




(Approved by AICTE, Affiliated to MGU / APJ Abdul Kalam Technological University, NAAC Accredited & ISO Certified Institution)

CERTIFICATE PROGRAMS- ACADEMIC YEAR 2016-2017

SI No	Name of Program	Date & Duration	Agency Conducted	No of students enrolled (without repeating)	No of Times held in an year
1	Certification of Java	4/2/2017 30 hrs	MLMCE	21	1
2	Certification of PHP	1/4/2017, 30 hrs	MLMCE	18	1
3	HDL Design	10-02-2020 & 30 HRS	MLMCE	129	1
4	2D to 3D IC-change in trends in semiconductor IC design	09-03-2020 & 30 HRS	MLMCE	122	1
5	E-TAP	28/01/2017 & 30 hours	MLMCE	32	1
6	E-CAD	6/8/2016 & 30 hours	MLMCE	34	1
7	Proteus PCB Designing	6/8/2016 & 30 hours	MLMCE	38	1
8	Latex for beginners	6/8/2016 & 30 hours	MLMCE	16	1
9	Foundation In Mechanical CAD	19/11/2016, 30 Hours	MLMCE	78	1
10	HVAC	12/11/2016, 30 Hours	MLMCE	74	1
11	CAD	21/03/2017, 30 Hours	MLMCE	79	1


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CERTIFICATION ON PHP

30 Hour Course

- ✓ Trusted by Recruiters of Software Industry
- ✓ Includes detailed PHP Coding
- ✓ Available with updated Short Study Material
- ✓ Completion Certificate Will be provided
- ✓ Interaction with Domain Expert

Resource Person

Ms.Tinu Thomas, AP, CSE DEPT

Ms.Sruthy Emmanuel, AP, CSE DEPT

Ms.Divya S.B, AP, CSE DEPT

Date: 01-04-17 to 29-04-17



Coordinator: Ms.Tinu Thomas, AP, CSE DEPT

30 Hours Course
(Certificate)

Needed to become
a Verified PHP
Programmer

Learn the
fundamentals of
PHP

Become 1 among
the trained
Engineer

MANGALAM COLLEGE
OF ENGINEERING

Mangalam Hills,
Vettimukal P O
Ettumanoor, Kottayam
686631

Time 9: 00 AM to 5 PM
(5 Days)



MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Ref: MI/M/CSE/CC/2016-2017/002

Date: 23/03/2017

Submitted to the Principal approval

We have proposed to conduct the certificate course on "PHP" for our UG CSE students during this semester (2016-17). Tentative timings and course fees details are mentioned below. Hence, we kindly request you to give approval for the same.

Course Schedule :- 1/04/2017 to 29/4/2017

S.No.	Name of the course	Course instructors	Course duration	Approx. Course fee	Target students (year/branch)
1	Certification on PHP	Ms. Finu Thomas	30 hrs	Free	II&III CSE Dept.
2		Ms. Sruthy Emmanuel			
3		Ms. Divya S B			

Thanking You,

Course coordinator

HOD/CSE

Principal

Copy to:

1. CSE Department file
2. Notice Board
3. IQAC

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MANGALAM COLLEGE OF ENGINEERING

Principal
Mangalam College of Engineering
K. P. Road, Mangalam, Chennai - 601 031



MANGALAM COLLEGE OF ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Department of Computer Science and Engineering

Academic year 2016-17

DETAILED SYLLABUS

1. Introduction to PHP
 - 1.1 PHP Intro
 - 1.2 PHP Install
 - 1.3 PHP Syntax
 - 1.4 PHP Variables
 - 1.5 PHP Echo / Print
 - 1.6 PHP Data Types
 - 1.7 PHP Strings
 - 1.8 PHP Constants & Operators
2. Handling Html Form with PHP
 - 2.1 PHP Form Handling
 - 2.2 PHP Form Validation
 - 2.3 PHP Form Required
 - 2.4 PHP Form URL/E-mail
 - 2.5 PHP Form Complete
3. Decisions and loop
 - 3.1 Making Decisions
 - 3.2 Doing Repetitive task with looping
 - 3.3 Mixing Decisions and looping with Html
 - 3.4 PHP If...Else...Elseif
 - 3.5 PHP Switch
 - 3.6 PHP While Loop and For Loops
4. Array
 - 4.1 Creating index based and Associative array
 - 4.2 Accessing array Element
 - 4.3 Looping with Index based array
 - 4.4 Looping with associative array using each() and foreach()
 - 4.5 Some useful Library function
5. Database Connectivity with MySql
 - 5.1 Introduction to RDBMS
 - 5.2 Connection with MySql Database
 - 5.3 Performing basic database operation(DML) (Insert, Delete, Update, Select)
 - 5.4 Join (Cross joins, Inner joins, Outer Joins, Self joins.) Framework- CodeIgnite

Prepared By
Ms. Tinu Thomas

Approved by

Internal Quality Assurance Cell (IQAC)
Mangalam College of Engineering
Kottayam, India - 686 011



CERTIFICATION ON JAVA

30 Hour Course

- ✓ Trusted by Recruiters of software Industry
- ✓ Includes detailed Java Programming
- ✓ Available with Updated Short Study Material
- ✓ Completion Certificate Will be provided
- ✓ Interaction with Domain Expert

Resource Person

Ms.Divya S.B, AP, CSE DEPT

Ms.Jinu P Sainudeen, AP, CSE DEPT

Ms.Nimmymol Manuel, AP, CSE DEPT

Date: 04-02-17 to 27-02-17




Coordinator: Ms.Divya S.B, AP, CSE DEPT

**30 Hours
Course
(Certificate)**

**Needed to
become a
Verified Java
Programmer**

**Learn the
fundamentals
of Java**

**Become 1
among the
trained
Engineer**


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686631

Time 9: 00 AM to 5 PM
(5 Days)



MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Ref. MLM/CSE/CC/2016-2017/01

Date 26/1/2017

Submitted to the Principal approval

We have proposed to conduct the certificate course on "Java" for our UG CSE students during this semester (2016-17). Tentative timings and course fees details are mentioned below. Hence, we kindly request you to give approval for the same.

