
6	620520105307	BASKAR S
7	620520105309	DHAMOTHARAN D
8	620520105310	DHINESH M
9	620520105311	DURAI R
10	620520105312	GIRIMURUGAN S
11	620520105314	JALEEL AHAMED M
12	620520105316	JOSH MAHIBAL S
13	620520105317	JOTHIKA V
14	620520105319	MAHENDRAN R
15	620520105322	MUNIYAMMAL M
16	620520105326	RAMESHKUMAR S
17	620520105327	SANJAI R
18	620520105328	SANTHIYA R
19	620520105329	SANTHOSH K
20	620520105332	SRINIVAS P
21	620520105333	VIGNESHWARAN S
22	620520105334	VINOTHKUMAR S

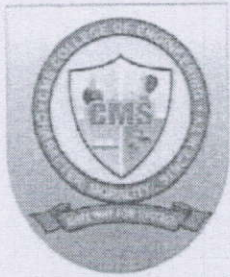
PROGRAM CO-ORDINATOR

HOD



  
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## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

### VALUE ADDED PROGRAM- ETAP

ACADEMIC YEAR: 2022-2023

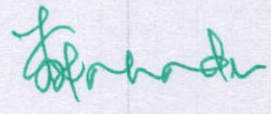
### STUDENTS NAME LIST

S.NO	REG NO	NAME
1	620521105004	VINETH PRAVEEN P
2	620521105301	BANU PRIYA G
3	620521105302	KABILESHWARAN R
4	620521105305	SUJITH KUMAR S
5	620521105306	VIGNESH.P
6	620521105307	VISHAL K

  
PROGRAM CO-ORDINATOR

  
HOD



  
Dr. K. MAHADEVAN, B.E., M.Tech., Ph.D.  
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## ORGANIZED BY DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

## MAT LAB

DATE: 27.08.2022 TO 12.11 2022

VENUE: CMSCE, LECTURE HALL



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

### College Of Engineering

Approved by AICTE, New Delhi Affiliated By Anna University Chennai  
CMS Nagar, Ernapuram post, Namakkal Dt, pin 637003, Tamilnadu

**ORGANISED BY**

**DEPARTMENT OF ELECTRICAL  
ELECTRONICS & ENGINEERING**

## E TAP

**DATE: 03/09/2022 to 03/12/2022    VENUE: CMSCE LECTURE HALL**



Dr. K. MAHADEVAN, B.E., M.E., Ph.D.  
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## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

### VALUE ADDED PROGRAM

#### MAT LAB

#### SYLLABUS

##### Course Objectives:

- MATLAB introduces students to basic MATLAB programming concepts.
- MATLAB is a software package for carrying out numerical computations and analyses.
- It uses blocks of data called matrices (MATLAB stands for matrix laboratory).
- MATLAB is probably the most commonly used scientific and engineering numerical software.

##### Course Outcomes:

- Become familiar with fundamental operations in Matlab
- Perform statistical data analysis, data interpolation by Matlab, solve differentiation equation with Matlab
- Acquire a reasonable level of competence in designing optimization algorithms, solve linear programming, constrained and unconstrained optimization problems by Matlab
- Apply Matlab to solve practical engineering problems Master used skills in Matlab programming, code debugging.

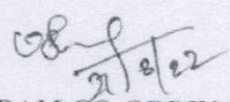
**UNIT I:** Introduction to MATLAB, Creating Variables, Some Useful MATLAB Functions, Data Types

**UNIT-II:** Script Files - Introduction to Arrays, Graphing

**UNIT-III:** Good Programming Practices - Input and Output Statements - Conditional Statements


**UNIT-IV:** Loops - Nested Loops

**UNIT-V:** Arrays - Array Functions

  
PROGRAM CO-ORDINATOR

  
HOD



  
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## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

### VALUE ADDED PROGRAM

#### ETAP

#### SYLLABUS

##### Course Objective:

To impart knowledge on

- Structural modelling, analysis, designing using ETABS Finite Element software. This course will help the students to familiarize on the analysis and design of RCC and Steel structures.

##### Course Outcome:

At the end of the course, the students will be able to • Model, analyse and design the structural frames of both RCC and steel using ETABS Finite Element software.

##### Unit I INTRODUCTION

Overview of FEM - Introduction to interface of ETABS - local coordinate system - global coordinate system - define, assign materials and sections - frame element - shell element.

##### Unit II 2D FRAME SYSTEM

Modelling 2D frame (steel) - horizontal and vertical load (point load, uniformly distributed load, trapezoidal load) - analysis and results computations - design - verification of members passing - redesign.

##### Unit III 3D MOMENT RESISTING FRAME SYSTEM


Model 3D frame system (RCC) - floor load - assigning of reinforcements - analysis and results computations - design - verification of members passing - redesign.

##### Unit IV 3D SHEAR WALL AND FRAME

Model 3D shear wall - mesh and auto-mesh for wall objects - lateral loads (wind and earthquake) - results computations.

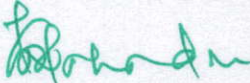
##### Unit V PROJECT REPORT

Importing CAD model - results tabulation - plotting - final project - exporting models.

