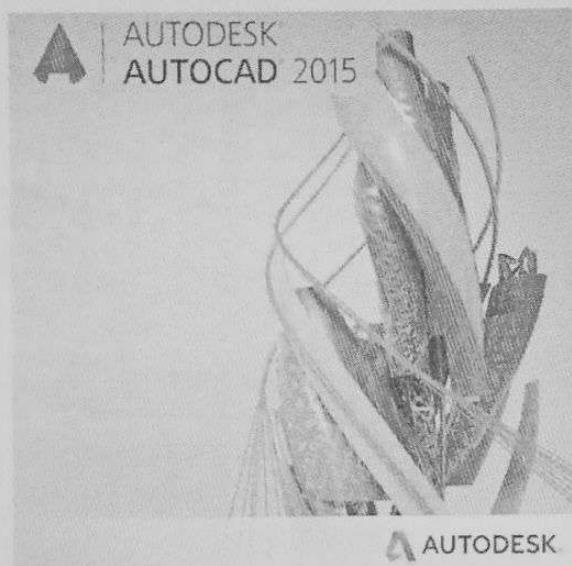




**SSM Institute of Engineering and Technology,  
Dindigul – 624 002**

## **DEPARTMENT OF CIVIL ENGINEERING**



Cad Technologies School of design Pvt. Ltd.

Technology Training

# **AUTOCAD**

*Second year (19-20)*



**SSM Institute of Engineering and Technology,  
Dindigul – 624 002**

## **DEPARTMENT OF CIVIL ENGINEERING**



Cad Technologies School of design Pvt. Ltd.

Technology Training  
**Revit Architecture**  
*Third year (19-20)*



# SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

Dindigul – Palani Highway, Dindigul 624 002

Date: 10.01.2020

## CIRCULAR

It is planned to conduct Value Added Course for II year students by Department of Civil Engineering along with CADD technologies school of design Pvt. Ltd.

S.N o	Year	Name of the Course	Period	No. of days
1.	II Year	AUTO CAD	20.01.20 to 24.01.20	5 days

Faculty In-charge

HoD/Civil



# SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

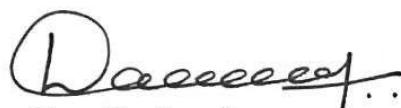
Dindigul – Palani Highway, Dindigul 624 002

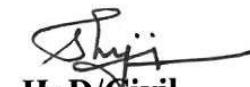
Date: 10.01.2020

## CIRCULAR

It is planned to conduct Value Added Course for IIIyear students by Department of Civil Engineering along with CADD technologies school of design Pvt. Ltd.

S.N o	Year	Name of the Course	Period	No. of days
1.	III Year	REVIT ARCHITECTURE	27.01.2020 TO 31.01.2020	5 days

  
Faculty In-charge

  
HoD/Civil

## AutoCAD

S.NO	CONTENT
1	Introduction to CAD/CAM/CAE & Introduction to AutoCAD & Design Basics
2	Units, Limits, Drafting Settings, Selection Methods
3	Modify(Erase, Move, Copy, Rotate, Trim, Extend)Draw(Polyline, rectangle, Polygon)
4	Draw(Arc, Ellipse, Spline, Point, Hatch, Region, Revision Cloud, Wipe Out, Construction Line, Ray, Donut)
5	Modify(Array, Break, Break at point, Fillet, Chamfer, Scale, Lengthen, Stretch, Explode, Join, Align)
6	Annotation(Text, Dimensions)
7	Annotation(Leaders, Table, Scaling)
8	Property Tool bar, Layer Tool bar, Draw order
9	Drafting Settings(Infer Constraint) & Parametric Constraints
10	Block & Dynamic Block
11	Isometric View, Customize Hatch
12	Layout & Plotting
13	Introduction of 3D, Views, Viewports, Orbit, Visual styles
14	Solid Creation, 3D Modify & UCS
15	Solid Editing & Material
16	Surface Creation
17	Surface Editing
18	Mesh (Creation & Editing), Section
19	Rendering Materials, Lighting
20	Motion Path Animation

Cadd Technologies School of design Private Limited  
Coimbatore

Total Hours: 50 Hrs.

