# List of Value Added Courses offered during the Academic Year 2017 - 18

| PROGRAMME NAME | VALUE ADDED COURSE |
|---|---|
| B.E. / Mechanical Engineering | 3D Printing |
| | Autodesk Fusion 360 (Auto-CAD) |
| M.E. / CAD / CAM | NX Nastran |
| B.E. / Computer Science and Engineering | IOT using Arduino |
| | Mobile Application Development using iOS |
| M.E. / Computer Science and Engineering | MATLAB |
| B.E. / Electronics and Communication Engineering | Programming in C |
| | Programming in C++ |
| | Java Programming |
| M.E. / Communication Systems | Java Programming |
| B.E. / Electrical and Electronics Engineering | Domestic and Industrial Wiring |
| | PCB Fabrication |
| | Hands on Training on PLC and SCADA |
| M.E. / Power Electronics and Drives | Embedded system |
| B.Tech. / Information Technology | Python and GIMP |
| B.E. / Civil Engineering | Total Station |
| | Revit Architecture |
| M.E. / Structural Engineering | PRIMAVERA |
| B.E. / Agriculture Engineering | Design of Millets Processing Equipment |
| B.E. / Biomedical Engineering | PCB Design |

## CHIEF PATRON

**Mr. S. MOHAMED JALEEL**

Chairman

## PATRONS

**Mr. S. M. SEENI MOHAIDEEN**

Chief Executive Officer

**Mr. S. M. SEENI MOHAMED ALIAR MARAIKKAYAR**

Joint Chief Executive Officer

**Dr. A. SENTHIL KUMAR**

Principal

## CONVENOR

**Dr. G. D. SIVAKUMAR**

Vice Principal & HOD / Mechanical

## CO ORDINATORS

Dr. K. VINAYAGAR

Dr. G. NAGARAJ

Mr. S. PARAMASAMY

T. GANGAHARAN

## ABOUT THE PROGRAMME

This course will help you understand how 3D printing is being applied across a number of domains, including design, manufacturing, and retailing. It will also demonstrate the special capabilities of 3D printing such as customization, self-assembly, and the ability to print complex objects.

## COURSE CONTENT

The programme covers the following important topics

- A New Way of Making 3D modeling
- On-Demand Manufacturing
- Development and Education
- From Ideas to Objects

## REGISTRATION

- Total number of participants is limited only.
- Participants will be selected on first comes first serve basis only.

## IMPORTANT DATES:

Last date for Registration: 02.12.2017

## COMMUNICATION

Coordinators

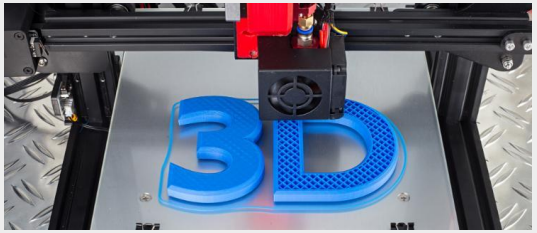
Department of Mechanical Engineering

**Mobile: 9384391615, 8072015019**

# Value Added Course

on

# 3D PRINTING




**04.12.2017 to 08.12.2017**

**11.12.2017 to 15.12.2017**

**18.12.2017 to 22.12.2017**

**26.12.2017 to 30.12.2017**

## DEPARTMENT OF MECHANICAL ENGINEERING

*(Approved Research Centre by Anna University, Chennai)*

**SETHU INSTITUTE OF TECHNOLOGY**

**15VME01 3D PRINTING**

**OBJECTIVES :**

- To know the fundamental and advanced knowledge of the manufacturing technology and their applications.

**UNIT I INTRODUCTION**

Introduction of 3D Printing, Evolution of 3D Printing, Additive manufacturing, General Overview – Need - Development of Additive Manufacturing Technology - Three dimensional Printing (3DP): Principle- Basic process-Physics of 3DP- types of printing- process capabilities- material system.

**UNIT II 3D PRINTING**

A New Way of Making 3D modeling - On-Demand Manufacturing - Development and Education - From Ideas to Objects - Solid Liquid based and powder based 3DP systems- strength and weakness.

General procedure of 3D Printing, 3D CAD file formats, Stereo lithography (stl) files, Various Printing technologies.

**UNIT III APPLICATION**

3D Printing and Additive Manufacturing Methods - Applications and case studies-Ballastic Particle Manufacturing (BPM)-Introduction to 4D Printing technology. DM in detail, Operating Plasto 200 - Live demonstration, STL principles, Object placement, Object analysis, Slicing and printing, Print settings

**TOTAL : 30 PERIODS**

**COURSE OUTCOMES:**

After successful completion of this course the students will be able to:

1. Demonstrate knowledge of key historical factors that have shaped manufacturing over the centuries Explain current and emerging 3D printing applications in a variety of industries
2. Design and print various given objects.

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Joint Chief Executive Officer

**Dr. A. SENTHIL KUMAR**

Principal

## CONVENOR

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Vice Principal & HOD / Mechanical

## CO ORDINATORS

**Dr. C. KAILASANATHAN**

**Dr. C. MUTHUSAMY**

**Dr. K. VINAYAGAR**

**Dr. G. NAGARAJ**

**Mr. S. PARAMASAMY**

## ABOUT THE PROGRAMME

The manufacturing industry is making a digital transformation, allowing companies to customize production through advances in machine learning, sustainable design, generative design, and collaboration, with integrated design and manufacturing processes. This course introduces innovations in CAD and digital manufacturing, speaking to the rapid changes taking place that are forever transforming the future of making.

## COURSE CONTENT

The programme covers the following important aspects of CFD concepts

- Fusion 360 fundamentals
- 3D modeling
- Assemblies
- Manufacturing - Milling, Turning and Inspection
- Fusion 360 extensions
- Generative design

## REGISTRATION

- Total number of participants is limited only.
- Participants will be selected on first comes first serve basis only.

## IMPORTANT DATES:

Last date for Registration: 10.12.2017

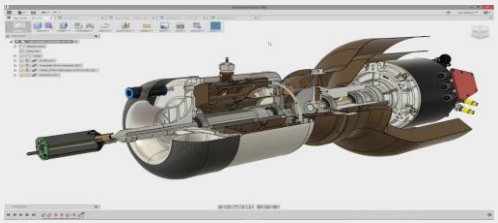
## COMMUNICATION

Coordinators
Department of Mechanical Engineering
**Mobile: 9384391615, 8072015019**

# Value Added Course

on

# AUTODESK FUSION 360



**11.12.2017 to 15.12.2017**

**18.12.2017 to 22.12.2017**

**26.12.2017 to 30.12.2017**

**02.01.2018 to 06.01.2018**

## DEPARTMENT OF MECHANICAL ENGINEERING

*(Approved Research Centre by Anna University, Chennai)*

**15VME03 AUTODESK FUSSION 360**

**OBJECTIVES :**

- To learn fundamental skills and knowledge to create design in the Autodesk Fusion software.
- To Create sketches, 3D models and assemblies.

**UNIT I INTRODUCTION**

Introduction of Autodesk - Control of the Model - Basic Shapes - Sketch in the Fusion 360 - Extrude feature for 3D model creation - Revolve feature for 3D model creation - Constraints Application - Dimension and constraints to fully constraint the sketch.

**UNIT II AUTODESK OPERATIONS**

Trim Extend Mirror - Copy Sketch - Sketch Patterns - Extrude from sketch on the model - Offset in the sketch on the model - One sketch for multiple features - Fillet and Chamfer - Hole creation - Construct Features - Parameter Dimensions by equations - Design Modify Tools - Feature order impact to the model - Direct Modelling - various features.

**UNIT III DRAWING EXERCISES**

Drawing of a simple steel truss - sectional views of prism, pyramid, cylinder, cone, etc. - isometric projection of simple objects - Creation of 3-D models of simple objects and obtaining 2-D multi-view drawings from 3-D model.

**TOTAL : 30 PERIODS**

**COURSE OUTCOMES:**

After successful completion of this course the students will be able to:

1. Construct the 3D view of objects in Isometric projection using AutoCAD software.
2. Draw the simple steel truss , sectional view of solids like prism, pyramid, cylinder and cone using AutoCAD software.