  
PROGRAM CO-ORDINATOR

  
HOD



  
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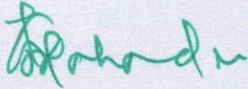
## DEPARTMENT OF MECHANICAL ENGINEERING

### VALUE ADDED PROGRAM

2022-2023

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	CATIA	30	44	SELF-FRAMED PROGRAM



  
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DATE: 30.08.2022

**FROM**

G.Gopal

Head of the Department

Department of Mechanical Engineering

CMS College of Engineering

Namakkal-637003

**TO**

The Principal

CMS College of Engineering

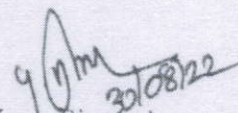
Namakkal-637003

Respected sir,

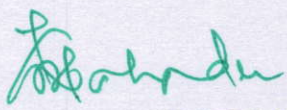
Sub: Request for Permission to organize value added program – Reg.,

I wish to inform you that, we are planning to conduct value added program on “CATIA” for B.E. Mechanical Engineering students from 03.09.2022 to 03.12.22 and 27.08.2022 to 12.11.2022. In this regard, I kindly request you to avail permission to conduct the program successfully.

Thanking you

  
Yours Sincerely  
(G.GOPAL)



  
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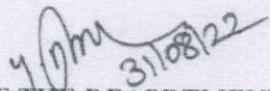
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DATE: 31.08.2022

## 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 "CATIA" from 03.09.2022 to 03.12.22 and 27.08.2022 to 12.11.2022. The session will be organized by **Dr.K.R.Thangadurai Associate Professor, Department of Mechanical Engineering, Jayaram College of Engineering**. All the students of II & III Year are intimated to attend the program without fail in order to enrich their knowledge.

  
HEAD OF THE DEPARTMENT

Copy to

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2. HOD
3. Notice Board



  
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## DEPARTMENT OF MECHANICAL ENGINEERING

### VALUE ADDED PROGRAM - CATIA

ACADEMIC YEAR: 2022-2023

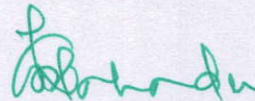
### STUDENTS NAME LIST

S.NO	REG NO	NAME
1	620521114001	CHOWTHRI M
2	620521114002	HARIHARAN AJ
3	620521114301	AJITH M A
4	620521114302	ARUL EBINEZER A
5	620521114303	DINESHKUMAR S
6	620521114304	IMMANUVEL A
7	620521114305	KARTHICK R
8	620521114306	MUKESHKANNAN M
9	620521114307	MUSTHAFA S
10	620521114308	NANDHAKUMAR B
11	620521114309	PRAVEEN G
12	620521114310	RAJKUMAR S
13	620521114311	RAMACHANDRAN R
14	620521114312	SATHESHKUMAR M
15	620521114313	SURIYA M

M. L. S. 27/9/22  
PROGRAM CO-ORDINATOR

Y. J. M. 23/09/22  
HOD



  
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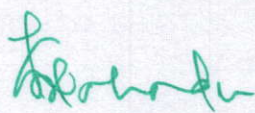
### VALUE ADDED PROGRAM- CATIA

ACADEMIC YEAR: 2022-2023

### STUDENTS NAME LIST

S.NO	REG NO	NAME
1	620520114303	ARUL MURUGAN M
2	620520114307	CHANDRU M
3	620520114309	DHARMARAJ R
4	620520114310	DHINESH M
5	620520114314	GOBINATH G
6	620520114317	GUNASEKARAN D
7	620520114319	KALIA MOORTHY M
8	620520114323	KARTHIKEYAN P
9	620520114324	KARTHIKEYAN R
10	620520114326	KIDHIYON T
11	620520114328	LESLEY BRITTO S
12	620520114329	LOGANATHAN P
13	620520114330	LUKESH S



  
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14	620520114336	MUNEESWARAN A
15	620520114341	PRAKASH E
16	620520114343	PRAVEENKUMAR R
17	620520114344	PREMNATH A
18	620520114345	PRIYA A
19	620520114348	RANJITH S
20	620520114353	SARANRAJ E
21	620520114354	SIVAKUMAR P
22	620520114357	SURESH V
23	620520114358	SURYA E
24	620520114359	SURYA M
25	620520114361	VENKATESH BABU R
26	620520114362	VETRISELVAN R
27	620520114363	VIGNESHWARAN R
28	620520114366	VIVEK D
29	620520114367	YUVANRAJ G

M.L.  
27/08/22

PROGRAM CO-ORDINATOR

y. Om  
27/08/22  
HOD



*[Signature]*

Dr.K.MAHADEVAN B.E., M.E., Ph.D.  
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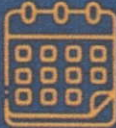
Contact No: 98433 46065, 84899 10651.


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**CMS COLLEGE  
OF ENGINEERING**

ORGANIZED BY  
**DEPARTMENT OF MECHANICAL AND  
ENGINEERING**

**CATIA**

 3/9/2022 to 3/12/2022  
and  
27/8/2022 to 12/11/2022

 **VENUE AT LECTURE HALL**



  
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## 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), constraints, 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

M. V.  
3/9/22

PROGRAM CO-ORDINATOR

9/09/22  
HOD



  
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