Content:

- ✓ Introduction to Revit & Building Basics, BIM Concepts
- ✓ Default Template settings, User Interface, Datum
- ✓ Model- Draw, Linestyle & Modify
- ✓ Architecture - Wall types & Duplicate creations, Door, Window
- ✓ Text - Dimensions - Aligned, linear, Angular, Arc length, Radial & Diameter
- ✓ Architecture - Place a component, Column & Duplicate creations
- ✓ Floor creations, Roof Creations, Room & Area
- ✓ Opening & Circulation
- ✓ Architecture - Curtain wall, Curtain Grid and Mullion – Model text
- ✓ Work Plane, Model in Place - Extrusion, Revolve
- ✓ Create- 3D View, section, plan views, Elevation
- ✓ Quantity Take off and Cost – Schedules
- ✓ Massing & Site (Model & Modify site, Conceptual Mass & Model by face)
- ✓ Insert (Decal, Import CAD & Link Revit & CAD – Manage – Materials – Material Creations - Lighting
- ✓ Family Creations - Blend, Sweep, Sweptblend - Void Forms - Extrude, Blend, Revolve, Sweep, Sweptblend
- ✓ Rendering, Walkthrough
- ✓ Exterior Model Concept, Interior Model Concept
- ✓ Lumion Introduction and its application
- ✓ Interactive Session – 2 days



## SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

Palani Highway, Dindigul – 624 002, Tamilnadu.

Phone : 0451 – 2448800 – 99 (100 Lines)

Email : [ssmietdgl@gmail.com](mailto:ssmietdgl@gmail.com)

Fax: 0451 – 2448855

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### Computer Science And Engineering

16/11/2019

#### CIRCULAR

We would like to inform that, Computer Science And Engineering department is about to conduct ten weeks training program on “Python with Advanced Concepts” .The interested students are instructed to register their names with Ms. S. Bharathi , AP/CSE on or before 30/11/2019 with out fail. Your effective participation is appreciated..



HOD/CSE



# SSM

INSTITUTE OF ENGINEERING AND  
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APPROVED BY AICTE, NEW DELHI | AFFILIATED TO ANNA UNIVERSITY, CHENNAI  
ACCREDITED BY NAAC | ACCREDITED BY NBA (ECE, EEE, MECH UG PROGRAMS)

## TECHNOLOGY TRAINING ON PYTHON WITH ADVANCED CONCEPTS



Instructors  
**S.Bharathi**  
**M. Kiruthika**



**Hod**

Dr.V. Shanmugavel

**Principal**

Dr.D.Senthil Kumaran

From

Ms. S. Bharathi, AP/CSE  
Ms. M. Kiruthika, AP/CSE  
Department of Computer Science and Engineering,  
SSM Institute of Engineering and Technology,  
Dindigul

*II<sup>nd</sup>  
IV Sem  
15/11/19*

To

The Principal,  
SSM Institute of Engineering and Technology,  
Dindigul.

Through

The Head of the Department,  
Department of Computer Science and Engineering,  
SSM Institute of Engineering and Technology,  
Dindigul.

Respected Sir,

Sub: Requisition to conduct Value added Course to our Students at our college- Reg.

We are planning to conduct Value added Course "*Python with Advanced Concepts*" at our college during the even semester of the academic year 2019-20. The course schedule is enclosed with this letter for your reference. Hence we kindly request your permission to conduct and guide the same.