Course Schedule :- 4/2/17 to 27/2/2017

S.No	Name of the course	Course instructors	Course duration	Approx. Course fee	Target students (year/branch)
1	Certification on java	Ms Divya SB	30 hrs	Free	
2		Ms.Jinu P Sainudeen			
3		Ms.Nimmymol Manuel			

Thanking You,

Course Coordinator

HoD/CSE

Principal

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3. IQAC

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Department of Computer Science and Engineering

Academic year 2016-17

DETAILED SYLLABUS

1. Java Fundamentals

- 1.1 Features of Java
- 1.2 OOPs concepts
- 1.3 Java virtual machine
- 1.4 Reflection byte codes
- 1.5 Byte code interpretation
- 1.6 Data types, variable, arrays, expressions, operators, and control structures
- 1.7 Objects and classes

2. Java Classes

- 2.1 Abstract classes
- 2.2 Static classes
- 2.3 Inner classes
- 2.4 Packages
- 2.5 Wrapper classes
- 2.6 Interfaces
- 2.7 This
- 2.8 Super
- 2.9 Access control

3. Exception handling

- 3.1 Exception as objects
- 3.2 Exception hierarchy
- 3.3 Try catch finally
- 3.4 Throw, throws

4. IO package & Multi threading

- 4.1 Input streams
- 4.2 Output streams
- 4.3 Object serialization
- 4.4 Deserialization
- 4.5 Sample programs on IO files
- 4.6 Filter and pipe streams
- 4.7 Thread Life cycle
- 4.8 Multi threading advantages and issues
- 4.9 Simple thread program
- 4.10 Thread synchronization

5. GUI & Database Connectivity

- 5.1 Introduction to AWT programming
- 5.2 Layout and component managers
- 5.3 Event handling
- 5.4 Applet class Applet life-cycle
- 5.5 Swing components – JApplet, JButton, JFrame, etc

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
ACADEMIC YEAR 2016-17

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Man... (1040)
Revised... 2016

- 5.6 JDBC architecture
- 5.7 Establishing connectivity and working with connection interface
- 5.8 Working with statements
- 5.9 Creating and executing SQL statements
- 5.10 Working with Result Set



Prepared By
Ms. Divya S B



Approved by



CERTIFICATE COURSE IN CAD

30 Hour Course

- ✓ Includes detailed technologies in CAD
- ✓ Available with updated Short Study Material
- ✓ Completion Certificate Will be provided
- ✓ Interaction with Domain Expert

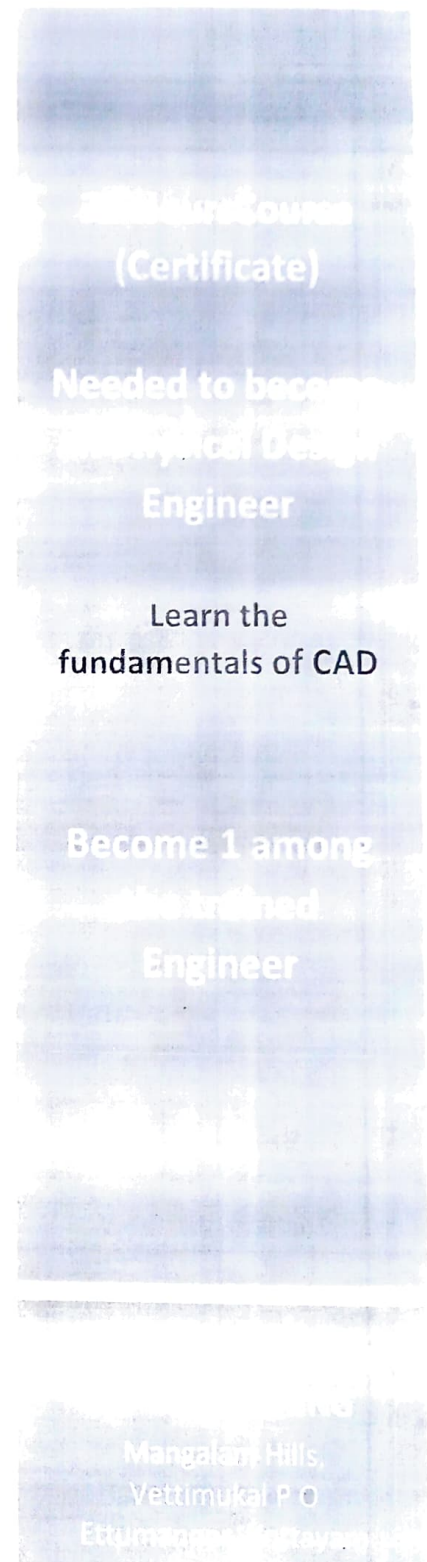
Resource Person

Mr. Jishnu M

APME

MANGALAM COLLEGE OF ENGINEERING

Date: 15/11/2016 to 24/11/2016




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SYLLABUS (Add-on Course)

Course Name: Computer Aided Designing

Total hours: 30

MODULE 1: (8 hours)


Fundamentals of Engineering Drawings, Construction of plane and complex geometrical figures, Construction of Curves and Helix, Principles of Projections, Projections of Straight Lines and Solids, Section of Solids, Mechanical Parts Drawing

MODULE 2: (12 hours)


Fundamentals of Computers, Introduction, Computer Hardware and Software Concepts, Introduction of Personal Computer and Operating Systems WINDOWS-XP, Windows-7, File Management

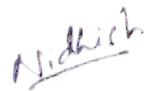
MODULE 3: (10 hours)

Drawing using AutoCAD: Setting up a drawing starting from scratch, Setting up a drawing using a Wizard, Using and creating a template file, Opening an existing drawing, Screen Layout, Pull-down menus, Screen icons, Command line