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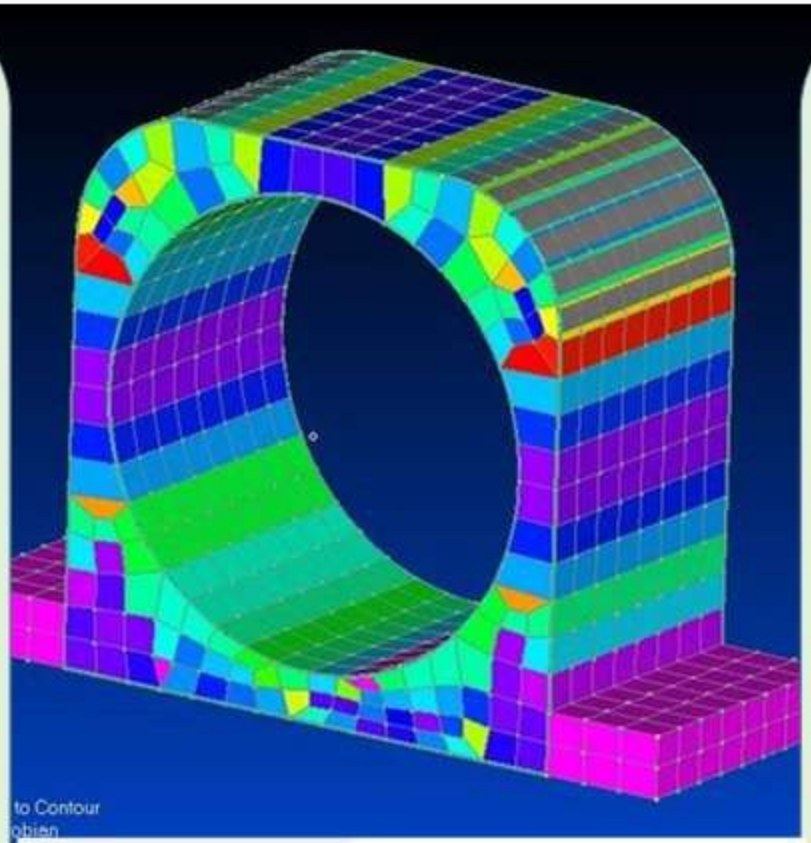
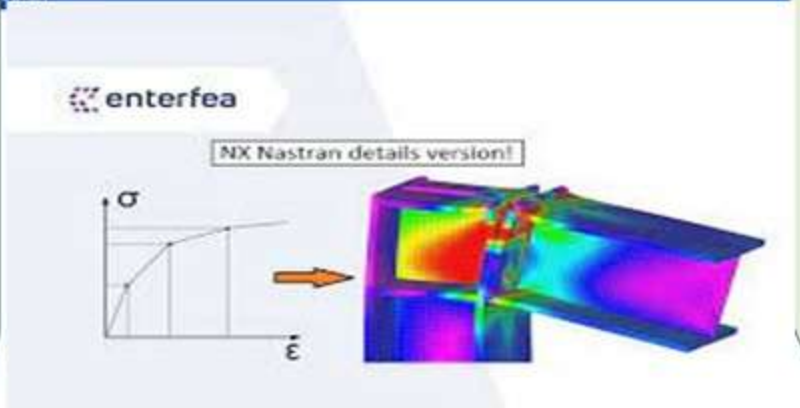
**Co- Ordinator**

**Dr. G.D. Sivakumar**




**DEPARTMENT OF MECHANICAI ENGINEERING**

**M.E CAD/CAM**

*(Approved Research Centre by Anna University, Chennai)*

# VALUE ADDED COURSE

**on**

# NX Nastran

**05.02.2018 to 09.02.2018**

# SETHU INSTITUTE OF TECHNOLOGY

**(An Autonomous Institution, Affiliated to Anna University, Chennai)**

# NX Nastron

**Total duration: 40 hours (Theory 10 Hours + Lab 30 Hours)**

| NX Nastron Total Duration : 40 Hours | |
|---|---|
| **Session** | **Topics** |
| **Day 1** | Overview of NX Nastran<br>Structure and Syntax for Input Data<br>General Input File Syntax Rules<br>Replicating Bulk Data Entries<br>Inserting External Files with INCLUDE<br>Including Comments in the Input File |
| **Day 2** | Overview of Coordinate Systems in NX Nastran<br>Understanding the Basic Coordinate System<br>Defining a Local Coordinate System<br>Understanding the Element and Material Coordinate System<br>Other Special Coordinate System Entries |
| **Day 3** | Material Properties<br>Material Properties for Linear Structural Analysis<br>Material Properties for Nonlinear Structural Analysis<br>Material Properties for Thermal Analysis<br>Material Properties for Fluids |
| **Day 4** | Overview of Load Sets<br>Defining Static Loads<br>Point Loads<br>Distributed Loads<br>Inertia Loads (Acceleration Loads)<br>Thermal Loads |
| **Day 5** | Introduction to Constraints<br>Single-point Constraints<br>Automatically Applying Single-point Constraints<br>Enforced Displacements at Grid Points (SPCD, SPC)<br>Multipoint Constraints<br>Rigid Body Supports |

## ABOUT THE INSTITUTION

Sethu Institute of Technology is one of the premier institutions in TamilNadu bloomed in 1995.The college is situated in the NH 45 B Madurai-Tuticorin National Highway, in a sprawling area of 135 acres in the outskirts of Madurai city. The college is Accredited with 'A' grade by NAAC and Five of the UG Programmes have been accredited by National Board of Accreditation (NBA), New Delhi.Our Founder Chairman Thiru..S.Mohamed Jaleel, whose sole aim is to impart Quality Technical Education with the latest state-of-art infrastructure.

Mr.S.M.Seeni Mohaideen, Chief Executive Officer and Mr.S.M.SeeniMohamedAliar Maraikkayar, Joint Chief Executive Officer are young and energetic who are being the driving forces behind the innovative ideas which have fetched numerous credits to the Management.

Our Principal and Deans are the excelling force for providing innovative technical excellence and experimentation in the minds of budding professionals.

## ABOUT THE DEPARTMENT

The Department of Computer Science and Engineering was incepted in the year 1995 with the objective of producing high caliber technocrats and eminent software professionals. The department has a team of well qualified, experienced and dedicated faculty members with industrial and research background. The Department of Computer Science and Engineering has been accredited by National Board of Accreditation (NBA), New Delhi. It has well equipped laboratories with latest computers and laptops. The Department has been approve as Research Centre by Anna University, Chennai

## DEPARTMENT VISION

To achieve excellence in technical education and scientific research in the field of computer science and engineering to contribute to the society.

## DEPARTMENT MISSION

- Transforming students into technocrats in computer technology confirming the industry expectation.
- Imparting holistic learner centric environment.
- Cultivating interpersonal traits, problem solving skills, critical and rationale thinking capabilities for the development of students leading to innovators, leaders and entrepreneurs.
- Establishing collaboration with the industries for mutual benefits .
- Promoting Research activities among the students and the faculty to solve problems related to industry and society.
- Offering computer applications life skill to society for better living.

## PROGRAMME EDUCATIONAL OBJECTIVES

- Graduates will practice as Competent Computer Engineers by exhibiting the state of the art technical skills to cater to the needs of the industries.
- Graduates will lead the team and function in a team of multi-cultural professionals with effective interpersonal skills.
- Graduates will hone their professional expertise engaging in research and sustained learning activities.

## TOPICS COVERED

- Introduction to IOT
- Arduino Simulation Environment
- Sensor & Actuators with Arduino
- IoT Protocols
- Cloud Platforms for IOT

## BENEFICIARY

II YEAR CSE Students

VALUE ADDED COURSE

ON

# Internet of Things using Arduino

**ORGANIZED BY**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**DATE :26.12.17-30.12.17**

**Convener**

Dr.C.CALLINS CHRISTIYANA

HOD-CSE


**SETHU INSTITUTE OF TECHNOLOGY**

(An Autonomous Institution | Accredited with 'A' Grade)

Pulloor, Kariapatti Taluk,

Virudhunagar District - 626 115.