Thanking You Sir,

Date: 15.11.2019

Place: Dindigul

Yours Faithfully,

*8B/11/19  
V.Sunmughavel 15/11/19  
Ms. S. Bharathi, AP/CSE  
Ms. M. Kiruthika, AP/CSE*

*V.Sunmughavel 15/11/19*  
HoD/CSE

Dr. V. Shunmughavel

*D*  
Principal

Dr. D. Senthilkumaran

Enclosure:

1. Python with Advanced Concepts Course Schedule



# SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

Dindigul – Palani Highway, Dindigul – 624 002.

Department of Computer Science and Engineering

Academic Year 2019-2020

VALUE ADDED COURSE

## PYTHON WITH ADVANCED CONCEPTS

S.No.	Week	Topic Title	Topic Details
1.	Week 1	Introduction to Python Spyder tool	<b>Introduction Spyder</b> <ul style="list-style-type: none"><li>• Setting working Directory</li><li>• Creating and saving a script file</li><li>• File execution, clearing console, removing variables from environment, clearing environment</li><li>• Commenting script files</li><li>• Variable creation</li><li>• Arithmetic and logical operators</li><li>• Data types and associated operations</li></ul>
2.	Week 2	Python-Data Structure	<b>Data Structure</b> <ul style="list-style-type: none"><li>• Strings</li><li>• Lists</li><li>• Tuples</li><li>• Dictionary</li><li>• Sets</li></ul>
3.	Week 3	Python- Control structures Numpy Packages	<b>Control structures</b> <ul style="list-style-type: none"><li>• if-else family</li><li>• for loop</li><li>• for loop with if-break</li><li>• while loop</li></ul> <b>Numpy</b> <ul style="list-style-type: none"><li>• Array</li><li>• Matrix and associated operations</li><li>• Linear algebra and related operations</li></ul>
4.	Week 4	Pandas Library	<b>Pandas dataframe and dataframe related operations on Toyota Corolla dataset</b> <ul style="list-style-type: none"><li>• Reading files</li><li>• Exploratory data analysis</li><li>• Data preparation and preprocessing</li></ul>
5.	Week 5	Data visualization	<b>Data visualization on Toyoto Corolla dataset using matplotlib and seaborn libraries</b> <ul style="list-style-type: none"><li>• Scatter plot</li><li>• Line plot</li><li>• Bar plot</li><li>• Histogram</li><li>• Box plot</li><li>• Pair plot</li></ul>

6.	<b>Week 6</b>	<b>Python - Object Oriented</b>	<b>Python - Object Oriented</b> <ul style="list-style-type: none"> <li>• Overview of OOP Terminology</li> <li>• Creating Classes</li> <li>• Creating Instance Objects</li> <li>• Accessing Attributes</li> <li>• Destroying Objects (Garbage Collection)</li> </ul>
7.	<b>Week 7</b>	<b>Python - Object Oriented</b>	<b>Python - Object Oriented</b> <ul style="list-style-type: none"> <li>• Class Inheritance</li> <li>• Overriding Methods</li> <li>• Base Overloading Methods</li> <li>• Data Hiding</li> </ul>
8.	<b>Week 8</b>	<b>Python with Database</b>	<b>Python with Database</b> <ul style="list-style-type: none"> <li>• Create Database</li> <li>• Insert</li> <li>• Find</li> <li>• Query</li> <li>• Delete</li> <li>• Update</li> </ul>
9.	<b>Week 9</b>	<b>Python-GUI</b>	<b>Python-GUI</b> <ul style="list-style-type: none"> <li>• Button</li> <li>• Canvas</li> <li>• Checkbutton</li> <li>• Radio Button</li> <li>• Frame</li> <li>• Label</li> <li>• ListBox</li> </ul>
10.	<b>Week 10</b>	<b>Python-GUI</b>	<b>Python-GUI</b> <ul style="list-style-type: none"> <li>• Menu</li> <li>• Menu Button</li> <li>• Message</li> <li>• Scale</li> <li>• Scroll Bar</li> <li>• Text</li> <li>• Panel Window</li> <li>• Label Frame</li> <li>• Message Box</li> </ul>

8B1-Ay 15/11/19

M. Kiruthika  
15/11/19.

**Faculty Incharge**

Ms.S. Bharathi, AP/CSE  
Ms. M. Kiruthika,AP/CSE

V. Shunmughavel  
15/11/19.  
HoD/CSE

  
**Principal**

Dr.V.Shunmughavel

Dr.D.Senthilkumaran



## SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

Palani Highway, Dindigul – 624 002, Tamilnadu.