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MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING

Department of Mechanical Engineering

1.	Academic Year	: 2016-17
2.	Title of the Course	: Computer Aided Designing (CAD)
3.	Objective of the Course	:
4.	Prerequisite	: Nil
5.	Requirement	: Seminar Hall, CAD LAB
6.	Beneficiary	: S2 Students
7.	Date and Duration of the Course	: 15.11.2016 to 24.11.2016 (30 Hours)
8.	Proposed Timing	: 2:00 PM to 05:00 PM (3 hours per day)
9.	No of Hours Required	: 30 Hours
10.	Internal Resources	: Mr. Jishnu M AP (ME)
11.	Course Registration Fees	: Nil
12.	Contents of Courses	: Enclosed Separately
13.	Credits and Certification	: Those who have 80 % of Attendance and scored 60 % in internal exam evaluation
14.	Venue	: Mechanical Seminar Hall, CAD Lab

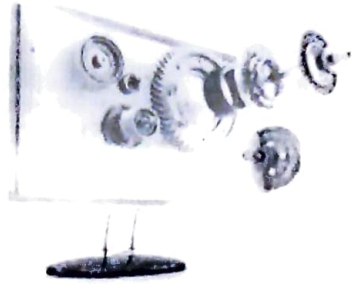
Jishnu

COURSE COORDINATOR

Nidhish

MANGALAM COLLEGE OF ENGINEERING
Ettumanoor

HOD



CERTIFICATE COURSE IN FOUNDATION IN MECHANICAL CAD

30 Hour Course

- ✓ Includes detailed technologies in CAD
- ✓ Available with updated Short Study Material
- ✓ Completion Certificate Will be provided
- ✓ Interaction with Domain Expert

Resource Person

Mr. Jishnu M

APME

MANGALAM COLLEGE OF ENGINEERING

Date: 19/11/2016 to 28/11/2016



30 Hours Course
(Certificate)

Needed to become
an Physical Design
Engineer

Learn the
fundamentals of
MECHANICAL CAD

Become 1 among
the trained

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MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING

Department of Mechanical Engineering

1.	Academic Year	: 2016-17
2.	Title of the Course	: Foundation in Mechanical CAD
3.	Objective of the Course	:
4.	Prerequisite	: Nil
5.	Requirement	: Seminar Hall, CAD LAB
6.	Beneficiary	: S1 Students
7.	Date and Duration of the Course	: 19.11.2016 to 28.11.2016(30 Hours)
8.	Proposed Timing	: 2:00 PM to 05:00 PM(3 hours per day)
9.	No of Hours Required	: 30 Hours
10.	Internal Resources	: Mr. Jishnu M AP (ME)
11.	Course Registration Fees	: Nil
12.	Contents of Courses	: Enclosed Separately
13.	Credits and Certification	: Those who have 80 % of Attendance and scored 60 % in internal exam evaluation
14.	Venue	: Mechanical Seminar Hall, CAD Lab

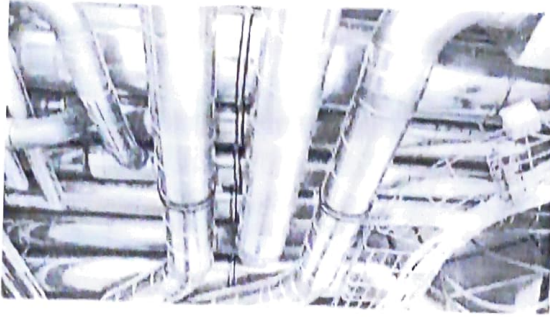
Jishnu

COURSE COORDINATOR

Nidhish

HOD

Nidhish
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MANGALAM COLLEGE OF ENGINEERING
Ettimanoor



CERTIFICATE COURSE IN HVAC

30 Hour Course

- ✓ Includes detailed technologies in HVAC
- ✓ Available with updated Short Study Material
- ✓ Completion Certificate Will be provided
- ✓ Interaction with Domain Expert

Resource Person

Mr. Hariprasad K S

APME

MANGALAM COLLEGE OF ENGINEERING

Date: 12/11/2016 to 21/01/2017



Needed to become

Engineer

Learn the
fundamentals of
HVAC

Engineer

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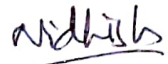



MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING

Department of Mechanical Engineering

1.	Academic Year	: 2016-17
2.	Title of the Course	: Heat Ventilation & Air Conditioning
3.	Objective of the Course	: To provide an overlook on the various aspects of HVAC
4.	Prerequisite	: Nil
5.	Requirement	: Seminar Hall
6.	Beneficiary	: S7 Students
7.	Date and Duration of the Course	: 12.11.2016 - 21.01.2017 (30 Hours)
8.	Proposed Timing	: 9:00 AM – 12:00 PM (3 hours per day)
9.	No of Hours Required	: 30 Hours
10.	Internal Resources	: Mr. Hariprasad K S AP (ME)
11.	Course Registration Fees	: Nil
12.	Contents of Courses	: Enclosed Separately
13.	Credits and Certification	: Those who have 80 % of Attendance and scored 60 % in internal exam evaluation
14.	Venue	: Mechanical Seminar Hall


COURSE COORDINATOR


HOD


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MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING

Course on Heat Ventilation & Air Conditioning (HVAC)