Tamil Nadu.

website : www.sethu.ac.in

SETHU INSTITUTE OF TECHNOLOGY
(An Autonomous Institution)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

# Value Added Course on Internet of Things (IOT) Using Arduino

**DURATION:30 Hours**

## COURSE OUTLINE

| S.No | Modules to be Covered |
|---|---|
| 1. | Introduction to IOT |
| 2. | Arduino Simulation Environment |
| 3. | Sensor & Actuators with Arduino |
| 4. | IoT Protocols |
| 5. | Cloud Platforms for IOT |

## Detailed Course Syllabus:

### 1. Introduction to IOT

- Understanding IoT fundamentals
- IOT Architecture and protocols
- Various Platforms for IoT
- Real time Examples of IoT
- Overview of IoT components and IoT Communication Technologies
- Challenges in IOT

### 2. Arduino Simulation Environment

- Arduino Uno Architecture
- Setup the IDE, Writing Arduino Software

- Arduino Libraries
- Basics of Embedded C programming for Arduino
- Interfacing LED, push button and buzzer with Arduino
- Interfacing Arduino with LCD

**3. Sensor & Actuators with Arduino**

- Overview of Sensors working
- Analog and Digital Sensors
- Interfacing of Temperature, Humidity, Motion, Light and Gas Sensor with Arduino
- Interfacing of Actuators with Arduino.
- Interfacing of Relay Switch and Servo Motor with Arduino

**4.IoT Protocols**

- M2M vs. IOT
- Communication Protocols

**6. Cloud Platforms for IOT**

- Virtualization concepts and Cloud Architecture
- Cloud computing, benefits
- Cloud services -- SaaS, PaaS, IaaS
- Cloud providers & offerings
- Study of IOT Cloud platforms
- ThingSpeak API and MQTT
- Interfacing ESP8266 with Web services

**Course Outcome:**

- After the completion of the course, the students will be able to design some IOT based prototypes.

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- Offering computer applications life skill to society for better living.

## PROGRAMME EDUCATIONAL OBJECTIVES

- Graduates will practice as Competent Computer Engineers by exhibiting the state of the art technical skills to cater to the needs of the industries.
- Graduates will lead the team and function in a team of multi-cultural professionals with effective interpersonal skills.
- Graduates will hone their professional expertise engaging in research and sustained learning activities.

## TOPICS COVERED

- Fundamentals of Ios development environment

**Beneficiary**

III & IV YEAR CSE Students

# VALUE ADDED COURSE ON

# Mobile Application Development using iOS

**ORGANIZED BY**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**DATE**

**18.09.17 – 22.09.17**

**&**

**25.09.17 -29.09.17**

**Convener**

Dr.C.CALLINS CHRISTIYANA

HOD-CSE


**SETHU INSTITUTE OF TECHNOLOGY**

(An Autonomous Institution | Accredited with 'A' Grade)

Pulloor, Kariapatti Taluk,

Virudhunagar District - 626 115.

Tamil Nadu.

website : www.sethu.ac.in

**SETHU INSTITUTE OF TECHNOLOGY**
**(An Autonomous Institution)**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

DURATION: 30 HOURS

# VALUE ADDED COURSE ON

## Mobile Application Development using iOS

**Module 1:**

**Ios development environment**

- Introduction to ios sdk
- Whats new in ios 9
- sdk tools
  - Whats new in xcode 7
  - using xcode
  - using interface builder
  - using iphone simulator

**Swift fundamentals**

- Hello swift
- swift playground
- core data types
- string type
- tuples and optionls
- constant and variables
- statement and operators
- functions

**User interface & Table views**

- image view
- scroll view

- collection view
- Multiple view controllers
- Application and multiple views
- presenting vie controllers
- animating vie switching
- tab based applications
- Navigation based applications

**Multi touch and gestures API**

- event and touches
- gesture Recognition

**Networking, connectivity etc.**

- Making web request
- restful services
- ios Apple push notification services

**Course Outcomes:**

- Install and configure Android application development tools.
- Design and develop user Interfaces for the Android platform.
- Save state information across important operating system events.
- Apply Java programming concepts to Android application development

## ABOUT INSTITUTION

Sethu Institute of Technology is one of the premier institutions in TamilNadu bloomed in 1995.The college is situtated in the NH 45 B Madurai-Tuticorin National Highway,in a sprawling area of 135 acres in the outskirts of Madurai city. The college is an ISO 9001:2008 Certified institution and Accredited with 'A' grade by NAAC.Our Founder chairman Thiru.S.Mohamed Jaleel,whose sole aim is to impart Quality Technical Education with the latest state-of -artinfrastructure. Er.S.M.Seeni Mohaideen,Cheif Executive Officer and Er.SM.Seeni Mohamed Aliar Maraikkayar, Joint Chief Executive Officer are young and energetic who are being the driving forces behind the innovative ideas which have fetched numerous credits to the Management.
Our principal and Deans are excelling the force for providing technical excellence and experimentation in the minds of building professionals

## ABOUT THE DEPARTMENT

The Computer Science and Engineering programme enables the students to acquaint themselves with the latest developments in the field of computational technologies and also to learn innovative approaches in programming subjects.
The department offers undergraduate and postgraduate degree programmes. Undergraduate graduate programme incepted during 1995, Post graduate programme M.E. Computer Science and Engineering started at 2009. In 2011, the Department has been recognized as a Centre for Research, by Anna University and offers Ph.D. programme in collaboration with Anna University. This department recognizes the immense potential of the students and inculcates in them the habit of innovative thinking and problem solving capability. The department is also a pioneer in developing the positive attitude to instill the self-confidence in our students.

## DEPARTMENT VISION

To achieve excellence in technical education and scientific research in the field of computer science and engineering to contribute to the society.

## DEPARTMENT MISSION

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- Promoting Research activities among the students and the faculty to solve problems related to industry and society.
- Offering computer applications life skill to society for better living.

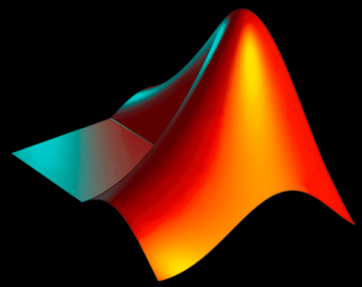
## CONVENORS

Dr.C.Callins Christiana Head/CSE

# SETHU INSTITUTE OF TECHNOLOGY

**[An Autonomous Institution| Accredited with 'A' Grade by NAAC]**
**PULLOOR, KARIAPATTI – 626 115.**

# VALUE ADDED COURSE ON MATLAB



## RESOURCE PERSON

*Dr.N.Balamurgan,*
*Associate Professor(ECE),*
*Thiagarajar College of Engineering,*
*Madurai.*

**12 June 2017 - 21 june 2017**

| 15VMECSE03 | MATLAB | |
|---|---|---|

**OBJECTIVES:**

- To familiar with the main features of the MATLAB integrated design environment and its user interfaces.

| UNIT I | OVERVIEW OF MATLAB | 10 |
|---|---|---|

Overview: Reading data from files - Saving and loading variables - Plotting data - Customizing plots Exporting graphics for use in other applications. Variables and Commands: Entering commands Creating numeric and character variables Making and annotating plots - Getting help - Creating and running live scripts - Analysis and Visualization with Vectors: Performing calculations with vectors Accessing and modifying values in vectors - Formatting and sharing live scripts

| UNIT II | ANALYSIS AND VISUALIZATION WITH MATRICES | 10 |
|---|---|---|

Creating and manipulating matrices - Performing calculations with matrices - Calculating statistics with matrix data - Visualizing matrix data. Tables of Data: Storing data as a table - Operating on tables - Extracting data from tables - Modifying tables. Conditional Data Selection: Logical operations and variables - Finding and counting - Logical indexing. Organizing Data: Combining tables of data - Table metadata - Dates and durations - Discrete categories

| UNIT III | ANALYZING DATA | 10 |
|---|---|---|

Importing from spreadsheets and delimited text files - Dealing with missing data - Plotting functions - Increasing Automation with Programming Constructs: Programming constructs - User interaction - Decision branching – Loops. Increasing Automation with Functions: Creating functions - Calling functions - Setting the MATLAB path – Debugging - Using breakpoints - Creating and using structures- Customizing plots.