Phone : 0451 – 2448800 – 99 (100 Lines)

Email : [ssmietdgl@gmail.com](mailto:ssmietdgl@gmail.com)

Fax: 0451 – 2448855

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### Computer Science And Engineering

12/11/2019

#### CIRCULAR

We would like to inform that, Computer Science And Engineering department is about to conduct seven days training program on “Automated Software Testing using Selenium Web Driver” .The interested students are instructed to register their names with Dr. V. Eswaramoorthy , ASP/CSE on or before 31/12/2019 with out fail. Your effective participation is appreciated..

*V.H.S*  
HOD/CSE



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ACCREDITED BY NAAC | ACCREDITED BY NBA (ECE, EEE, MECH UG PROGRAMS)

# ONE WEEK TECHNOLOGY TRAINING

on

**Automated software Testing  
using Selenium Web Driver**

Instructor

Dr. V. Eswaramoorthy ASP/CSE

Head of the Department  
Dr.v shanmugavel

Principal  
Dr.D.Senthil kumaran

## **SYLLABUS**

### **AUTOMATED SOFTWARE TESTING USING SELENIUM WEB DRIVER**

#### **Objective:**

The learner will able to

- Know different type of applications and testing, along with the purpose of automation testing.
- Gain insight into the evolution of Selenium
- Get an overview of Selenium 2.5.3 and its components.
- Compare commonly used automation tool with Selenium automation tools.
- Set up their own environment so that they can start working with Selenium.

#### **Pre-requisites for taking up the course**

- Basic understanding of manual QA Process
- Any programming language experience is desired (JAVA will be preferred)
- Any development integrated environment (IDE) (Eclipse latest version preferred)

#### **Software Requirements:**

- Java – jdk1.8 and above
- Eclipse 4.8.0
- Selenium jar 2.5.3
- Browser – Google Chrome, Mozilla Firefox 47.0.1
- Gecko Driver 0.21.0

#### **Topics:**

##### **Introduction to Software Engineering**

**Hours: 5**

Brief introduction to software systems and SDLC – SDLC Models, Pros and Cons: Waterfall Model, Iterative Model, Spiral Model, Prototyping Model, RAD Model, V model.

##### **Testing and know the different types of Testing**

**Hours: 7**

STLC-Different Kinds of testing -Test Planning-Test documentation-Test Environment set up-Test data-Test cases-Entire Flow/Test Execution-Test Reporting – Metrics –Defects-Traceability Matrix-UAT-Change Management and other miscellaneous topics.

##### **Introduction to Automated Testing**

**Hours: 5**

Automation Testing Basics - An overview for the major functional testing tools - Overview of Test management and bug tracking tools -Introduction to Selenium Automation Testing

##### **Selenium Web Driver**

**Hours: 3**

Download & Install Selenium Web Driver with Eclipse - First Selenium Web driver Script: JAVA Code Example

## **Locators in Selenium**

**Hours: 20**

Locator Types: ID, ClassName, Name, Link Text, Xpath - Find Element and FindElements in Selenium WebDriver - Selenium Form WebElement: TextBox, Submit Button, sendkeys(), click() - Select CheckBox and Radio Button in Selenium WebDriver - Click on Image in Selenium Webdriver - Select Value from DropDownList using Selenium Webdriver - Locate Elements by Link Text & Partial Link Text in Selenium Webdriver - Mouse Click & Keyboard Event: Action Class in Selenium Webdriver - Upload & Download a File using Selenium Webdriver - XPath in Selenium WebDriver - Alert & Popup Window Handling in Selenium WebDriver - How to Handle Web Table in Selenium WebDriver - Handling Dynamic Web Tables Using Selenium WebDriver - Desired Capabilities in Selenium WebDriver - How to Verify Tooltip using Selenium WebDriver - Gecko (Marionette) Driver Selenium: Download, Install, Use with Firefox