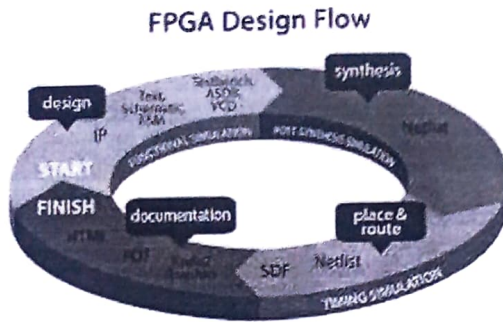
Syllabus

Course Code: MEAC16HVAC		Course on HVAC	
Pre-requisite: NIL			
		30	0
Module	Topics	L	
1	Introduction to HVAC, Fundamental of Heat Transfer, Fundamentals for RAC, Refrigerants in HVAC, Fundamental of Psychrometric, Psychrometric Process	6	
2	Classification of AC, Non-Centralized & Centralized AC, Air Handling Unit, Chiller Water System, Package System, VRV & VRF System	6	
3	Introduction to Heat Load, Heat Load Calculation for Bedroom, Heat Load Calculation for Hostel, Heat Load Calculation for Dinning, Introduction to Hourly Analysis Program, Heat Load Calculation for HAP	6	
4	Introduction about Ducting, Duct Fittings, Duct Annotation, Single Line Diagram, Double Line Diagram, Duct Design	6	
5	Introduction to Hydronic System, Pipe Design, Fittings, Types of Valves, Pipe Loss Calculation and Pump Selection, Ventilation, Fresh Air Circulation, Clean Room	6	
Total Hours		30	
<p>= Mode: Flipped Class Room [Lecture to be videotaped], Industrial visit to see different types of equipment's, Lectures by Experts from Industry (two or more sessions)</p>			

Neena Joseph

Internal Quality Assurance Cell (IQAC)
 Mangalam College of Engineering
 Kottayam, India - 686 631

AG
 MANGALAM COLLEGE OF ENGINEERING
 KOTTAYAM



HDL DESIGN

30 Hour Course

- ✓ Trusted by Recruiters of VLSI Industry
- ✓ Includes detailed VHDL and Verilog Programme
- ✓ **Available with Updated Short Study Material**
- ✓ Completion Certificate Will be provided
- ✓ Interaction with Domain Expert

Resource Person

Mr Abraham C G
 Researcher
 AnnaUniversity, Chennai

Date: 03-04-2017 to 07-04-2017



Coordinator: Prof JyothiSree K R, AP-ECE

**30 Hours Course
 (Certificate)**

**Needed to become
 a Verification
 Engineer**

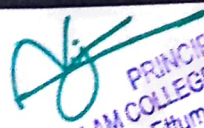
**Learn the
 fundamentals of
 VHDL and Verilog**

**Become 1 among
 the trained
 Engineer**

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 OF ENGINEERING**

Mangalam Hills,
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 Ettumanoor, Kottayam
 686631

Time 9:00 AM to 5 PM
 (5 Days)


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MANGALAM COLLEGE OF ENGINEERING

Department of Electronics and Communication Engineering

1.	Academic Year	: 2016-2017
2.	Title of the Course	: HDL Design
3.	Objective of the Course	: To develop the skill for HDL Design
4.	Prerequisite	: Basic Programming
5.	Requirement	: Online Google meet for theory class : Project Lab for practical class
6.	Beneficiary	: S6 and S4 Students
7.	Date and Duration of the Course	: 03-04-2017 to 07-04-2017
8.	Proposed Timing	: 09.00 AM to 04.00 PM
9.	No of Hours Required	: 30 Hours
10.	Resource Person	: Mr Abraham C G
11.	Course Registration Fees	: Nil
12.	Contents of Courses	: Enclosed Separately
13.	Credits and Certification	: Those who have 80 % of Attendance and scored 60 % in internal exam evaluation
14.	Venue	: Online

COURSE COORDINATOR

HOD/ECE

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CERTIFICATE COURSE

HDL Design

Course Objective:

- To expose the students to the basic fundamentals of HDL.
- To discuss VHDL in detail
- To discuss Verilog in detail

Course Outcomes:

- Student knows and how to install and write coding for HDL
- Student learns to write programmes for various Digital logic circuits

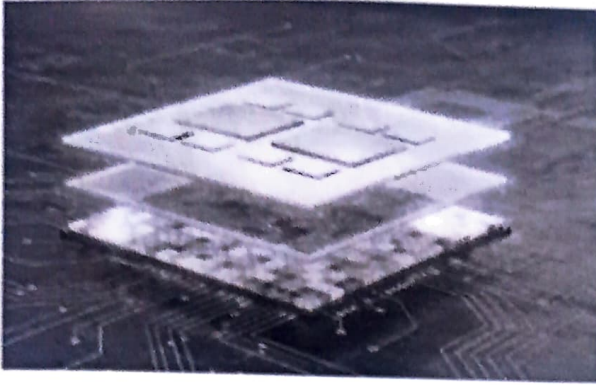
S.NO.	CONTENT	INSTRUCTIONAL HOURS
Section 1		
1	Module:-1 – VHDL Basics (4 HRS) HDL's history. Benefits of HDL. Concepts of VHDL. Entity and Architecture. Behavioral, data flow and structural specifications. Mixed structural-behavioral models.	4
2	Module:-2 – VHDL Components(6 HRS) Basic elements of VHDL. Timing model. Delay types: delta, transport and inertial delays. Data types. Scalar data types: numerical, physical (operations with physical types, time description), enumerated. Attributes of scalar data types. Conversion of scalar data types. Subtypes.	6
3	Module:- 3- Verilog- Basics-1 (6 HRS) Modeling concepts- Levels of abstraction. Design methodologies. Basic concepts - Module. Data types: nets, registers, vectors, arrays. Parameter types. Operators. Operator types, precedence. Sequential and parallel blocks.	6
Section 2		
10	Module:-4 Verilog – Basics-2 (6 HRS) Behavioral modeling blocks: always block, event-based timing control, branch statements, case. Procedural assignments: blocking and non-blocking. Data flow modeling: Assign statements. Delays. Implicit net declaration. Gate level modeling. Gate types: and/or, buf/not gates, bufif/notif gates.	6
11	Module:-5 Verilog- Application (8 HRS) Switch level modeling. Primitives. Use of tri-reg. Test-bench creation. Initial block. Delay-based timing control. System tasks. Monitoring a simulation. Looping constructs: while loop, for loop, repeat, forever loop. VCS simulation examples.	8
Total Hours		=30

Recommended Text Books:

1. Palnitkar, Samir. *Verilog HDL: a guide to digital design and synthesis*. Vol. 1. Prentice Hall Professional, 2003.
2. Minns, P. D., & Elliott, I. (2008). *FSM-based digital design using Verilog HDL*. John Wiley & Sons.



