M.I.E.T. ENGINEERING COLLEGE

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
UG - CSE, EEE & MECH Programs Accredited by NBA, New Delhi.
(An ISO 9001:2015 Certified Institution)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu

Ph: 0431 – 2660 303

1.2.2: Number of Add on /Certificate programs offered during the last five years

1.2.2.1: Highlighted Portion of brochures showing curriculum and syllabus regarding the Add-on/Certificate programs for 2015-16 and 2016-2017

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 - 2660 303

DEPARTMENT OF CIVIL ENGINEERING

Certificate Program on

ADVANCED SURVEYING

Course Description

This course will give the basic idea of advanced Surveying, a new instruments like Total station ,GPS usage and handling of error in surveying process. Opportunity to explore photogrammetry surveying, Astronomical surveying.

COURSE DURATION	: 32 HRS
TIME	: 9:30 AM TO 5:00 PM
DATE OF COURSE STARTS	: 06.06.2015
YEAR OFFERED	: 2015-16

Course Instructors

Mr.A.Belin Jude, AP/Civil, Mr.S.Manikandan, AP/Civil.

Course Objectives

- To make students aware with different advance surveying methodologies applied to carry out large scale survey works as modern instruments have largely changed the approach to survey works with the principles being same.
- To prepare the students to handle the errors they are likely to come across any large scale survey works.

Course Syllabus

Course Code and Name: CE15161 and Advanced Surveying

UNIT I TOTAL STATION

Classification – Basic measuring and working Principles of an Electro – optical and Microwave total station- Sources of errors in Electro – Optical and Microwave total station.

UNIT II AERIAL PHOTOGRAMMETRY

Terrestrial Photogrammetry – Aerial photogrammetry -Overlaps – Scale of photographs –Stereoscopic vision - Photo interpretation – Applications.

UNIT III ASTRONOMICAL SURVEYING

Astronomical terms and definition– Celestial co-ordinate System – Field observations and determinations of time, longitude, latitude and azimuth by attitude and Hour angle method.

UNIT IV GPS

Basic concepts – Space, Control and User segments – Satellite configuration –Anti spoofing and selective availability – Field work procedure – Data processing Applications.

UNIT V HYDROGRAPHIC SURVEYING

Applications- Shore line survey, Sounding- Methods of locating soundings –Tides and tide gauges, determination of MSL.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website : www.miet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF CIVIL ENGINEERING

Certificate Program on

ANALYSIS AND DESIGN OF CONCRETE STRUCTURES USING STADD PRO SOFTWARE

Course Description

This course will deals the analysing and design of concrete structures using stadd pro software.Modeling and properities applied manually to Estimate the detailing diagrams.

COURSE DURATION	: 34 HRS
TIME	: 9:30 AM TO 5:00 PM
DATE OF COURSE STARTS	: 06.06.2015
YEAR OFFERED	: 2015-16

Course Instructors

Mr.S.Suresh, AP/Civil & Mr. P.Swaminathan, AP/Civil.

Course Objectives

- To learn basic operations in STADD Pro with the help of STADD Pro v8i.
- Students will be able to design concrete structures.
- Manipulate calculation of shear force, bending moments
- And compare manual - software

Course Syllabus

Course Code and Name: CE15162 and Analysis and Design of Concrete Structures using Stadd pro software

Unit I – Introduction

Introduction Structural Analysis and Design Software's – History and Advantages, An Integrated Approach-Modeling Features, Analysis Features,- Design Features, Detailing Features

Unit II – Modeling

Begin a New Model, Select the Base Units and Design Codes-Set up Grid Lines, Draw Grids, Define and edit Story Levels - Draw Dimension Lines, Draw Joint Objects, and Save the Model

Unit III – Properties

Editing Properties-Defining Properties (Material Properties, Section Properties, and Load Patterns)-Draw Structural Objects-Assigning Properties-Assign Loads to Frame Shell, Checking the model for any errors and eliminating if any.

Unit IV – Analysing

Analyze the Model, Display Results for Checking-Checking and understanding the results and designing structural elements-.Concrete Frame Design.

Unit V – Detailing

Reinforcement Drawings for structural elements- bar bending schedule.-Summary Report-Export Result

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 – 2600 393

DEPARTMENT OF CIVIL ENGINEERING

Certificate Program on

DESIGN AND CONSTRUCTION OF BRIDGES

Course Description

This course will give the basic idea of construction of road bridges,load calculations using I.R.C Loading standards.Also deals with supporting structures of bridges and its design.