## **Exercises**

**Hours: 20**

1. Searching for a Product
2. Registering a new User account
3. Login to the User account
4. Logout from the Application
5. Forgot Password Scenario
6. Adding Items to Cart
7. Purchasing an item by placing an order as a guest user
8. Purchasing an item by placing an order as a registered user
9. And many more

**TOTAL HOURS: 60**



# SSM Institute of Engineering and Technology

Sindalagundu post, Dindigul-624-002, Tamilnadu pH: 0451-2448800  
(Approved by AICTE, Affiliated to Anna University, Chennai Accredited by NAAC)

## Department of Electrical and Electronics Engineering

Organizes

**Six days Technology Training Program on**

**◆ PCB Design and Fabrication ◆**

**For the IV year students of EEE**

---

**from(02.12.2019 to 07.12.2019)**

---

**Trained by**

**Er.S.P.Sarathy Retired employee from Schneider Electric System India Pvt, Ltd, Chennai**

**Co-ordinators**

Mr.G.Satheeshkumar,AP/EEE

**HoD**

Dr.V.Vijaykumar

**Principal**

Dr.D.Senthilkumaran

**ALL ARE INVITED**



**SSM Institute of Engineering and Technology, Dindigul-02.**

**Department of Electrical and Electronics Engineering**

**CIRCULAR**

**03.10.2019**

This is to inform that value added program on **PCB Design and Fabrication** is going to be conducted for IV year EEE students from 02.12.2019 to 07.12.2019 by Er.S.P.Sarathy Retired Employee from Schneider Electric System India Pvt. Ltd, Chennai. Henceforth interested students are informed to register their name to Mr.G.Satheesh Kumar, AP/EE on or before 24.10.2019.

~~Faculty Incharge~~

A handwritten signature in black ink, appearing to read 'Dr. Vijay'. It is written in a cursive style with some loops and variations in thickness.

*Dr. Vijay*  
HoD/EEE

## PCB DESIGN AND FABRICATION

### Syllabus

#### Module I: (9 Hrs)

Introduction to Printed circuit board: fundamental of electronic components, basic electronic circuits, Basics of printed circuit board designing: Layout planning, general rules and parameters, ground conductor considerations, thermal issues, check and inspection of artwork.

#### Module II: (6 hrs)

Design rules for PCB: Design rules for Digital circuit PCBs, Analog circuit PCBs, high frequency and fast pulse applications, Power electronic applications, Microwave applications

#### Module III: (10 hrs)

Introduction to Electronic design automation(EDA) tools for PCB designing: Brief Introduction of various simulators, SPICE and PSPICE Environment, Selecting the Components Footprints as per design, Making New Footprints, Assigning Footprint to components, Net listing, PCB Layout Designing, Auto routing and manual routing, Assigning specific text (silkscreen) to design, Creating report of design, creating manufacturing data (GERBER) for design.

#### Module IV: (7 hrs)

Introduction printed circuit board production techniques: Photo printing, film- master production, reprographic camera, basic process for double sided PCBs photo resists, Screen printing process, plating, relative performance and quality control, Etching machines, Solders alloys, fluxes, soldering techniques, Mechanical operations.

#### Module V: (6 hrs)

PCB Technology Trends: Multilayer PCBs, Multiwire PCB, Flexible PCBs, Surface mount PCBs, Reflow soldering, Introduction to High-Density Interconnection (HDI) Technology.