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2D TO 3D IC CHANGE IN TRENDS IN SEMICONDUCTOR IC DESIGN

30 Hour Course

- ✓ Trusted by Recruiters of Semiconductor Industry
- ✓ Includes detailed IC Design Flow
- ✓ Available with updated Short Study Material
- ✓ Completion Certificate Will be provided
- ✓ Interaction with Domain Expert

Resource Person

Prof Radeep Krishna R
Centre for VLSI Design
KARE , Madurai

Date: 06-03-2017to 10-03-2017



Coordinator: Prof Simi P Thomas, AP/ECE

**30 Hours Course
(Certificate)**

**Needed to become
an Physical Design
Engineer**


**Learn the
fundamentals of
VLSI Physical
Design**

**Become 1 among
the trained
Engineer**

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686631

Time 9: 00 AM to 5 PM
(5 Days)


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MANGALAM COLLEGE OF ENGINEERING

Department of Electronics and Communication Engineering

1.	Academic Year	: 2016-2017
2.	Title of the Course	: 2D to 3D IC-change in trends in semiconductor IC design
3.	Objective of the Course	:To develop the skill for VLSI Physical Design
4.	Prerequisite	: Basic VLSI
5.	Requirement	: Online Google meet for theory class : Project Lab for practical class
6.	Beneficiary	: S8 and S6 Students
7.	Date and Duration of the Course	: 06-03-2017 to 10-03-2017
8.	Proposed Timing	: 09.00 AM to 04.00 PM
9.	No of Hours Required	: 30 Hours
10.	Resource person	: Prof Radeep Krishna R
11.	Course Registration Fees	: Nil
12.	Contents of Courses	: Enclosed Separately
13.	Credits and Certification	: Those who have 80 % of Attendance and scored 60 % in internal exam evaluation
14.	Venue	: Online

Semi
COURSE COORDINATOR

[Signature]
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MANGALAM COLLEGE OF ENGINEERING
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CERTIFICATE COURSE

2D to 3D IC-change in trends in semiconductor IC design

Course Objective:

- To expose the students to the basic fundamentals of VLSI Physical Design
- To understand the 2D IC Design
- To understand the 3D IC Design

Course Outcomes:

- Student knows and how to develop optimisation algorithms for different VLSI Physical Design Flows
- Student learns to do optimisation in 2D IC and 3D IC Designs

S.NO.	CONTENT	INSTRUCTIONAL HOURS
Section 1		
1	Introduction to VLSI Physical Design	2
2	2D IC Design	2
3	3D IC Design	2
4	VLSI Bi-Partitioning	4
5	VLSI Floor planning	4
6	VLSI Placement- legalization	4
7	VLSI Routing	4
8	Timing Analysis	4
Section 2		
10	Example's	4
Total Hours		=30

➤ Recommended Text Books:

1. Todri-Sanial, Aida, and Chuan Seng Tan, eds. *Physical Design for 3D Integrated Circuits*. CRC Press, 2017.
2. Kahng, A. B., Lienig, J., Markov, I. L., & Hu, J. (2011). *VLSI physical design: from graph partitioning to timing closure*. Springer Science & Business Media.


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Mangalam Hills, Vettimukal p.o
Ettumanoor, Kottayam 686631

PROTEUS PCB DESIGNING

Date: 06/08/2016

(30 hour course)

(certificate)

Organized by : Department Of Electrical
And Electronics Engineering

Speaker: Liya Aliyas

(Assistant Professor
Department of Electrical And
Electronics Engineering)

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MANGALAM COLLEGE OF ENGINEERING
Mangalam Hills, Vettimukal p.o
Chennai-600 031

E-CAD

DATE: 06/08/2016

(certificate)
(30 hour course)

Organized by : Department Of Electrical
And Electronics Engineering

Speaker: AJU THOMAS

(Assistant Professor
Department of Electrical And
Electronics Engineering)


MANGALAM COLLEGE OF ENGINEERING
CHENNAI



MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Department of Electrical and Electronics Engineering

1.	Academic Year	: 2016-2017
2.	Title of the Course	: Electrical CAD for Beginners
3.	Objective of the Course	: To create understanding of the Electrical Cadd,
4.	Prerequisite	: Computer lab for practical class
5.	Beneficiary	: S7 Students
6.	Date and Duration of the Course	: 06/08/2016 to 03/09/2016 (30 Hours)
7.	Proposed Timing	: 09.00 AM to 04.00 PM (6 hours per every saturday)
8.	No of Hours Required	: 30 Hours
9.	Internal Resources	: Mr. Aju Thomas, AP/EEE
10.	Course Registration Fees	: Nil
11.	Contents of Courses	: Enclosed Separately
12.	Credits and Certification	: Those who have 80 % of Attendance and scored 60 % in practical evaluation
13.	Venue	: MANGALAM COLLEGE OF ENGINEERING

Aju
COURSE COORDINATOR

B. S. S.
HOD/EEE
Head of Department
Electrical and Electronics

U. P. S.
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A. K.
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Ettimanoor

CERTIFICATE COURSE

LaTeX for Beginners

Course Objective:

- To expose the students to the basic concepts documentation and its importance.
- To give Working knowledge of Latex typesetting language.
- Student should use Latex file to define document class and layout options.
- Student should use various methods to either create or import graphics into Latex document.
- Student should use tabular and array environments within Latex documents.