**TOTAL: 30 Periods**

**COURSE OUTCOMES:**

**After the successful completion of this course, the student will be able to**

- Explain the basic features of the MATLAB(Understand)
- Use MATLAB commands to create, access and manipulating data. (Apply)
- Use Appropriate MATLAB syntax to distinguish various applications. (Apply)

## CHIEF PATRON

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Chairman

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Joint Chief Executive Officer

**Dr. A. SENTHIL KUMAR**

Principal

## CONVENOR

**Mrs. HELINA RAJINI SURESH**

HoD/ECE

## CO ORDINATORS

**Mrs.R.Devika**

**Dr.R.Karthick**

**Mrs.M.Fathu Nisha**

## ABOUT THE PROGRAMME

The objective of this programme is to enhance the knowledge of students in C Programming. Participation in this programme will be helpful to attain updated knowledge in their programming skills.

## COURSE CONTENT

The programme covers the following important aspects of Google Applications

- C Introduction
- Data Types
- Storage Classes
- Pointers& Arrays
- Structures and Union
- Programs

## REGISTRATION

- No Registration Fee
- Total number of participants is limited to hundred and fifty members only.
- Participants will be selected on first comes first serve basis only.

## IMPORTANT DATES:

Last date for Registration : 09.12.2017
Classes from 11.12.2017 to 15.12.2017

## COMMUNICATION

Coordinators
Department of ECE
**Mobile:9940389791,7598046081**

# Value Added Course

on

# Programming In C


**11th Dec 2017**


## DEPARTMENT OF ELECTRONIICS AND COMMUNICATION ENGINEERING

*(Approved Research Centre by Anna University, Chennai)*

**SETHU INSTITUTE OF TECHNOLOGY**

# PROGRAMMING IN C

## UNIT I BASICS OF C PROGRAMMING

Introduction to programming paradigms – Structure of C program – C programming: Data Types — Storage classes – Constants — Enumeration Constants – Keywords — Operators: Precedence and Associativity – Expressions – Input/Output statements, Assignment statements — Decision making statements – Switch statement – Looping statements — Pre-processor directives – Compilation process

## UNIT II ARRAYS

Introduction to Arrays: Declaration, Initialization — One dimensional array —– Two dimensional arrays — Example Program: Matrix Operations (Addition, Scaling, Determinant and Transpose) – String operations: length, compare, concatenate, copy — Selection sort, linear and binary search.

## UNIT III POINTERS

Introduction to functions: Function prototype, function definition, function call, Recursion — Example Program: Computation of Sine series, Scientific calculator using built-in functions, Binary Search using recursive functions — Pointers — Pointer operators — Pointer arithmetic — Arrays and pointers — Array of pointers — Example

## UNIT IV STRUCTURES

Structure – Nested structures — Pointer and Structures — Array of structures — Example Program using structures and pointers — Self-referential structures — Dynamic memory allocation – Singly linked list

COURSE OUTCOMES:

1. Explain the concept of a functional hierarchical code organization
2. Apply the concept of object thinking within the framework of functional model to define Arrays
3. Apply the Basic Programming Knowledge to handle possible errors during program execution.

## CHIEF PATRON

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Joint Chief Executive Officer

**Dr. A. SENTHIL KUMAR**

Principal

## CONVENOR

**Dr. A. MERLINE**

Prof. & Dean / ECE

**Dr.M.Parisa Beham**

Hod/ECE

**Dr.R.Tamilselvi**

PG-Head

## CO ORDINATORS

**Mrs.R.Devika**

**Dr.R.Karthick**

**Mrs.M.Fathu Nisha**

## ABOUT THE PROGRAMME

The objective of this programme is to enhance the knowledge of students in C++ Programming. Participation in this programme will be helpful to attain updated knowledge in their programming skills.

## COURSE CONTENT

The programme covers the following important aspects of Google Applications

- Object oriented design.
- Introduction to OOP in C++
- Classes and Objects.
- Inheritance.
- Polymorphism
- Programs

## REGISTRATION

- No Registration Fee
- Total number of participants is limited to hundred and fifty members only.
- Participants will be selected on first comes first serve basis only.

## IMPORTANT DATES:

Last date for Registration: : 09.12.2017
Classes from 11.12.2017 to 15.12.2017

## COMMUNICATION

Coordinators
Department of ECE
**Mobile:9940389791,7598046081**

# Value Added Course

on

# Programming In C++

**11th DEC 2017**


## DEPARTMENT OF ELECTRONIICS AND COMMUNICATION ENGINEERING

*(Approved Research Centre by Anna University, Chennai)*

**SETHU INSTITUTE OF TECHNOLOGY**

# PROGRAMMING IN C++

## UNIT I INTRODUCTION AND FIRST PROGRAM

First C++ Program, How C++ differs from C, Variables Declaration, Function overloading, Optional Parameters, Reference Variables, Operator overloading, Basics of Console Input and Output, Constant Pointers, Dynamic Memory Allocation

## UNIT II OOPS CONCEPTS

Overview of OOPs Principles, Introduction to classes & objects, Creation & destruction of objects, Data Members, Member Functions, the Pointer, Constructor &Destructor, Static class member, Friend class and functions, Namespace.

## UNIT III INHERITANCE & POLYMORPHISM

Introduction and benefits, Access Specifier, Base and Derived class Constructors, Types of Inheritance, Down casting and up casting, Function overriding, Virtual functions, Destructor overriding, What is Polymorphism, Pure virtual functions, Virtual Base Class- Example Problem

COURSE OUTCOMES:

- Explain the basics in C++ concepts for code reuse
- Apply the Concepts in C++ to implement inheritance and virtual functions with polymorphism.
- Design and implement generic classes with C++ templates.

**CHIEF PATRON**
**Mr. S. MOHAMED JALEEL**
**Chairman**

**PATRONS**

**Mr. S. M. SEENI MOHAIDEEN**
**Chief Executive Officer**
**Mr. S. M. SEENI MOHAMED ALIAR MARAIKKAYAR**
**Joint Chief Executive Officer**
**Dr. A. SENTHIL KUMAR**
**Principal**

**CONVENOR**
**Dr. A. MERLINE**
**Prof. & Dean / ECE**
**Mrs.J.Helina**
**Hod/ECE**

**CO ORDINATORS**
**Mrs.R.Devika**
**Dr.R.Karthick**
**Mrs.M.Fathu Nisha**

## ABOUT THE PROGRAMME

The objective of this programme is to enhance the knowledge of students in JAVA Programming. Participation in this programme will be helpful to attain updated knowledge in their programming skills.

## COURSE CONTENT

The programme covers the following important aspects of Google Applications

- Data types, variables, and arrays.
- Operators and control statements
- Java Environment and OOPs concepts.
- Classes and methods.
- String handling
- Programs

## REGISTRATION

- No Registration Fee
- Total number of participants is limited to hundred and fifty members only.
- Participants will be selected on first comes first serve basis only.

## IMPORTANT DATES:

Last date for Registration : 03.05.2018
Classes from 7.5.2018 to 11.5.2018

COMMUNICATION
Coordinators
Department of ECE
Mobile:9940389791,7598046081

SETHU INSTITUTE OF TECHNOLOGY
(AUTONOMOUS)
(Approved by AICTE, New Delhi)
(Accredited by NAAC with 'A' Grade)
Pullor -626115,Virudhunagar Dt.

Value Added Course
on
7th May 2018

**Organized by**
**DEPARTMENT OF ELECTRONIICS AND COMMUNICATION ENGINEERING**
**(Approved Research Centre by Anna University, Chennai)**

# Java Programming

# JAVA PROGRAMMING

## UNIT I OVERVIEW OF JAVA PROGRAMMING

Introduction to java, java buzzword, data types, dynamic initialization, scope and life time, operators, control statements, arrays, type conversion and casting, finals & blank finals.

Classes and Objects: Concepts, methods, constructors, usage of static, access control, this key word, garbage collection, overloading, parameter passing mechanisms, nested classes and inner classes.