#### Module VI: (7 hrs)

PCB design for EMI/EMC: Subsystem/PCB Placement in an enclosure, Filtering circuit placement, decoupling and bypassing, Electronic discharge protection, Electronic waste; Printed circuit boards Recycling techniques, Introduction to Integrated Circuit Packaging and footprints, NEMA and IPC standards.

#### Text Books:

1. Printed circuit board design, fabrication assembly and testing By R. S. Khandpur, Tata McGraw Hill 2006

#### Reference Books:

1. Printed circuit Board Design and technology, Walter C. Bosshart
2. Printed Circuits Handbook, Sixth Edition, by Clyde F. Coombs, Jr, Happy T. Holden, Publisher: McGraw-Hill Education Year: 2016



## SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

Dindigul – Palani Highway, Dindigul – 624 002.

Email:[ssmietdgl@gmail.com](mailto:ssmietdgl@gmail.com) , Website: [www.ssmiet.ac.in](http://www.ssmiet.ac.in)

### DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

#### CIRCULAR

23.12.2019

The Department of ECE has planned to conduct the value-added course for II & III ECE is scheduled to be conducted on 04.01.2020 onwards. The main objective of this course is establishing basic hardware and programming knowledge about the advanced technology in electronics and communication. Henceforth, students of second and third year ECE students are requested to attend this course and get benefitted. There is no registration fee.

A handwritten signature consisting of stylized numbers and letters, appearing to read 'Coordinator / VAC'.

Coordinator / VAC

Dr.K.Vinoth Kumar

A handwritten signature of 'S. Karthigai Lakshmi'.

HoD/ECE

Dr.S.Karthigai Lakshmi

A handwritten signature of 'Dr.D.Senthil Kumaran'.

Principal

Dr.D.Senthil Kumaran

**SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY,DINDIGUL**

**DEPARTMENT OF ECE**

**CIRCULAR**

**Date: 07.09.19**

This is kindly to inform that a Value added course on "Quantum dot Cellular Automata in Nanotechnology" for Final Year students has been arranged for their project work.

**Schedule:**

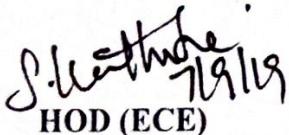
<b>Class 1</b>	<b>29.06.2019</b>
<b>Class 2</b>	<b>06.07.2019</b>
<b>Class 3</b>	<b>31.08.2019</b>
<b>Class 4</b>	<b>07.08.2019</b>
<b>Class 5</b>	<b>21.08.2019</b>

**Faculty Incharge**

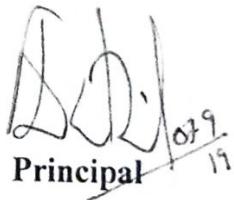
1.Dr.S.Karthigai Lakshmi, Prof/ECE

2. M.Jeyalakshmi,AP/ECE



  
HOD (ECE)

**Dr.S. KARTHIGAI LAKSHMI**  
Professor & Head  
Department of ECE  
SSM Institute of Engg & Tech  
Tirupur - 624 002

  
Principal

**D.D.GENTIL ROMA, M.Tech, Ph.D**  
Principal  
SSM Institute of Engineering and Technology  
Kuthirupatti Village, Sankagundu P.O,  
Palani Road, Dindigul 624 002



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Dindigul – Palani Highway, Dindigul-624 002

**Value added Course on “QCA in Nanotechnology”**

**Date :29.06.2019 to 21.08.2019**

**Syllabus content**

1. Introduction to Nanotechnology
2. Introduction to Quantum dot Cellular Automata
3. QCA Cells
4. QCA Logic gates
5. QCA Crossovers
6. QCA clock zones
7. Introduction to QCA software Version 2.0.3
8. Design of digital logic circuits using QCA software



## **SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY**

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Dindigul – Palani Highway, Dindigul-624 002