Course Outcomes:

- Student knows and how to install Latex software.
- Student learns to write equations, matrix and tables.
- Student learn to quote the references, equation references, citations.
- Student lists the figures, tables and generating index.

S.NO.	CONTENT	INSTRUCTIONAL HOURS
Section 1		
1.	Introduction and Application	1
2.	Installation of the software LaTeX and basic MITEK	2
3.	Understanding Latex compilation Basic Syntax	2
4.	Page Layout – Titles, Abstract Chapters, Sections, References, Equation references, citation.	3
5.	Classes: article, book, report	2
6.	List making environments Table of contents, Generating new commands	2
7.	Errors and Error handling	1
8.	Font Effects: Coloured Text, Font Sizes, Lists, Comments & Spacing, Special Characters	2
Section 2		
9.	Figure handling numbering and List of figures with Practical examples	2
10.	Tables with Practical examples	3
11.	Writing equations, Matrix, Mathematical Equations and numbering methods	4
12.	Practical on numbering and without numbering format	1
13.	Inserting References: Introduction, The BibTeX le	1
14.	Inserting the bibliography	2
15.	Practical examples	2
Total Hours		=30

Recommended Books:

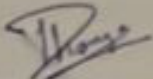
1. Diller, Latex Line by Line, published by Wiley.
2. Introduction to Latex by Tobias Oetiker.
3. Patrick Daly. Natural Sciences Citations and References, 2006
4. Michael Doenes. Short Math Guide for Latex.

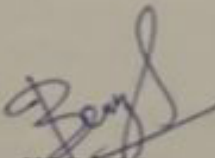


MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Department of Electrical and Electronics Engineering

1.	Academic Year	: 2016-17
2.	Title of the Course	: LaTeX for Beginners
3.	Objective of the Course	:To create understanding of the LaTeX, To understand the fundamentals of Scilab and Utilization, Development of Proficiency in English and Communication skills
4.	Prerequisite	: Nil
5.	Requirement	: Dept. of EEE S3 class Room
6.	Beneficiary	: S3 Students
7.	Date and Duration of the Course	: 06.08.2016 to 03.09.2016 (30 Hours)
8.	Proposed Timing	: 09.00 AM to 04.00 PM (6 hours per every Saturday)
9.	No of Hours Required	: 30 Hours
10.	Internal Resources	: Ms. Dhanya S / AP (EEE)
11.	Course Registration Fees	: Nil
12.	Contents of Courses	: Enclosed Separately
13.	Credits and Certification	: Those who have 80 % of Attendance and scored 60 % in internal exam evaluation
14.	Venue	: S3 Classroom Department of EEE, 1 st floor


COURSE COORDINATOR


HOD/EEE
Head of Department
Electrical and Electronics


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MANGALAM COLLEGE OF ENGINEERING
Mangalam Hills, Vettimukul p.o
Chumaranok, Kottayam 686631

LATEX FOR BEGINNERS

- * cross platform compatibility
- * easy to make templates

Date: 06/08/2016
(30 hour course)
(certificate)

Organized by : Department Of Electrical
And Electronics Engineering

Speaker: DHANYA S
(Assistant Professor
Department of Electrical And
Electronics Engineering)




CERTIFICATE COURSE

Electrical CAD for Beginners

Course Objective:

- To expose the students to the basic concepts of using the powerful electrical drawing creation tools in the AutoCAD Electrical software.
- To give Working knowledge of Electrical cad.
- Student should use Electrical CAD software for Electrical project.

Course Outcomes:

- Student should Know methods of customizing AutoCAD Electrical symbols, circuits, and databases. Other topics covered include title block linking, reporting tools, templates, and project file.
- Student should Know methods of customizing AutoCAD Electrical symbols, circuits, and databases

S.NO.	CONTENT	INSTRUCTIONAL HOURS
1	Introduction <ul style="list-style-type: none">• Autocad Electrical• GUI	3
2	Projects <ul style="list-style-type: none">• Introduction to Project Manager• Working with projects	3
3	Drawing <ul style="list-style-type: none">• Create a new drawing• Adding a drawing	3
4	Component tools <ul style="list-style-type: none">• Inserting Components• Relocating Components	3
5	DC LAP WINDING	3
6	DC WAVE WINDING	3
7	DOL STARTER	3
8	STAR DELTA STARTER	3
9	Wires <ul style="list-style-type: none">• Wire Layers• Wire Types• Insert Wire• Modify wire	3
10	PROJECT	3
Total Hours =30		

CERTIFICATE COURSE

ETAP FAMILIARISATION

Course Objective:

- To introduce the basic concepts in power system modelling.
- To give familiarization of ETAP software for power system analysis and design
- To perform load flow analysis of a small power system using ETAP
- To perform short circuit analysis of a small power system using ETAP

Course Outcomes:

- Student will be able to model a power system network
- Student acquire skill to perform load flow analysis of a power system network
- Student acquire skill to perform short circuit analysis of a power system network

1.

S.NO.	CONTENT	INSTRUCTIONAL HOURS
Section 1		
	Introduction to ETAP	1
1	Creating New Project in ETAP	2
3	Draw Single Line Diagram	2
4	Load Flow Analysis	2
5	AC Power Flow Methods	2
5.1	Load flow calculations	2
5.2	Load flow examples using different bus systems	2
5.3	Load flow examples using Newton Raphson Method in ETAP	1
Section 2		
6	Introduction to Short Circuit Analysis	2
6.1	Fundamentals of Short Circuit Analysis	3
6.2	Short Circuit Hand Calculations	3
6.3	Symmetrical and Unsymmetrical Faults	4
6.4	Short Circuit Analysis examples demonstration using ETAP	4
Total Hours		=30


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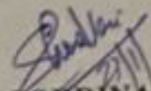

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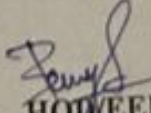



MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING


Department of Electrical and Electronics Engineering

1.	Academic Year	: 2016-17
2.	Title of the Course	: ETAP Familiarisation
3.	Objective of the Course	: To create understanding of the power system components. To perform modelling and Load flow analysis of a power system using ETAP. To perform short circuit analysis on a small power system.
4.	Prerequisite	: Knowledge of Power System Analysis : Tutorial Sessions in ETAP
5.	Venue	: PG simulation Lab
6.	Beneficiary	: S8 Students
7.	Date and Duration of the Course	: 28/01/2017 to 25/02/2017 (30 Hours)
8.	Proposed Timing	: 09.00 AM to 04.00 PM (6 hours per every saturday)
9.	No of Hours Required	: 30 Hours
10.	Internal Resources	: Mrs. Shoma Mani / AP (EEE)
11.	Course Registration Fees	: Nil
12.	Contents of Courses	: Enclosed Separately
13.	Credits and Certification	: Those who have 80 % of Attendance and scored 60 % in practical evaluation


COURSE COORDINATOR


HOD EEE


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MANGALAM COLLEGE OF ENGINEERING
Mangalam Hills, Vettanohal p.o
Ethurambakkam, Kattayam 686631

E-TAP

Date: 28/01/2017
(30 hours)
(certificate)

Organized by : Department Of Electrical
And Electronics Engineering

Spnaker: Shoma Mani
(Assistant Professor
Department of Electrical And
Electronics Engineering)


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Ethurambakkam

CERTIFICATE COURSE

Proteus PCB Designing

Course Objective:

- This is a basic course for designing of PCB using software. PCB (Printed Circuit Board) designing is an integral part of each electronics products and this program is designed to make students capable to design their own projects PCB up to industrial grade.


Course Outcomes:

- Student knows PCB designing and how to install Proteus software.
- Student learn to design electronic circuits.
- Student learn to simulate the circuit with Proteus software.

S.NO.	CONTENT	INSTRUCTIONAL HOURS
Section 1		
1	Introduction and Application	1
2	What is PCB, Types of PCBs: Single Sided (Single Layer), Multi-Layer (Double Layer), PCB Materials	2
3	Creating a Project	2
4	Planning, Keyboard shortcuts, display options etc	2
5	Components selection and connection in Proteus	3
6	Selection of Controllers	2
7	Scopes, meters and measurement equipment	1
8	Design verification and connections	3
Section 2		
9	Practical section for basic simpler circuits	2
10	Single Phase Half controlled converter with R load	2
11	Single Phase fully controlled bridge converter with R and RL loads	2
12	Three Phase half controlled bridge converter with R-load	2
13	Single Phase AC Voltage Controller with R and RL Loads	2
14	Single phase converter with PWM control	1
15	Single Phase parallel inverter with R and RL loads	1
16	Buck and Boost converter	2
Total Hours		=30

Recommended Books:

1. Proteus (Design Software) by Lambert M. Surhone, Miriam T. Timpledon, Susan F. Marseken, VDM Publishing, 2010.

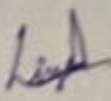

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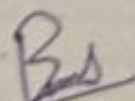


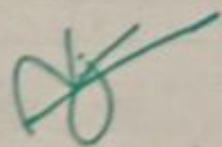
MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Department of Electrical and Electronics Engineering

1.	Academic Year	: 2016-2017
2.	Title of the Course	: Proteus PCB Designing
3.	Objective of the Course	:To understand designing of PCB using software, To designing an integral part of each electronics products
4.	Prerequisite	: NIL
5.	Beneficiary	: 55 Students
6.	Date and Duration of the Course	: 06.08.2016 to 03.09.2016 (30 Hours)
7.	Proposed Timing	: 09.00 AM to 04.00 PM (6 hours per every Saturday)
8.	No of Hours Required	: 30 Hours
9.	Internal Resources	: Ms. Liya Alias, AP/EEE
10.	Course Registration Fees	: Nil
11.	Contents of Courses	: Enclosed Separately
12.	Credits and Certification	: Those who have 80 % of Attendance and scored 60 % in practical evaluation
13.	Venue	: CAD Lab for practical class and 55 Class room


COURSE COORDINATOR


HOD/EEE


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Consolidated Report for the Certificate Course - ETAP FAMILIARISATION

Academic Year: 2016-2017

Batch 2013-2017

Year: IV/VIII Semester

Name of the Activity	: Certificate Course
Title of the Activity	: ETAP FAMILIARISATION
Staff Incharges	: Mrs.Shoma Mani, AP/EEE
Place of the Activity	: Dept. of EEE Mangalam College of Engineering.Ettumanoor. PG Simulation Lab
No. of Participants	: 32
No. of Qualified	: 32
Name & Designation of Expert	: Mrs.Shoma Mani, AP/EEE
Objective of the Activity	To create understanding of the power system components and perform modelling and Load flow analysis of a power system using ETAP.
Outcome of the Activity	: Students understood how to do load flow analysis,short circuit analysis and cable sizing of conductors.

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Consolidated Report for the Certificate Course - Proteus PCB Designing

Academic Year: 2016-17

Batch 2014-2018

Year: III/V Semester

Name of the Activity	: Certificate Course
Title of the Activity	: Proteus PCB Designing
Staff Incharges	: Ms. Liya Alias, AP/EEE
Place of the Activity	: Dept. of EEE S5 classroom and CAD Lab
No. of Participants	: 38
No. of Qualified	: 38
Name & Designation of Expert	: Ms. Liya Alias, AP/EEE
Objective of the Activity	: This program is designed to make students capable to design their own projects PCB up to industrial grade Basically power electronic circuits.
Outcome of the Activity	: Students were able to design basic converters and their controlling networks in Proteus


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Consolidated Report for the Certificate Course - LaTeX for Beginners