Inheritance: Basic concepts, access specifiers, usage of super key word, method overriding, final methods and classes, abstract classes, dynamic method dispatch, Object class.

## UNIT II INTERFACES AND PACKAGES

Interfaces: Differences between classes and interfaces, defining an interface, implementing interface, variables in interface and extending interfaces.

Packages: Creating a Package, setting CLASSPATH, Access control protection, importing packages.

Exception Handling: Concepts of Exception handling, types of exceptions, usage of try, catch, throw, throws and finally keywords, Built-in exceptions, creating own exception sub classes.

## COURSE OUTCOMES:

1. Apply the knowledge in OOPs to Use the syntax and semantics of java programming language
2. Develop reusable programs using the concepts of inheritance, polymorphism, interfaces and packages.
3. Apply the concepts of Multithreading and Exception handling to develop efficient and error free codes.

## ABOUT THE INSTITUTION

Sethu Institute of Technology is one of the premier institutions in TamilNadu bloomed in 1995.The college is situated in the NH 45 B Madurai-Tuticorin National Highway, in a sprawling area of 135 acres in the outskirts of Madurai city. The college is an ISO 9001:2008 Certified institution and currently offers 9 UG and 5 PG Programmes. It is Accredited with 'A' grade by NAAC and Five of the UG Programmes have been accredited by National Board of Accreditation (NBA), New Delhi. Our Founder Chairman Thiru..S.Mohamed Jaleel, whose sole aim is to impart Quality Technical Education with the latest state-of-art infrastructure.

Er.S.M.Seeni Mohaideen, Chief Executive Officer and Er.S.M.SeeniMohamedAliar Maraikkayar, Joint Chief Executive Officer are young and energetic who are being the driving forces behind the innovative ideas which have fetched numerous credits to the Management.

Our Principal and Deans are the excelling force for providing innovative technical excellence and experimentation in the minds of budding professionals.

## ABOUT THE DEPARTMENT

The Department of Electrical and Electronics Engineering has been blossoming in this great institution since 1998. The department offers M.E. course in Power Electronics and Drives. The department is accredited by National Board of Accreditation (NBA), New Delhi. Our department is approved as Research Centre by Anna University, Chennai since 2011. The department is flourishing day by day by its achievement and there by bringing laurels to the institution. The department has highly dedicated, experienced, young and energetic professionals as Faculty members including 10 Doctorates. Two funded Research Projects from DRDO and DST are ongoing with the sanctioned amount of Rs. 70 Lakhs. The Department excels both in academic and research to attain the Vision.

## DEPARTMENT VISION

To achieve Excellence in Education and Research in the field of Electrical and Electronics Engineering and thereby provide knowledge based contribution for the development of economy and society.

## DEPARTMENT MISSION

- ❖ Providing comprehensive and value based engineering education to meet intellectual, ethical and career challenges
- ❖ Promoting collaboration with academia, industry and research organizations
- ❖ Providing state-of-art infrastructure and resources for teaching-learning, research and development activities
- ❖ Enriching the skills to enhance employability and entrepreneurship
- ❖ Offering services and promoting activities to serve the society and nation

## PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Core

**Core Competence** Demonstrate technical competency in electrical engineering and related fields .

**Life Long Learning** Engage in life-long learning for professional development and research

**Ethics and Communication** Exhibit effective communication skills, team work and lead their profession with ethics

## ABOUT THE COURSE

The Electrical Wiring Systems are mostly standardized with several rules, regulations and laws. Electrical Wiring must be installed correctly and safely in accordance with electrical regulations and standards. If the electrical wiring is carried out incorrectly or without confirming to any standard, then it may lead to incidents like short circuits, electric shocks, damage the device / appliance or leads to the malfunctioning of device which further causes for the reduction of device life.

Several factors have to be considered before the actual installation work to be done for residential, commercial or industrial wiring. These factors include type of building construction, type of ceiling, wall and floor construction, wiring methods, installation requirements, etc.

## OUTCOME OF THE COURSE

After Completion of the Workshop, the Participants will be able to know the concepts of domestic and industrial wiring.

## TOPICS COVERED

- Demonstrates the proper safety practices and procedures.
- Explains the proper function of tools and testing equipment.
- Rough in and wire residential rooms following the National Electrical Code.
- Installation, trouble-shoot and service Home Technology Integration Equipment

## Beneficiary:

**II YEAR EEE Students**

# HANDS ON TRAINING on DOMESTIC AND INDUSTRIAL WIRING

**Organized by**

**Department of Electrical & Electronics Engineering**

**Date: 08.08.2017 – 12.08.2017**

**Convener**

**Dr.S.Nagalakshmi , HoD/EEE**

**Co-Convener**

**Ms.S.Rohini, AP/EEE**
**Mr.S.Gopi, AP/EEE**

**EMINENT RESOURCE PERSON**

**Mr.K. Venkateeswaran, B.E.,**
**Cluster Engineer**
**Principle ACS Audits, Engg. & Services, Chennai**


**SETHU INSTITUTE OF TECHNOLOGY**
***(An Autonomous Institution)***
***Accredited with 'A' Grade by NAAC***
**Pulloor, Kariapatti Taluk,**
**Virudhunagar District -626 115.**
**Tamil Nadu.**
**website : www.sethu.ac.in**

**SETHU INSTITUTE OF TECHNOLOGY**
**(An Autonomous Institution | Accredited with 'A' Grade by NAAC)**
**PULLOOR, KARIAPATTI – 626 115**

## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

## VALUE ADDED COURSE

on

## DOMESTIC AND INDUSTRIAL WIRING

## SYLLABUS

**Duration: 30 Hrs.**

1. Demonstration & Practice on connecting common electrical accessories in circuits and testing them in series board. (5 Hrs.)
2. Demonstration on Testing & replacement of different types of fuses. (5 Hrs.)
3. Identification of different wiring materials and their specifications. (3 Hrs.)
4. Removing of insulation from assorted wires and cables. (5 Hrs.)
5. Demonstration and practice crimping thimbles/lugs of various sizes. (5 Hrs.)
6. Jointing practice with single and multi-stranded conductors of different wires and cables (7 Hrs.)

### COURSE OUTCOMES

At the end of this course, students can able to

- Demonstrate simple single phase and three phase circuit.
- Apply the practical knowledge in maintaining hand tools & usage of various Measuring instruments.
- Test Electrical wiring as per drawing.
- Identify faults, do preventive maintenance and troubleshooting electrical equipments.

## ABOUT THE INSTITUTION

Sethu Institute of Technology is one of the premier institutions in TamilNadu bloomed in 1995.The college is situated in the NH 45 B Madurai-Tuticorin National Highway, in a sprawling area of 135 acres in the outskirts of Madurai city. The college is an ISO 9001:2008 Certified institutions and currently offers 9 UG and 5 PG Programmes. It is Accredited with 'A' grade by NAAC and Five of the UG Programmes have been accredited by National Board of Accreditation (NBA), New Delhi. Our Founder Chairman Thiru..S.Mohamed Jaleel, whose sole aim is to impart Quality Technical Education with the latest state-of-art infrastructure.

Er.S.M.Seeni Mohaideen, Chief Executive Officer and Er.S.M.SeeniMohamedAliar Maraikkayar, Joint Chief Executive Officer are young and energetic who are being the driving forces behind the innovative ideas which have fetched numerous credits to the Management.

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## ABOUT THE DEPARTMENT

The Department of Electrical and Electronics Engineering has been blossoming in this great institution since 1998. The department offers M.E. course in Power Electronics and Drives. The department is accredited by National Board of Accreditation (NBA), New Delhi. Our department is approved as Research Centre by Anna University, Chennai since 2011. The department is flourishing day by day by its achievement and there by bringing laurels to the institution. The department has highly dedicated, experienced, young and energetic professionals as Faculty members including 10 Doctorates. Two funded Research Projects from DRDO and DST are ongoing with the sanctioned amount of Rs. 70 Lakhs. The Department excels both in academic and research to attain the Vision.

## DEPARTMENT VISION

To achieve Excellence in Education and Research in the field of Electrical and Electronics Engineering and thereby provide knowledge based contribution for the development of economy and society.

