



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

CERTIFICATE PROGRAMS- ACADEMIC YEAR 2017-2018

SI No	Name of Program	Date & Duration	Agency Conducted	No of students enrolled (without repeating)	No of Times held in an year
1	PC Hardware and Networking	5/8/2017,30 hrs	MLMCE	14	1
2	Certification on Python	7/10/2017,30 hrs	MLMCE	12	1
3	HDL Design	08-01-2018 & 30 HRS	MLMCE	163	1
4	2D to 3D IC-change in trends in semiconductor IC design	21-03-2018 & 30 HRS	MLMCE	163	1
5	E-TAP	20/01/2018 & 30 hours	MLMCE	38	1
6	E-CAD	12/8/2017 & 30 hours	MLMCE	38	1
7	Proteus PCB Designing	12/8/2017 & 30 hours	MLMCE	18	1
8	Latex for beginners	12/8/2017 & 30 hours	MLMCE	40	1
9	Foundation In Mechanical CAD	19/11/2017,30 Hours	MLMCE	106	1
10	HVAC	14/10/2017,30 Hours	MLMCE	109	1
11	NPTEL-SWAYAM	1/1/2017'8WEEKS	MLMCE	2	1


MANGALAM COLLEGE OF ENGINEERING
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CERTIFICATION ON PYTHON

30 Hour Course

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

Resource Person

Ms. Nimmymol Manuel, AP, CSE DEPT

Ms. Sruthy Emmanuel, AP, CSE DEPT

Ms. Divya S.B, AP, CSE DEPT

Date: 07-10-17 to 20-10-17



विश्वं शास्त्रे प्रतिष्ठितम्।

Coordinator: Ms. Nimmymol Manuel, AP, CSE DEPT

30 Hours Course
(Certificate)

Needed to become
a Verified Python
Programmer

Learn the
fundamentals of
Python

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)

PRINCIPAL
MANGALAM COLLEGE OF ENGINEERING
ETTUMANOOR, KOTTAYAM



MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Ref: MLM/CSE/CC/2017-2018/02

Date: 22/9/2017

Submitted to the Principal approval

We have proposed to conduct the certificate course on "**Certification on Python**" for our UG students during this semester (2017-18). Tentative timings and course fees details are mentioned below. Hence, we kindly request you to give approval for the same.

Course Explanation:

The course is designed to provide Basic knowledge of Python. The course focus on improving the basic programming skills of students using python Programming Language

Course Schedule :- 7/10/2017 to 30/10/2017

S.No.	Name of the course	Course instructors	Course duration	Approx. Course fee	Target students (year/branch)
1	Certification on Python	Ms.Nimmymol Manuel	30 hrs	Free	IV
2		Ms.Sruthy emmanuel			
3		Ms.Divya S B			

Thanking You,


Course I/C


HoD/CSE



Principal

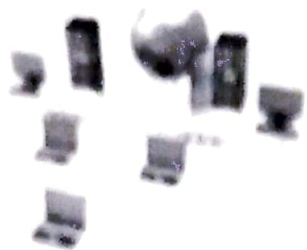
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1. CSE Department file
2. Department Notice Board
3. IQAC

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Internal Quality Assurance Cell (IQAC)
Mangalam College of Engineering
Kadayan, mald - 635 631



CERTIFICATION ON PC HARWARE & NETWROKING

30 Hour Course

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

Resource Person

Ms. Neethu Maria John, AP, CSE DEPT

Ms. Tinu Thomas, AP, CSE DEPT

Ms. Gayathri R Krishna, AP, CSE DEPT

Date: 05-08-17 to 28-08-17



Coordinator: Ms. Neethu Maria John, AP, CSE DEPT

**30 Hours
Course
(Certificate)**

**Gain
knowledge on
PC Hardware
& Networking**

**Learn the
fundamentals
of Hardware
& Networking**

**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: MLM/CSE/CC/2017-2018/ 01

Date: 24/07/2017

Submitted to the Principal approval

We have proposed to conduct the certificate course on “PC Hardware and Networking” for our UG CSE students during this semester (2017-18). Tentative timings and course fees details are mentioned below. Hence, we kindly request you to give approval for the same.

Course Explanation:

PC Hardware and Networking focus to train the students to acquire basic knowledge in computer hardware and peripherals for installation, PC assembly, trouble shooting and maintenance including system management and its backup. The course also provides a basic knowledge of TCP/IP networks work group, internet and intranet.