COURSE DURATION	: 32 HRS
TIME	: 9:30 AM TO 5:00 PM
DATE OF COURSE STARTS	: 21.06.2015
YEAR OFFERED	: 2015-16

Course Instructors

Mr.S.Arun Sahaya Raj AP/Civil

Course Objectives

- To identify the different types of bridges: arch, suspension, truss, beam, cantilever and cable stayed.
- Learn the various loads which real life bridges are subjected to.
- Understand how each bridge structure works to carry the loads placed on the bridge.

Course Syllabus

Course Code and Name: CE15163 and Design and Construction of Bridges

Unit 1: Introduction

Introduction to bridges, classification of bridges- site selection of bridges, Computation of discharge, linear waterway, economic span, afflux, scour depth- Design loads for bridges- Introduction to I.R.C. loading standards,

Unit2: Construction of bridges

Methods-In-situ and precast construction- False work, gantries and self-launching gantries, Span by span construction-Cantilever construction -Transverse launching Longitudinal launching, Rotation.

Unit3: Other Bridges

Other Bridges: Design of Box culvert - Design of Pipe culverts

Unit 4: Substructures

Piers, abutments, wing walls factors effecting and stability, well foundations. Design of well, construction; open sinking of wells, Plugging, sand filling and casting of well cap

Unit 5: Bearings

Different types of bearings – Design of bearings – Design of piers and abutments of different types – Types of bridge foundations – Design of foundations.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Certificate Program on

BASIC CONCEPTS OF PYTHON PROGRAMMING

Course Description

This Course will give the fundamentals of Python, branching, looping concepts. It also covers the topics of how to create Functions, operations in tuples, dictionary and lists. It also provides the concepts of files, modules and packages.

COURSE DURATION	: 33 HRS
TIME	: 9:30 AM TO 5:00 PM
DATE OF COURSE STARTS	: 8.06.2015
YEAR OFFERED	: 2015-16

Course Instructors

Mrs. G.NalinaKeerthana., AP/CSE
Mr.M.K.Mohamed Faizal., AP/CSE

Course Objectives

- To Impart the knowledge to the students about Python Programming.
- To instruct the students to develop basic programs in python.

Course Syllabus

Course Code and Name: CS15161 and Basic Concepts of Python Programming

UNIT I – INTRODUCTION TO PYTHON

Features of Python- Interpreter- Data Types.

UNIT II –CONTROL FLOW

Branching- Looping-Loop Control Statements.

UNIT III – FUNCTIONS, STRINGS

Strings- Strings Operations- Functions- Recursion- Function Composition.

UNIT IV – LISTS, TUPLES, DICTIONARY

Lists- List Operations- Aliasing- Cloning- List Comprehension- Tuples- Tuples Methods- Dictionary- Dictionary Functions.

UNIT V – FILES, MODULES, PACKAGES

Files- File Operations- Exception Handling- Packages- Modules.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 – 2600 303

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Certificate Program on

FUNDAMENTALS OF HARDWARE AND NETWORKING

Course Description

This Course will provide the basic concepts of Networking. It also covers the topics of Installing OS, Assembling, types of area Networks, methods of Messaging and Routing protocols.

COURSE DURATION	: 35HRS
TIME	: 9:00 AM TO 5:30 PM
DATE OF COURSE STARTS	: 21.12.2015
YEAR OFFERED	: 2015-16

Course Instructors

Mr.D.Yuvaraj., ASP/CSE
Mrs.A.Barveen., AP/CSE

Course Objectives

- To build on the Computer Networking knowledge or move into Network Engineering positions such as Systems Admin, Network Admin or Technical Operations.

Course Syllabus

Course Code and Name: CS15162 and Fundamentals of Hardware and Networking

UNIT I –INTRODUCTION

Introduction-PC Components and Identification-Study of Different Blocks-Assembling & Trouble shooting-Installation-Operating system-Installation-Software-Installation- Devices.

UNIT II–NETWORKING

Introduction to Networking Fundamentals-Networking History and Evolution-Introduction to Network Architecture and Design-Network components design and functions.