## DEPARTMENT MISSION

- Providing comprehensive and value based engineering education to meet intellectual, ethical and career challenges
- Promoting collaboration with academia, industry and research organizations
- Providing state-of-art infrastructure and resources for teaching-learning, research and development activities
- Enriching the skills to enhance employability and entrepreneurship
- Offering services and promoting activities to serve the society and nation

## PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

**Core Competence** Demonstrate technical competency in electrical engineering and related fields.

**Life Long Learning** Engage in life-long learning for professional development and research

**Ethics and Communication** Exhibit effective communication skills, team work and lead their profession with ethics.

## ABOUT THE COURSE

PCB designing is a computer-aided designing technology. It is used to plan and design circuit boards for electronic circuits designed to deliver a specific output or outputs. PCB designing is done for both through-hole and surface mount electronic components.

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.

## OUTCOME OF THE COURSE

Students are able to design a schematic of their circuit, capable to produce PCB of their own circuit. They are able to design PCB layout of their design

## TOPICS COVERED

- Identifying Electronic Components Symbols & Footprints
- Constructing your Component libraries & use them effectively
- Schematic creation & interpretation
- Effective use of design rules & interfacing between schematic & PCB
- Component placement & routing techniques for various technologies

## Beneficiary:

**III YEAR EEE Students**

# HANDS ON TRAINING
# on
# PCB FABRICATION

**Organized by**

**Department of Electrical & Electronics Engineering**

**Date: 10.08.2017 – 14.08.2017**


**Convener**

**Dr.S.Nagalakshmi , HoD/EEE**

**Co-Convener**

**Ms.J.Jeyashanthi AP/EEE**

**Mr. M. Muhammed Alaudeen Ashiq AP/EEE**


**EMINENT RESOURCE PERSON**

**Mr. Jayabalan,M.E**
**C Infotech Pvt.Ltd,**
**Madurai**


**SETHU INSTITUTE OF TECHNOLOGY**

***(An Autonomous Institution)***

***Accredited with 'A' Grade by NAAC***

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**website : www.sethu.ac.in**

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**PULLOOR, KARIAPATTI – 626 115**

## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

## VALUE ADDED COURSE

on

## Hands on Training on PLC and SCADA

## SYLLABUS

**Duration: 30 Hrs.**

**Starting the PCB designing (3 Hrs.)**

- Understanding the schematic Entry
- Creating Library & Components
- Drawing a Schematic
- Flat Design / hierarchical Design
- Setting up Environment for PCB
- Design a Board

**Auto routing (2 Hrs.)**

- Introduction to Auto routing
- Setting up Rules
- Defining Constraints
- Auto router Setup

**PCB Designing Practice (13 Hrs.)**

- PCB Designing of Basic and Analog Electronic Circuits
- PCB Designing of Power Supplies
- PCB Designing of Different Sensor modules
- PCB Designing of Embedded Projects

**Post Designing & PCB Fabrication Process (12 Hrs.)**

- Printing the Design
- Etching
- Drilling
- Interconnecting and Packaging electronic Circuits (IPC) Standards
- Gerber Generation

• Soldering and De-soldering
• Component Mounting
• PCB and Hardware Testing

**COURSE OUTCOMES**

At the end of this course, students can able to

- Build schematic of Academic and Industrial projects
- Design using PCB, soldering and Desoldering of components as per design.
- Test and Troubleshoot the faults in PCB Design

## ABOUT THE INSTITUTION

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## DEPARTMENT VISION

To achieve Excellence in Education and Research in the field of Electrical and Electronics Engineering for the benefit of the society

## DEPARTMENT MISSION

- Providing comprehensive and value based engineering education to meet intellectual, ethical and career challenges
- Promoting collaboration with academia, industry and research organizations
- Providing state-of-art infrastructure and resources for teaching-learning, research and development activities
- Enriching the skills to enhance employability and entrepreneurship
- Offering services and promoting activities to serve the

## PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

**Professional Competency** Actively engages themselves in technical activities to achieve practical competency within and across disciplines.

**Life-long learning** Update their knowledge continuously for life-long learning to enhance their technical and non-technical skills through graduate study or professional improvement opportunities.

**Ethics** Demonstrate leadership and have necessary skills such as high ethical standards, effective communication and team work

## ABOUT THE COURSE

**Supervisory control and data acquisition (SCADA)** is a control system architecture comprising computers, networked data communications and graphical user interfaces for high-level supervision of machines and processes. It also covers sensors and other devices, such as programmable logic controllers, which interface with process plant or machinery. The operator interfaces which enable monitoring and the issuing of process commands, like controller set point changes, are handled through the SCADA computer system. The subordinated operations, e.g. the real-time control logic or controller calculations, are performed by networked modules connected to the field sensors and actuators.

The SCADA concept was developed to be a universal means of remote-access to a variety of local control modules, which could be from different manufacturers and allowing access through standard automation protocols. In practice, large SCADA systems have grown to become very similar to distributed control systems in function, while using multiple means of interfacing with the plant. They can control large-scale processes that can include multiple sites, and work over large distances as well as small distance. It is one of the most commonly-used types of industrial control systems, in spite of concerns about SCADA systems being vulnerable to cyber warfare/cyber terrorism attacks.

## OUTCOME OF THE COURSE

After Completion of the Workshop, the Participants will be able to know the PLC programming and SCADA Concepts.

## TOPICS COVERED

- Ladder Diagram
- PLC/RTU programming
- SCADA Components
- PLC Commercial Integration
- Communication infrastructure and methods

**Beneficiary:** IV YEAR EEE Students

# HANDS ON TRAINING ON PLC AND SCADA

**Organized by**

**Department of Electrical & Electronics Engineering**

**Date: 22.01.2018 – 26.01.2018**

**Convener**

**Dr.S.Nagalakshmi , HoD/EEE**

**Co-Convener**

**Mr.B.Karthikeyan, AP/EEE**
**MrM.Palpandian AP/EEE**

**EMINENT RESOURCE PERSON**

**Mr. M. Kumaran**
**Managing Director**
**Uniq Control and Automation Pvt. Ltd., Madurai**


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**PULLOOR, KARIAPATTI – 626 115**

## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

## VALUE ADDED COURSE

on

## Hands on Training on PLC and SCADA

## SYLLABUS

**Duration: 30 Hrs.**

1. Design and implement logic gates and bit level logic ladder diagram program using PLC. (3Hrs.)
2. Design and develop Parking Lot automatic Vehicle counting with the help of Counter Ladder Diagram program using PLC. (4Hrs.)
3. Design and implement arithmetic and logic instruction ladder diagram program using PLC. (3Hrs.)
4. Design and implement ladder logic for bottle filling system using PLC. (4Hrs.)
5. Design and implement ladder logic for traffic signal control using PLC. (4Hrs.)
6. Design and implement ladder logic for mixing, heating and filling process using PLC. (4 Hrs.)
7. Design and implement ladder logic program for stepper motor speed control system using PLC. (4Hrs.)
8. Design and implement ladder logic program for water level control system using PLC. (4Hrs.)

**COURSE OUTCOMES**

At the end of this course, students can able to

- Build ladder logic diagram for simple applications.
- Simulate and Implement the ladder logic diagram for real time applications using Allen Bradly.

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## DEPARTMENT VISION

To achieve Excellence in Education and Research in the field of Electrical and Electronics Engineering and provide knowledge based contribution for the development of economy and society.

## DEPARTMENT MISSION

- Providing comprehensive and value based education in Electrical and Electronics engineering and related fields to meet intellectual, ethical and career challenges.
- Providing state-of- the-art infrastructure and resources to promote teaching-learning and research activities.
- Enriching the skills to enhance employability and entrepreneurship.
- Strengthening the collaboration with academia, industry and research organizations.
- Fostering Research and Development activities leading to innovation and technological growth in the overall ambit of electrical and electronics engineering.
- Offering services to the society through education, science and technology.

## ABOUT THE COURSE

The exciting and challenging world of Electronics has influenced our lives to the deepest levels. In Embedded Systems courses, students are introduced to the techniques and practical knowledge about testing, designing, integrating and implementing the software used for the advanced embedded systems.