Course Schedule :- 5/08/2017 to 28/8/2017

S.No.	Name of the course	Course instructors	Course duration	Approx. Course fee	Target students (year/branch)
1	Certification on PC Hardware & Networking	Ms.Neethu Maria	30 hrs	Free	III&IV CSE Dept.
2		Ms.Tinu Thomas			
3		Ms.Gayathri R Krishna			

Thanking You,


HoD/CSE



HoD/CSE


Principal

Copy to:

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3. IQAC

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Mangalam College of Engineering
Kottayam, India - 686 631

5. Network basic and configuration

- 5.1 Setting IP addresses,
- 5.2 Sharing files and folders
- 5.3 Network troubleshooting
- 5.4 PING test, ipconfig etc

6. Introduction to servers and network security

6.1 Types of servers,

- 6.1.1 Files servers,
- 6.1.2 Email Servers,
- 6.1.3 Proxy servers etc

6.2 Basics of Internet and Intranet

6.3 Types of Internet connections

- 6.3.1 Dialup, Broadband, Leased Line, Wi-Fi, Wi-Max, 2G, 3G, 4G, WWW, E-mails, Search Engines, Social Networking.
- 6.3.2 Cloud application
- 6.3.3 Audio-video Conferencing
- 6.3.4 Voice over Internet Protocol (VOIP).

6.4. Recovery and backup

6.5. Essential security measures



Prepared By
Ms. Neethi Maria John



Approved by

Quality Assurance Cell (QAC)
College of Engineering
Kerala - 686 631





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

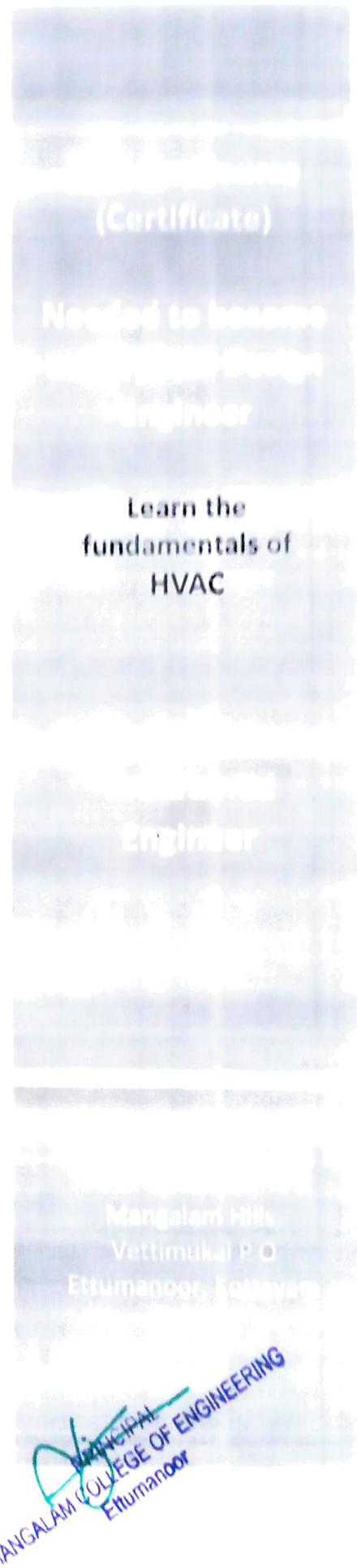
Resource Person

Mr. Haniprasad K S

APME

MANGALAM COLLEGE OF ENGINEERING

Date: 14/10/2017 to 16/12/2017





MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING

Course on Heat Ventilation & Air Conditioning (HVAC)

Syllabus

Course Code: MEAC17HVAC		Course on HVAC	
Pre-requisite: NIL		L	T
Module	Topics	L	
1	Introduction to HVAC, Fundamental of Heat Transfer, Fundamentals of 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 Dining, 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	
= Mode: Flipped Class Room [Lecture to be videotaped], Industrial visit to see different types of equipments, Lectures by Experts from Industry (two or more sessions)			

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MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING

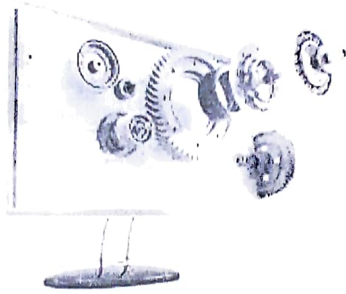
Department of Mechanical Engineering

1.	Academic Year	: 2017-18
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	: 14.10.2017 - 16.12.2017 (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

Pravin M
MANGALAM COLLEGE OF ENGINEERING
Ettimadai

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. Sammon Korah

APME

MANGALAM COLLEGE OF ENGINEERING

Date: 18/11/2017 to 28/11/2017



SYLLABUS (Add-on Course)