### **Value added Course on“VLSI design Tools-Verilog and VHDL”**

**Date :11.01.2020 to 28.03.2020**

#### **Syllabus content**

1. Introduction to VLSI
2. Introduction to Chip Fabrication
3. About VLSI Design flow
4. VLSI Tool –Verilog Introduction
5. Logical Operators and syntax in Verilog
6. VHDL Introduction
7. Hands on Verilog coding
8. Design of digital logic circuits using Verilog and VHDL



# SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

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Dindigul – 624 002

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### Syllabus

#### C Programming Fundamentals

- Data Types ,Variables
- Operations
- Expressions and Statements
- Conditional Statements
- Functions and pointers
- Array and its types
- Structure and union
- Storage classes
- Enum
- File Handling
- Preprocessor Directives.
- Strings
- Programs related to this topics

## VAC on “Embedded Programming”

### THEORY

The LPC2148 microcontrollers are based on a 32/16 bit ARM7TDMI-S CPU with real time Emulation and embedded trace support, that combines the microcontroller with embedded high speed flash memory ranging from 32 kB to 512 kB. A 128-bit wide memory interface and unique accelerator architecture enable 32-bit code execution at the maximum clock rate. For critical code size applications, the alternative 16-bit Thumb mode reduces code by more than 30 % with minimal performance penalty. Due to their tiny size and low power consumption, LPC2148 are ideal for applications where miniaturization is a key requirement, such as access control and point-of-sale. A blend of serial communications interfaces ranging from a USB 2.0 Full Speed device, multiple UARTS, SPI, SSP to I2Cs and on-chip SRAM of 8 kB up to 40 kB, make these devices very well suited for communication gateways and protocol converters, soft modems, voice recognition and low end imaging, providing both large buffer size and high processing power. Various 32-bit timers, single or dual 10-bit ADC(s), 10-bit DAC, PWM channels and 45 fast GPIO lines with up to nine edge or level sensitive external interrupt pins make these microcontrollers particularly suitable for industrial control and medical systems.

### FEATURES

- 16/32-bit ARM7TDMI-S microcontroller in a tiny LQFP64 package.
- 8 to 40 kB of on-chip static RAM and 32 to 512 kB of on-chip flash program memory.
- 128 bit wide interface/accelerator enables high speed 60 MHz operation.
- In-System/In-Application Programming (ISP/IAP) via on-chip boot-loader software.
- Single flash sector or full chip erase in 400 ms and programming of 256 bytes in 1 ms.
- Embedded ICE RT and Embedded Trace interfaces offer real-time debugging with the on-chip Real Monitor software and high speed tracing of instruction execution.

### PROCEDURE ( keil- $\mu$ -vision 4 )

1. Desktop → open keil- $\mu$ -vision 4 software.
2. Go to file → select New.
3. Go to project → select New  $\mu$  vision project → Create a new folder in computer (Local

disk D/E) → open the folder → Save a file with folder name.

4. From database → Go to NXP → Select LPC 2148 → Ok → Add file → Ok.

5. Go to target option → Right click source group1 → select add files to group' Source group1  
→ Give your folderName.c → Add → Close.

6. Type the program → File → Save as → Filename.c → Save.

7. Build the program → Rebuild.

8. Go to target options → click output → Enable create HEX file → Ok.

9. Switch ON he kit → Press reset button to load the new program.

10. Desktop → open flash magic.

11. **Step(i)** Select LPC 2148 → select Comport → Set baudrate as 9600 → interface None  
→ Set oscillator frequency as 12 MHz.

**Step (ii)** Enable erase all flash-code.

**Step (iii)** Go to browse and select HEX file.

**Step (iv)** Select verify after programming.

**Step (v)** Click start → Now the program is downloaded to kit.

12. Release reset button → View the output.



# SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

Dindigul-Palani Highway, Dindigul – 624 002, Tamilnadu

Tel. No:0451-2448800-899 (100 lines) Fax : 0451-2448855

E-mail : [ssmietdgl@gmail.com](mailto:ssmietdgl@gmail.com)

## DEPARTMENT OF MECHANICAL ENGINEERING

16.12.2019

### Submitted To Principal

Respected sir,

Sub: Requesting to conduct Value Added Course on “Hands on Training on Heat transfer Equipment” for third year Mechanical Students

I am writing to request your approval and support for the organization and execution of a value-added course titled "Hands-on Training on Heat Transfer Equipment."