Embedded system has expanded its usage in various developing domains like Military, Communication, Industrial, Automobiles, Medicine, etc. The growing demand of Embedded systems has brought many Embedded systems courses to learn this concept in academics such as Embedded C Course, Diploma in Embedded Systems, ME Embedded Systems, etc..

Embedded systems programming, therefore, consists of building the software control system of a computer-based product. The future of embedded systems lies in the advancement of technologies that enable faster communications, heavy data storage capacities and highly interwoven connections among the devices.

## OUTCOME OF THE COURSE

After completion of Embedded systems courses, candidates can get employability for work profiles such as Electronic System Engineer, Design and Control System Engineer, Product Architect, CAD Engineer, etc.

## TOPICS COVERED

- Introduction to Embedded Computing
- Design Process
- I/O Devices
- Component Interfacing
- Designing with Processors & Design Examples

**Beneficiary:**

II YEAR M.E., Power Electronics & Drives Students

# VALUE ADDED COURSE
# on
# EMBEDDED SYSTEMS

**Organized by**

**Department of Electrical & Electronics Engineering**

**M.E.,**

**Power Electronics & Drives**

## Date: 19.11.2018 – 22.11.2018

**Convener**

**Dr.S.Nagalakshmi,**
**Prof & PG Head/PED**

**Co-Convener**

**Mrs.Suvitha Babu**
**AP/EEE**

**EMINENT RESOURCE PERSON**

**Mr. Jayabalan,M.E**
**C Infotech Pvt.Ltd,**
**Madurai**


## SETHU INSTITUTE OF TECHNOLOGY

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**Virudhunagar District, Tamil Nadu.**
**website : www.sethu.ac.in**

# 19VPE04 EMBEDDED SYSTEM

**Unit-I Introduction to Embedded Systems**:

Definition of Embedded System, Embedded Systems Vs General Computing Systems, History of Embedded Systems, Classification, Major Application Areas, Purpose of Embedded Systems, Characteristics and Quality Attributes of Embedded Systems.

**UNIT-II Embedded Firmware:**

Reset Circuit, Brown-out Protection Circuit, Oscillator Unit, Real Time Clock, Watchdog Timer, Embedded Firmware Design Approaches and Development Languages.

**UNIT- III** T**ask Communication**:

Shared Memory, Message Passing, Remote Procedure Call and Sockets, Task Synchronization: Task Communication Synchronization Issues, Task Synchronization Techniques, Device Drivers, How to Choose an RTOS.

**Total: 30 Periods**

**COURSE OUTCOMES:**

On completion of this course, successful participants will be able to:

- Perform effectively as entry level Embedded Systems professionals.
- Develop and maintain applications written using embedded programming.
- Independently design and develop a hardware platform encompassing a microcontroller and peripherals.

# SETHU INSTITUTE OF TECHNOLOGY

An Autonomous Institution Affiliated to Anna University, Chennai
PULLOOR, KARIAPATTI-626 115

## DEPARTMENT OF INFORMATION TECHNOLOGY

Organizing a Webinar on

# PYTHON AND GIMP

24-31, AUGUST, 2017

9.30 am -4. 30 pm

PROGRAMMING LANGUAGE LAB

Workshop By,
Mrs. NAGANANDHINI,
Software Trainer,
APRARAJEET ENTERPRISES, MADURAI

## CONVENORS

Dr.S.Siva Ranjani
HOD-IT

## COORDINATORS

IT - Faculty

## PATRONS

Mr.S.MOHAMED JALEEL
Founder and Chairman

Mr.S.M.SEENI MOHAIDEEN
Chief Executive Officer

Mr.S.M.SEENI MOHAMED ALIYAR MARAIKKAYAR
Joint Chief Executive Officer

Mrs.S.M.NILOFER FATHIMA
Director-Administration

Dr.S.M.NAZIA FATHIMA
Director-R&D

Dr.A.SENTHIL KUMAR
Principal

Dr.G.D.SIVA KUMAR
Vice-principal

**SETHU INSTITUTE OF TECHNOLOG**
An Autonomous Institution
Pulloor, Kariapatti –Taulk. Virudhunagar Dist-626115.
**Department of Information Technology**
Accredited By NBA

**15VIT02** **Python and GIMP** **(30 Hours)**

**COURSE OBJECTIVE:**

- To make the student acquire sound knowledge in comprehensive understanding of GIMP's features and functions
- To impart through understanding of various aspects of plug-in and procedures
- To impart familiarity with GIMP objects

**Module I** **Introduction**

Introduction-Python-GIMP-Installation-transform an image using python scripting in GIMP

**Module II** **The Structure Of A Plugin**

An Example Plugin- Import Modules- Import Modules-The Procedural Database-The Gimp-Python Model- Procedural Database Procedures-

**Lab Exercise:**

Practice sessions on Image for Web-Practice sessions on Setting up GIMP

**Module III** **GIMP Module Procedures**

Constructors and Object Deletion- Configuration Information-Palette Operations- Gradient Operations-PDB Registration Functions- Parasites

**Lab Exercise**:

Practice sessions on Rotate and Corp the Image-Practice sessions on Adjusting Colors in the Image-Practice sessions on Healing and Cloning the image

**Module IV** **Gimp Objects**

Image Object- Channel Objects-Layer Objects- Drawable Objects-Tile Objects-Pixel Regions

**Lab Exercise**:

Practice sessions on Image Resolutions-Practice sessions on Fixed underexposed Images-Practice sessions on Adjust Color with Curve tool

**COURSE OUTCOMES:**

After the successful completion of this course, the student will be able to :

- Explain the core concept of python scripting in GIMP
- Apply GIMP procedures in solving in solving real time problems
- Design an application which suits the business need

# SETHU INSTITUTE OF TECHNOLOGY

An Autonomous Institution | Accredited 'A' Grade by NAAC

PULLOOR - 626 115, KARIAPATTI TALUK. VIRUDHUNAGAR DISTRICT.

## DEPARTMENT OF CIVIL ENGINEERING

## ORGANIZES

*Value Added Course on*

# Total Station

**On 8th August 2017 @ 11.00 a.m. at Civil Seminar Hall**

**Company**

**Ladder Survey Institute ,Chennai**

# ALL ARE WELCOME

| | | |
|---|---|---|
| Mr.A. M. Arun Mohan | Dr.K.Vijai | Dr.R.Kumutha |
| Faculty Coordinators | PG program Head | Dean & HoD |

LADDER SURVEY INSTITUE OF TECHNOLOGY

Advance Tech in Land Survey Training

AN ISO 9001:2015 CERTIFIED INSTITUTE

## MODES OF DELIVERY & PEDAGOGY WITH DURATION.

| SL.NO | SYLLABUS DESCRIPTION | TIME | T/P |
|---|---|---|---|
| 1. | Basics of surveying -History of surveying and Fundamentals of surveying – Knowledge on coordinates-Area calculation-Graf method coordinate extraction. | 02 | T (POWER POINT PRESENTATION) |
| 2. | **INTRODUCTION OF TOTAL STATION INSTRUMENT** About the Total Station instrument-Operations-Applications-Advantages-Disadvantages. | 02 | T (POWER POINT PRESENTATION) |
| 3. | **SETTING UP OF THE INSTRUMENT** Fixing the station point-Setting the instrument-Checking the plate level-Instrument level-Tilt-Northing-Observation. | 04 | P |
| 4. | **SURVEYING** Boundary survey-Layout survey-Road survey-Topographical survey | 16 | P |
| 5. | **LEVELING** Bench mark setting, Spot Level, Level transfer, Contour Survey – Real time | 04 | P |
| 6. | **MARKING** Layout marking-Pile marking-Column Marking. | 04 | P |
| 7. | **DRAWING** Downloading all surveyed data to the computer and implementing the same in AUTOCADD. | 04 | P (CAD LAB) |
| 8. | **VIVAVOCI & PRACTICAL EXAMINATION** | 02.5 | T/P |
| 9. | **Doubts clarification and Disscussion** | 01.5 | T |
| 10. | **TOTAL HOURS** | 40 | T/P |

No.125, Vasantha Street, Golden George Nagar, Nerkundram, Chennai – 600107
Toll free : 1800 123 8513
Cell : +91 9940143131

# Course Outcomes

- Analyze the reduced level of given road stretches using various leveling techniques (Analyse).
- Determine the fundamental quantities of surveying using Total station and GPS .(Apply)

# SETHU INSTITUTE OF TECHNOLOGY

An Autonomous Institution | Accredited 'A' Grade by NAAC

PULLOOR - 626 115, KARIAPATTI TALUK. VIRUDHUNAGAR DISTRICT.