Subject Name: Foundation in Mechanical CAD

Subject Code: SCADM0075

Total hours: 30

MODULE 1: (8 hours)

Engineering Graphics – Industrial Overview, Codes & Standards, Projection, Industrial projects, AutoCAD Interface Line, Circle, Trim, Inquiry-Distance, Rectangle, Copy, Move, Rotate, Poly line, Mirror, polygon, Stretch, Fillet, Chamfer, Ellipse arc, Region Array, Splines, Practice sessions

MODULE 2: (12 hours)


Single Line Text, Multiline Text, Explode, Hatch & Gradient, Drafting settings, Properties Tool Bar, Block (Make Block, Insert Block), Dimension style, Table Style, Isometric Drawings, Company Layout Designing, Drawings in Layer-International projects, Properties, Multi leader style

MODULE 3: (10 hours)

Design centre, Attribute, Inquiry – Area, Distance etc, Quick select, Filter, Draw order, Multi line style, Multi Line, Drawing Limits, Raster Image Reference, Hyper link, External References, Model-Title Block, Lay out, Scaling, Scale List, View port, Plot Style manager



IQAC



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Kottayam, India - 686 631





MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING

Department of Mechanical Engineering

1.	Academic Year	: 2017-18
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	: SI & S2 Students
7.	Date and Duration of the Course	: 19.11.2017 to 28.11.2018(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. Sammon Korah 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


COURSE COORDINATOR


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HOD

Date: 04-01-2018

Minutes of Meeting

All the faculty members of ECE, IQAC coordinator and Placement officer were present in the meeting conducted on 04-01-2018 at Department Library to finalize the Certificate course to be offered for the current academic year to bridge the gap identified in the Curriculum.

After analyzing the feedback received from various stakeholders like students, faculty, Alumni and Employers, the gap in the Curriculum prescribed by KTU is identified. Further the discussion is held on selection of Certificate course on par with the Standards of premier institutes and Industry expectations. Finalized the following Certificate course and guest lectures for the Academic Year 2017-18.

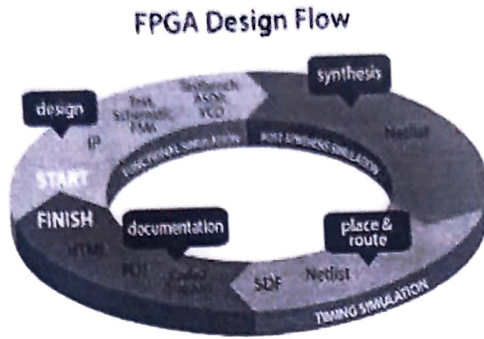
Details of Certificate course:

S. No	Name of Certificate Course	Year/ Semester	Total No of Hours	Date of Commencement	Faculty Coordinator
1	HDL Design	S4, S6 & S8	30	08-01-2018	Prof Jyothisree K R Assoc.Prof/ECE
2	2D to 3D IC-change in trends in semiconductor IC design	S4, S6 & S8	30	21-03-2018	Prof Simi P Thomas, Ap/ECE

The faculty members will be initiated at the earliest to design the curriculum for the specified Certificate course after getting approval from the Principal.


HoD - ECE


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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: 08-01-2018 to 12-01-2018



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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 (5 Days)


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MANGALAM COLLEGE OF ENGINEERING

Department of Electronics and Communication Engineering

1.	Academic Year	: 2017-18
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	: S8, S6 , S4 Students
7.	Date and Duration of the Course	: 08-01-2018 to 12-01-2018
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 /offline ✓

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(4 HRS) VHDL's history. Benefits of VHDL. Concepts of VHDL. Entity and Architecture. Behavioral, data flow and structural specifications. Mixed structural-behavioral models. Syntax of VHDL.	4
2	Module:-2 - VHDL(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 (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. Comparison of sequential and parallel blocks. Basic compiler directives. Behavioral modeling.	6
Section 2		
10	Module:-4 Verilog (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. Gate:truth tables. Gate,delays. Specify block. UDP. Ports. Port connection rules: by order and name.	6
11	Module:-5 Verilog (8 HRS)	8