UNIT III –AREA NETWORKS

Types of Networks Personal Area Networks (PANs)-Local Area Networks (LANs)-Campus Area Networks (CANs) Metropolitan Area Networks (MANs)-Cabling and Troubleshooting-Wide Area Networks (WANs)-Open Systems Interconnection (OSI) Reference Model.

UNIT IV –MESSAGING METHODS

Types of Messaging Unicast Messaging- Broadcast Messaging-Multicast Messaging InterconnectingLANs-Types of Addressing-Switching and Bridging.

UNIT V –ROUTING

Routing protocols-Domain Name System (DNS)-Security & Firewall-Types of servers-Internet connections.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Certificate Program on

Micro wind Tool for VLSI Design

Course Description

This course will give the Design and simulation of CMOS integrated circuits and also can Design and simulate an integrated circuit at physical description level..

COURSE DURATION	: 32Hrs
TIME	: **09.00 AM – 5.30 PM**
DATE OF COURSE STARTS	: **08.06.2015**
YEAR OFFERED	: 2015-16

Course Instructors

Mrs.B.Rajalakshmi AP/ECE
Mrs.G.Karthika AP/ECE

Course Objectives

- The presentation of the single MOS device, with details on the device modeling, simulation at logic and layout levels.
- Presents the CMOS Inverter, the 2D and 3D views, the comparative design in micron and deep-submicron technologies.
- Technology influence on design rules resistance effect, capacitance effect, propagation.

Course Syllabus

Course Code and Name: EC15161 and Micro wind Tool for VLSI Design

UNIT 1: Technology Scale down & the MOS device
Evolution of Microprocessors and Memories, Frequency Improvements, Increased Layers, The MOS as a switch, Logic Simulation of the MOS, MOS layout, Vertical aspect of the MOS, Static Mos Characteristics, Dynamic MOS behavior, Analog Simulation, Layout considerations, The MOS Model, The BSIM4 MOS Model, Low leakage MOS, High voltage MOS, Temperature effects on the MOS, The PMOS Transistor, The Transmission Gate.

UNIT 2: The Inverter
The LOGIC Inverter, THE CMOS INVERTER, Fanout effect, MANUAL LAYOUT OF THE INVERTER, Analog simulation of the INVERTER ,2D View of the Process,3D View of the Process,3-STATE INVERTER ,Basic Gates -The Nand Gate, The AND gate , The 3-Input OR Gate,The XOR Gate, Complex Gates, Multiplexor, Multiplexer, Keyboard multiplexor Arithmetics-Half-Adder Gate, Full-Adder Gate, Full-Adder Symbol in DSCH , Full-Adder Layout , Four-Bit Adder,Comparator , Arithmetic and logic Units , Critical Path.

UNIT 3: Latches, Memories&Analog Cells
RS Latch, D Latch, Edge Trigged Latch, Counter, RAM Memory , RAM Array, RAM Line decoder, RAM Column Selection, Dynamic RAM Memory, EEPROM, **Analog Cells** -Diode-connected MOS Voltage Reference, Current Mirror, Single Stage Amplifier, Simple Differential Amplifier, Voltage Controlled Oscillator.

UNIT 4: Converters &Input/output Interfacing
Analog-Digital Converter, Digital-Analog Converter, Sample and Hold circuit, **Input/Output Interfacing-** Create a Pad Ring, VDD/VSS Floor-planning, High Voltage MOS, I/O Pad, ESD, Protections, I/O Pad description using Ibis.

UNIT 5: Design Rules & Electrical Rules
Select a Design Rule File, Start Microwind with a specific design Rule, Nwell Design Rules, Diffusion Design Rules, Polysilicon Design Rules, 2nd Polysilicon Design Rules, Option Design Rules, Contact Design Rules, Metal & Via Design Rules, Metal2 & Via2 Design Rules, Metal3 & Via3 Design Rules, Metal4 & Via4 Design Rules, Metal5 & Via5 Design Rules, Metal6 Design Rules, Pad Design Rules, **Electrical Rules-** Electrical Circuit Extraction, Capacitance, Surface Capacitance, Interlayer Capacitance, Crosstalk Capacitance, Resistance, Vertical Aspect of the Technology, Dielectrics, Simulation Parameters, Models Level1 and Level3 for analog simulation,BSIM4 Model for analog simulation, TEC file for DSCH2.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICITY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Certificate Program on

Digital Systems Design with FPGAs and PLDs

Course Description

This course will give the Design and analyze combinational, sequential and arithmetic circuits and also can Understand digital system design flow, timing, synthesis and FPGA implementation issues. Solve engineering problems in the area of digital system design.