## DEPARTMENT OF CIVIL ENGINEERING

## ORGANIZES

*Value Added Course on*

# Revit Architecture

**On 8TH August 2017 @ 11.00 a.m. at Civil Seminar Hall**

**Company**

**Hitech -CADD CENTRE,MADURAI**

# ALL ARE WELCOME

| Mr.A. M. Arun Mohan | Dr.K.Vijai | Dr.R.Kumutha |
|---|---|---|
| Faculty Coordinators | PG program Head | Dean & HoD |

# Hitech CADD Centre,Madurai

## Revit Architecture

## Syllabus

- Building Information Modeling (BIM) Concepts, Revit Architecture User Interface, Terminology
- Creating, Modifying Levels, Column Grids & Adding, Modifying Walls, Doors & Windows
- Creating & Modifying Floors, Roofs, Ceilings, Curtain Walls, Stairs & Railings
- Loading, Adding & Modifying Component Families (Furniture, Fixtures & Equipment)
- Creating & Managing Plan, Section, Elevation, & 3D Views, Controlling Visibility of Objects
- Using Dimensions, Alignments & Constraints to Control Object Positioning
- Creating Callout, Detailed & Drafting Views & Editing, Annotation & Detailing Tools
- Creating & Modifying Schedules, Legends & Keynotes
- Creating Drawing Sheets & Working with Title Blocks, Printing & Publishing Views & Sheets
- Working with Revit Linked Projects, Creating & Working with Component Groups
- Working with Mass Shapes for Conceptual Design & Converting to Building Components
- Creating & Using In-Place Families, Creating & Modifying Parametric & Nested Families
- Rendering the Model, Creating Sun & Shadow Studies and Walkthroughs

**Total Hours-30 hours**

**Course outcomes**

- Creating & Managing Plan, Section, Elevation, & 3D Views, Controlling Visibility of Objects(Apply)
- Creating & Using In-Place Families, Creating & Modifying Parametric & Nested Families(Apply)

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An Autonomous Institution | Accredited 'A' Grade by NAAC

PULLOOR - 626 115, KARIAPATTI TALUK. VIRUDHUNAGAR DISTRICT.

## DEPARTMENT OF CIVIL ENGINEERING

## ORGANIZES

*Value Added Course on*

**PRIMAVERA**

**On 9th October 2017 @ 11.00 a.m. at Civil Seminar Hall**

**Company**

**Hi Tech CADD Centre, Madurai**

# ALL ARE WELCOME

| | | |
|---|---|---|
| **Mr. A. M. Arun Mohan** | **Dr.K.Vijai** | **Dr.R.Kumutha** |
| **Faculty Coordinators** | **PG program Head** | **Dean & HoD** |

# SETHU INSTITUTE OF TECHNOLOGY

An Autonomous Institution, Affiliated to Anna University, Chennai
Pulloor, Kariapatti -626 115.

**Course code : 19VAG01** **Course :Design of Millet Processing Equipment**

(A value added course offered by the Department of Agriculture Engineering)

**Total hours : 30**

**This course in Design of Millet processing equipment under Agriculture engineering at making the students aware of the practical knowledge about the processing units and to gain the knowledge from professionals**

## Course Objectives

- **To produce and distribute quality seeds in small millets.**
- **To popularize micro irrigation, organic farming and fertigation in small millets among the farmers.**
- **To popularize mechanization in small millets to mitigate labour scarcity.**
- **To promote value addition in small millets and to doubling the farm income.**

**Offered to : Students of Department of Agriculture Engineering**

## Course outcomes

- **Understand the process of manufacturing different methods of Millet production**
- **Analysis the special packing technique**

**Semester of offering : 2017-2018**

## Course coordinator

**Mr. M. Jothibass AP / Agri**

***SETHU INSTITUTE OF TECHNOLOGY***
***An Autonomous Institution Affiliated to Anna University, Chennai***
***Pulloor, Kariapatti -626 115.***

***DEPARTMENT OF AGRICULTURE ENGINEERING***

# *Design of Millet Processing Equipment*

## COURSE OBJECTIVES

- To produce and distribute quality seeds in small millets.
- To popularize micro irrigation, organic farming and fertigation in small millets among the farmers.
  To popularize mechanization in small millets to mitigate labour scarcity.
- To promote value addition in small millets and to doubling the farm income.

## COURSE CONTENT

Millets production and consumption status in India & recent advances - Millets -ancient Indian super foods - Millets in Indian diet - Millet based product research and innovation - Millet processing -past current status, future scope and challenges - Millets as smart and sustainable foods-Good for you, good for environment, good for farmers - Role of millets in agro, food and nutritional security in India - Millets processing, value addition, machinery ,quality control and safe storage - Millet processing home scale small scale medium scale large scale
- Entrepreneurship opportunities - Business plan and project report development - Entrepreneur sharing their experience - Various govt Scheme to boost processing /startups -capacity development programme, financial support, etc.

***TOTAL PERIODS : 30***

***Course Outcome:***

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

| | | |
|---|---|---|
| ***CO1*** | • *Understand the process of manufacturing different methods of Millet production* | ***[Understand]*** |
| ***CO2*** | • *Analysis the special packing technique* | ***[Analyze]*** |

# SETHU INSTITUTE OF TECHNOLOGY

An Autonomous Institution | Accredited with 'A' Grade by NAAC
Approved by AICTE, New Delhi & Permanently Affiliated to Anna University, Chennai

## DEPARTMENT OF BIOMEDICAL ENGINEERING

**Organizes a Value Added Course on**

# 15VBM02- PCB DESIGN

Venue : SIGNAL AND IMAGE PROCESSING LAB-BIOMEDICAL ENGINEERING

Date : 12.02.2018 TO 15.02.2018

Patrons

Mr. S. MOHAMED JALEEL
Founder and Chairman

Mr. S.M. SEENI MOHAIDEEN
Chief Execution Officer

Mr. S.M. SEENI MOHAMED ALIYAR MARAIKKAYAR
Joint Chief Executive Officer

Ms. S.M. NILOFER FATHIMA
Director-Administration

S.M. NAZIA FATHIMA
Director-R&D

Dr. A. SENTHIL KUMAR
Principal

Dr. G.D. SIVAKUMAR
Vice Principal

Convenor
Dr. K. Hemalatha
HOD

COORDINATOR
Mr.K.Kalanithi, Asst. Prof. (Sr.Gr) /BME

**CERTIFICATE Will BE PROVIDED TO All PARTICIPANTS**

# PCB DESIGN

## MODULE I

Introduction to PROTEUS - using tools in PROTEUS - Designing simple circuits in PROTEUS Using instruments in PROTEUS - simple circuits debugging using instruments, in PROTEUS - Simulating simple mini projects, Clipper circuit, Clamper circuit - Street light controller – Power supply construction for electronics devices - Night security light - Police siren using 555 timer.

## MODULE II

Introduction to PCB board-Parts of PCB - Difference between breadboard GCB board and PCB - Multilayer PCB-PCB design software packages-Design Steps - Advantages and Drawbacks of PCB-Software installation. – Overview - Getting started with PROTEUS Schematics design - Selecting footprints - Placing components - Signal routing- Hole through mount design - Design files - Single layer design - Double layer design -Multilayer design Hands on training.

## MODULE III

SMD packages-Difference between Hole through mount and Surface mount - Surface mount design : Single layer design in SMD packages - Double layer design in SMD packages - Multi layer design in SMD packages - hands on training - Designing PCB for simple circuits in hole through mount as well as SMD packages.

**Duration: 30 Hrs.**