Academic Year: 2016-17

Batch: 2015-19

Year: II/III Semester

Name of the Activity	: Certificate Course
Title of the Activity	: LaTeX for Beginners
Staff Incharges	: Ms. Dhanya S, AP/EEE
Place of the Activity	: Dept. of EEE Mangalam College of Engineering. Ettumanoor.
No. of Participants	: 16
No. of Qualified	: 16
Name & Designation of Expert	: Ms. Dhanya S, AP/EEE
Objective of the Activity	To expose the students to the basic concepts documentation and its importance and to give Working knowledge of Latex typesetting language.
Outcome of the Activity	: Students understood how to frame report and thesis, Improved their proficiency in English and communication skill

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Consolidated Report for the Certificate Course –Electrical CAD for Beginners

Academic Year: 2016-2017

Batch 2013-2017

Year: IV/VII Semester

Name of the Activity	: Certificate Course
Title of the Activity	: Electrical CAD for Beginners
Staff In charges	: Mr. Aju Thomas, AP/EEE
Place of the Activity	: Dept. of EEE (Online) Mangalam College of Engineering, Ettumanoor.
No. of Participants	: 34
No. of Qualified	: 32
Name & Designation of Expert	: Mr. Aju Thomas, AP/EEE
Objective of the Activity	To expose the students to the basic concepts of Electrical drawing using Electrical CAD
Outcome of the Activity	: Students were able to understand and draw electrical diagrams using Electrical CAD


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Consolidated Report for the Certificate Course – 2D to 3D IC-change in trends in semiconductor IC design

Academic Year: 2016-2017
ECE
Year: IV and III

Batch S8 and S6-

Name of the Activity	: Certificate Course
Title of the Activity	: 2D to 3D IC-change in trends in semiconductor IC design
Staff In charges	: Prof Simi P Thomas
Place of the Activity	: Dept. of ECE Mangalam College of Engineering. Ettumanoor.
No. of Participants	: 81+41
No. of Qualified	: 81+41
Name & Designation of Expert	: Prof Radeep Krishna R, Centre for VLSI Design , KARE
Objective of the Activity	Learn the fundamentals of VLSI Physical Design
Outcome of the Activity	Participants learned theory and practiced the development of VLSI Physical Design



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Department of Computer Science And Engineering

1.	Academic Year	: 2016-17
2.	Title of the Course	Certification of Java
3.	Objective of the Course	The main objective of the course is to provide the students with a concrete foundation in Certification of Java.
4.	Prerequisite	: Nil
5.	Requirement	: CSE Seminar Hall
6.	Beneficiary	: S4 Students
7.	Date and Duration of the Course	: 04-02-2017 to 27-02-2017
8.	Proposed Timing	: 9.00 AM to 05.00 PM (6 hours per day)
9.	No of Hours Required	: 30 Hours
10.	Internal Resources	: Ms Divya Sb
11.	Course Registration Fees	: Nil
12.	Contents of Courses	: Enclosed Separately
13.	Credits and Certification	: Those who have 80 % of Attendance and scored 60 % in internal exam evaluation
14.	Venue	: Seminar Hall


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Department of Computer Science And Engineering

1.	Academic Year	: 2016-17
2.	Title of the Course	Certification of PHP
3.	Objective of the Course	The main objective of the course is to provide the students with a concrete foundation in PHP
4.	Prerequisite	: Nil
5.	Requirement	: CSE Seminar Hall
6.	Beneficiary	: S6 Students
7.	Date and Duration of the Course	: 01-04-2017 to 29-04-2017
8.	Proposed Timing	: 9.00 AM to 05.00 PM (6 hours per day)
9.	No of Hours Required	: 30 Hours
10.	Internal Resources	: Ms Tinu Thomas
11.	Course Registration Fees	: Nil
12.	Contents of Courses	: Enclosed Separately
13.	Credits and Certification	: Those who have 80 % of Attendance and scored 60 % in internal exam evaluation
14.	Venue	: Seminar Hall


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Certificate Course – Computer Aided Designing (CAD)

Detailed explanation about the course

Academic Year: 2016-2017

Batch 2016-2020


Year: II Year

Department of Mechanical Engineering organized a certificate course on **Computer Aided Designing (CAD)** for the Second Year B. Tech students (2016-2020 Batch) from 15th November 2016 to 24th November 2016. A total of 79 students were enrolled for the course. 22 lecture hours and 8 practical hours were provided during the course as per curriculum. A multiple choice based examination was conducted for the enrolled students at the end of the course. Certificates were provided for the participants after successful completion of the course.

No of students Registered	No of Students participated	No of Students Passed	No of students Eligible for Certificate
79	79	79	79


Course Coordinator


HOD / ME


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Certificate Course – Foundation in Mechanical CAD

Detailed explanation about the course

Academic Year: 2016-2017


Batch 2016-2020

Year: I Year

Department of Mechanical Engineering organized a certificate course on **Foundation in Mechanical CAD** for the First Year B. Tech students (2016-2020 Batch) from 19th November 2016 to 28th November 2016. A total of 78 students were enrolled for the course. 22 lecture hours and 8 practical hours were provided during the course as per curriculum. A multiple choice based examination was conducted for the enrolled students at the end of the course. Certificates were provided for the participants after successful completion of the course.

No of students Registered	No of Students participated	No of Students Passed	No of students Eligible for Certificate
78	78	78	78


Course Coordinator


HOD / ME


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Detailed Explanation of Course

Academic Year: 2016-2017

Batch: 2016-2017

Year: IV/VII Semester

The main objective of the course is to provide the students with a solid foundation in heat ventilation and air condition and make them understand the calculation for heat loss and also about duct design.

The course was offered for final year mechanical students of Mangalam college of engineering. The course was designed with five modules and course was conducted from 12.11.2016 to 21.01.2017. Certificate was provided with students those who have 80 % of Attendance and scored 60 % in internal exam evaluation

No of students Registered	No of Students participated	No of Students Passed	No of students Eligible for Certificate
74	74	74	74


Course Coordinator


HOD/ME