COURSE DURATION	: 34Hrs
TIME	: 09.30 AM – 5.00 PM
DATE OF COURSE STARTS	: 21.12.2015
YEAR OFFERED	: 2015-16

Course Instructors

Ms.T.Nithya AP/ECE
Mr. K.Javid AP/ECE

Course Objectives

- Introduction to digital system design flow and approaches.
- Concept of Hardware description language.
- Understanding of Combinational, Sequential, Arithmetic Circuits and their Hierarchical Implementation.
- Knowledge of architecture of Programmable Logic Devices like FPGA.

Course Syllabus

Course Code and Name: EC15162 and Digital Systems Design with FPGAs and PLDs

Unit 1: Introduction to Programmable Logic
Introduction, Electronic Circuits: Analogue and Digital, Continuous Time versus Discrete Time,Analogue versus Digital, History of Digital Logic, Programmable Logic versus Discrete Logic, Programmable Logic versus Processors, Types of Programmable, Simple Programmable Logic Device (SPLD, Complex Programmable Logic Device (CPLD, Field Programmable Gate Array (FPGA), PLD Configuration Technologies, Programmable Logic Vendors, Programmable Logic Design Methods and Tools, Typical PLD Design Flow, Technology Trends.

Unit 2:Electronic Systems Design
Introduction, Sequential Product Development Process versus ConcurrentEngineering Process, Introduction - Sequential Product Development Process,Concurrent Engineering Process, Flowcharts, Block Diagrams, Gajski-Kuhn Chart, Hardware-Software Co-Design, Formal Verification, Embedded Systems and Real-Time Operating Systems.

Unit 3:Design Languages
Introduction, Software Programming Languages, Introduction,C, Cþþ,JAVATM,VisualBasicTM,Scripting Languages, PHP, Hardware Description Languages, Introduction-VHDL, Verilog_-HDL, Verilog_-A, VHDL-AMS, Verilog_-AMS, SPICE, SystemC, SystemVerilog, Mathematical Modeling Tools.

Unit 4: Introduction to Digital Logic Design with VHDL
Introduction, Designing with HDLs, Design Entry Methods, Introduction, Schematic Capture,
HDL Design Entry,Logic Synthesis,Entities, Architectures, Packages, and Configurations, Introduction, Dataflow Description Example ,Behavioral Description Example,Structural Description Example ,Signals versus Variables ,Data Types ,Concurrent versus Sequential Statements, Loops and Program Control ,Coding Styles for VHDL, Combinational Logic Design, Sequential Logic Design ,Memories, Unsigned versus Signed Arithmetic, Testing the Design: The VHDL Test Bench,File I/O for Test Bench Development.

Unit 5: System-Level Design
Introduction, Electronic System-Level Design ,Case Study 1: DC Motor Control ,Introduction, Motor Control System Overview,MATLAB_/Simulink_ Model Creationand Simulation, Translating the Design to VHDL,Concluding Remarks ,Case Study 2: Digital Filter Design, Introduction,Filter Overview ,MATLAB_/Simulink_ Model Creation and Simulation,Translating the Design to VHDL.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
UG - CSE, EEE & MECH Programs Accredited by NBA, New Delhi.
(An ISO 9001:2015 Certified Institution)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Certificate Program on

DESIGN OF WIRING AND WINDING

Course Description

This course will give the basic idea of electrical wiring at a different level, installation checking, and winding. Wiring exercises about single-phase, three-phase, staircase, floors, starters as well basics of motor winding.

COURSE DURATION	: 34HRS
TIME	: 9.30 AM – 05.00 PM
DATE OF COURSE STARTS	: 08-06-2015
YEAR OFFERED	: 2015-2016

Course Coordinator
Mr.D.Jayaraj., AP/EEE

Course Objectives

- To Impart Knowledge to the students with Electrical wiring & Testing.
- To introduce the concept of Winding.

Course Syllabus

Course Code and Name: EE15161&Design of Wiring and Winding

Unit I –Electrical wiring Level-I

control of three lamps - staircase wiring for G+n floors - emergency alarm circuit - single phase motor with the main switch - D.O.L starter and M.C.B -3 phase Induction motor with the main switch, star/delta starter, and E.L.C.B.