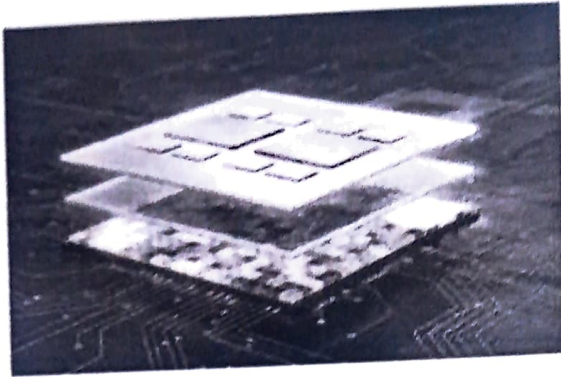
Switch level modeling. Primitives. Use of tri-reg. Test-bench creation. Initial block. Delay-based timing control. System tasks. Monitoring a simulation. Looping constructs: while loop, for loop, repeat, forever loop. VCS simulation examples. VCD file fragment. Tasks and functions. Differences between tasks and functions.	
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: 21-03-2018 to 25-03-2018



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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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	: 2017-18
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,S6,S4 Students
7.	Date and Duration of the Course	: 21-03-2018 to 25-03-2018
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	: At ECE Department

COURSE COORDINATOR

HOD/ECE

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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 Multi-Partitioning	4
5	VLSI Non Slicing Floor planning	4
6	VLSI Placement	4
7	VLSI Routing	4
8	Timing Analysis	4
Section 2		
10	Example's	4
Total Hours		=30

➤ Recommended Text Books:

1. Todri-Saniai, 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: 12/08/2017
(30 hour course)
(certificate)

Organized by : Department Of Electrical
And Electronics Engineering

Speaker: Liya Aliyas

(Assistant Profressor
Department of Electrical And
Electronics Engineering)

Principal
Department of Electrical
Engineering




MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING


Department of Electrical and Electronics Engineering

1.	Academic Year	: 2017-2018
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	: S5 Students
6.	Date and Duration of the Course	: 12.08.2017 to 14.10.2017 (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 Aliyas, 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 S5 Class room


COURSE COORDINATOR


HOD/EEE


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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 softwaare.

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 Inverter with PWM control	1
15	Single Phase series inverter with R and RL loads	1
10	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.



MANGALAM COLLEGE OF ENGINEERING
Mangalam Hills, Vettimukal p.o
Ettumanoor, Kottayam 686631

E-CAD

DATE: 12/08/2017

(certificate)

(30 hour course)

Organized by : Department Of Electrical
And Electronics Engineering

Speaker: AJU THOMAS

(Assistant Professor
Department of Electrical And
Electronics Engineering)

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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	Wires <ul style="list-style-type: none">• Wire Layers• Wire Types• Insert Wire• Modify wire	3
5	Wire Numbers <ul style="list-style-type: none">• Automatic wire numbers• Wire tagging• PLC I/O wire numbers	3
6	Grouping Wires	3
7	Point To Point Wiring tools	3
8	DC Lap Winding	3
9	AC Winding	3
10	PROJECT	3
Total Hours =30		


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MANGALAM COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Department of Electrical and Electronics Engineering

1	Academic Year	2017-2018
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	12.08.2017 to 14.10.2017 (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

Aju
MOD/EEE
Head of Department
Electrical and Electronics

[Signature]
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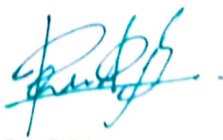
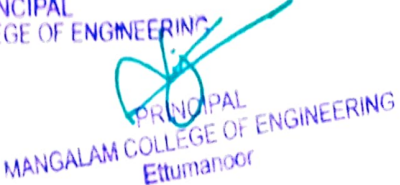
MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Department of Electrical and Electronics Engineering

1.	Academic Year	: 2017-18
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	: S3 classroom of Dept. of EEE
6.	Beneficiary	: S3 Students
7.	Date and Duration of the Course	: 12.08.2017 to 14.10.2017 (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	: 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	: Dept. of EEE S3 class room


COURSE COORDINATOR


HOD/EEE
Head of Department
Electrical and Electronics


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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 MITEX	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, beamer, slides, IEEE tran.	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 and Practical examples	3
11.	Writing equations, Matrix, Mathematical Equations and numbering methods	2
12.	Mathematical Symbols and format	2
13.	Practical on numbering and without numbering format	1
14.	Inserting References: Introduction, The BibTeX le	1
15.	Inserting the bibliography, Citing, Styles.	2
16.	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

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MANGALAM COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING


Department of Electrical and Electronics Engineering

1.	Academic Year	: 2017-18
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	: 20/01/2018 to 3/03/2018 (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
Head of Department
Electrical and Electronics


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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