As we are all aware, theoretical knowledge is essential, but practical application of concepts is equally crucial for a comprehensive understanding of any subject. Recognizing the significance of practical exposure, our department intends to conduct a specialized course that focuses on hands-on training in the field of heat transfer.

Thanking you

A handwritten signature in blue ink, appearing to read 'MURUGAN'.

Faculty Incharge

A handwritten signature in blue ink, appearing to read 'H.G.'.

HoD/Mech.Engg

A handwritten signature in blue ink, appearing to read 'S. S.'.

Principal



# SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, Affiliated to Anna University, Accredited by NAAC)

Dindigul – Palani Highway, Dindigul-624 002.

## Department of Mechanical Engineering

### Value added course On Heat Transfer Equipments Schedule

Week	Hour	Topic	Input Method
<b>I</b>	5,6	Introduction to Heat Transfer Equipments	Theory
	7,8	Introduction to Heat Transfer Equipments	Visit to Thermal Lab I and Thermal Lab II
<b>II</b>	5,6	Boiler Trial Experiments	Boiler Theory and Simulation of working of different types of Boilers
	7,8	Boiler Trial Experiments	Boiler Trial Experiments in Thermal Lab I
<b>III</b>	5,6	Cooling Towers	Cooling tower Theory and Working Simulation of different types of Cooling towers
	7,8	Cooling Towers experiment	Cooling Towers Experiments in Thermal Lab II
<b>IV</b>	5,6	Heat exchangers	Heat Exchangers Theory and Different types of Heat exchangers
	7,8	Heat exchangers Experiment	Visit to Thermal Lab II and conducting heat exchanger Experiment
<b>V</b>	5,6,	Application of Heat Transfer Equipments	Fins & Radiators Used in Ford Car
	7,8	Application of Heat Transfer Equipments	Refrigeration and Air conditioning Equipments
<b>VI</b>	5,6,7,8	Industrial Visit	Industrial Visit to SSM Mills for boiler, Milk Chilling plant (Heat Exchangers and Cooling tower)
<b>VII</b>	5,6,7,8	Guest Lecture	Guest Lecture From Reputed Industrial Persons and Students Feedback
<b>VIII</b>	5,6,7,8	Online Quiz	Online Quiz in Heat Transfer Equipments

**Faculty Incharge**

**HoD/Mech.Engg**

**Principal**

# **Hands on Training on ‘Heat Transfer Equipments’**

**Course Material Book**

**Academic Year (2019-2020) Even Semester**



**Department of Mechanical Engineering**

**SSM INSTITUTE OF ENGINEERING & TECHNOLOGY**

**Course Coordinators :**

- 1.Dr.M.Muthukannan.
- 2.Mr.S.Srinivasan.

# **SYLLABUS**

## **Chapter – I Introduction**

Heat Transfer Modes. Introduction of Heat transfer Equipments – Boiler – Heat Exchanger – Cooling Tower.

## **Chapter – II Boilers**

Types and comparison. Mountings and Accessories.  
Performance calculations, Boiler trial.

## **Chapter – III Cooling Tower**

Types and comparison. Mountings and Accessories. Heat transfer methods.

## **Chapter – IV Heat Exchanger**

Heat Exchanger Types - Overall Heat Transfer Coefficient – Fouling Factors - Analysis – LMTD method - NTU method.

## **Chapter – V Applications of Heat Transfer Equipments.**

Thermal Power Plant – Milk Chilling Plant – Refrigerator – Air conditioner.