S.NO.	CONTENT	INSTRUCTIONAL HOURS
Section 1		
1	Introduction to ETAP	1
2	Why to use a Power System Analysis Software	1
3	Creating New Project in ETAP	1
4	Draw Single Line Diagram	2
5	Load Flow Analysis	2
5.1	Fundamentals of Load Flow	2
5.2	Load flow calculations	2
5.2.1	Load flow examples using Gauss Seidal Method in ETAP	1
5.2.2	Load flow examples using Newton Raphson Method in ETAP	1
5.2.3	Load flow examples using Fast Decoupled 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
6.2.1	Symmetrical and Unsymmetrical Faults	4
6.2.2	Short Circuit Analysis examples demonstration using ETAP	4
Total Hours		=30

➤ Recommended Books:

1. ETAP for Electrical Engineers


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Electrical & Electronics


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Consolidated Report for the Certificate Course –Electrical CAD for Beginners

Academic Year: 2017-2018

Batch 2014-2018

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	:Mangalam College of Engineering,Ettumanoor.
No. of Participants	: 38
No. of Qualified	:38
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 - LaTeX for Beginners

Academic Year: 2017-18

Batch 2016-2020

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	: 40
No. of Qualified	: 40
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 - Proteus PCB Designing

Academic Year: 2017-2018

Batch 2015-2019

Year: III/V Semester

Name of the Activity	: Certificate Course
Title of the Activity	: Proteus PCB Designing
Staff Incharges	: Ms. LiyaAliyas, AP/EEE
Place of the Activity	: Dept. of EEE S5 classroom and CAD Lab
No. of Participants	: 18
No. of Qualified	: 18
Name & Designation of Expert	: Ms. LiyaAliyas, AP/EEE
Objective of the Activity	: This program is designed to make students capable to design their own projects PCB up to industrial grade
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 - ETAP FAMILIARISATION

Academic Year: 2017-2018

Batch 2014-2018

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	: 38
No. of Qualified	: 38
Name & Designation of Expert	: Mrs.Shoma Mani, AP/EEE
Objective of the Activity	To create understanding of the power system components and do Load flow analysis in G-S,NR and F-D methods using ETAP.To perform short circuit analysis on a small power system
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 – HDL Design

Academic Year: 2017-18

Batch S8 , S6, S4-

ECE

Year: IV , III , II

Name of the Activity	: Certificate Course
Title of the Activity	: HDL Design
Staff In charges	: Prof Jyothisree K R, Assoc,Prof,ECE
Place of the Activity	: Dept. of ECE Mangalam College of Engineering. Ettumanoor.
No. of Participants	: 45+45+73= 163
No. of Qualified	: 45+45+73=163
Name & Designation of Expert	: Mr Abraham C G, Researcher, AnnaUniversity,Chennai
Objective of the Activity	Learn the fundamentals of HDL Designs
Outcome of the Activity	Participants learned theory and practiced the development of VHDL and Verilog

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

Academic Year: 2017-18
Year: IV,III,II

Batch S8,S6,S4-ECE

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	: 45+45+73=163
No. of Qualified	: 45+45+73=163
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	: 2017-18
2.	Title of the Course	PC Hardware and Networking
3.	Objective of the Course	The main objective of the course is to provide the students with a concrete foundation in PC Hardware and Networking.
4.	Prerequisite	: Nil
5.	Requirement	: Seminar Hall
6.	Beneficiary	: S3/S5 Students
7.	Date and Duration of the Course	: 05-08-2017 to 28-8-19
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 Neethu Maria John
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	: 2017-18
2.	Title of the Course	Certification on Python
3.	Objective of the Course	The main objective of the course is to provide the students with a concrete foundation in Certification on Python.
4.	Prerequisite	: Nil
5.	Requirement	: Seminar Hall
6.	Beneficiary	: S7
7.	Date and Duration of the Course	: 07-10-2017 to 30-10-2017
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 Nimmymol Manuel
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	: CSE Seminar Hall


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Certificate Course – Foundation in Mechanical CAD

Detailed explanation about the course

Academic Year: 2017-2018

Batch 2017-2021

Year: I & II Year

Department of Mechanical Engineering organized a certificate course on **Foundation in Mechanical CAD** for the First & Second Year B. Tech students (2017-2021 Batch) from 19th November 2017 to 28th November 2017. A total of 106 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
106	106	106	106

Course Coordinator

HOD / ME



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Certificate course: Heating, ventilation and Air-conditioning

Detailed Explanation of Course

Academic Year: 2017-2018

Batch: 2014-2018

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 14.10.2017 to 16.12.2017. 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
109	109	109	109

Course Coordinator

HOD/ME

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