Unit II – Electrical wiring Level-II

1 phase service connection - sign lamp with a provision of fuse/ M.C.B/Electronic chock /switches - test board with necessary items - Tunnel wiring

Unit III – Electrical wiring Level-III

Methods of Electrical Wiring - Types of Electrical Wiring Systems-Advantages –Disadvantages- Single Phase Electrical Wiring Installation- Three Phase Electrical Wiring Installation in Home - Multi-Story Building.

Unit IV – Electrical Installation Checking

Insulation resistance test between installation and earth - Insulation resistance test between conductors- Testing of polarity- Testing of earth continuity paths- Earth resistance test.

Unit V – Electrical winding Basics

Motor Winding and Its Types - Stator Winding - Rotor Winding - Lap winding - Wave Winding - Motor Winding Calculation- number of slots and number of poles – end connections.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
UG - CSE, EEE & MECH Programs Accredited by NBA, New Delhi.
(An ISO 9001:2015 Certified Institution)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: www.miet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Certificate Program on

FUNDAMENTALS OF MATLAB

Course Description

The course provides a gentle introduction to the MATLAB computing environment, and is intended for beginning users and those looking for a review. It is designed to give students a basic understanding of MATLAB, including popular toolboxes. The course consists of interactive lectures and sample MATLAB problems given as assignments and discussed in class.

COURSE DURATION	: 32HRS
TIME	: 9.30 AM – 05.00 PM
DATE OF COURSE STARTS	: 08-06-2015
YEAR OFFERED	: 2015-2016

Course Coordinator
Mrs.B.Muthuselvi., AP/EEE

Course Objectives

- Understanding the MATLAB environment
- Being able to do simple calculations using MATLAB
- Being able to carry out simple numerical computations and analyses using MATLAB

Course Syllabus

Course Code and Name: EE15162 & Fundamentals of MATLAB

Unit I – Introduction to MATLAB
BriefIntroduction – Installation of MATLAB – History – Use of MATLAB – key features s

Unit II – MATLAB basics
The MATLAB environment - Basic computer programming - Variables and constants, operators and simple calculations - Formulas and functions - MATLAB toolboxes

Unit III –MATLAB software
Introduction to MATLAB software – MATLAB window – Command Window – Work space – Basic commands – Assigning variables – Operation of Variables

Unit IV – MATLAB Simulink
Introduction of Simulink – Simulink Environment & Interface – Study of library – Circuit oriented design – Equation oriented design – Model – Subsystem Design – Application.

Unit V –MATLAB Programming
Automated commands with scripts – writing programs with logic and flow control –writing functions – control statement programming – conditional statement programming

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 - 2660 303

DEPARTMENT OF MECHANICALENGINEERING

Certificate Program on

ADVANCED 3D MODELLING IN AUTODESK INVENTOR 2016

Course Description

This course will give the basic idea about the basic modeling using Autodesk Inventor software and part, assembly modeling of various parts of the Engine. The Computer Aided Manufacturing technique also explained as practical session.

COURSE DURATION	: 31 HRS
TIME	: 4:45 PM TO 6:45 PM
DATE OF COURSE STARTS	: 25.06.2015
YEAR OFFERED	: 2015-16

Course Instructors

Mr. S. Thulasiram, AP/Mech
Mr. R.Sankardoss, AP/ Mech
Mr. D.Manikandan, AP/Mech
Mr. M. Visvam, AP/Mech
Mr. P. Sundaram, AP/Mech
Mr. S. Senthil Kumar, AP/Mech

Course Objectives

- To familiarize the students in 3Dmodeling, Assembly, Generating drawings and CAM by using AutoDesk Inventor 2016.

Course Syllabus

Course Code and Name: ME15161 and Advanced 3D Modelling in Autodesk Inventor 2016

Unit I – Basics

Introduction to inventor 2016, Introduction to sketching and 2D constraints, Introduction to 3D modeling

Unit II – Exercises in Modeling

Aesthetic design and solid modeling in inventor 2016, Create, Modify and Fine tune organic forms using t-splines, Create a form based on a reference image, Create solid model from a sketch, Create solid model from sculpted body

Unit III –Exercises in Assembly

Collaboration and assembly design in inventor 2016, Collaborate and manage data in the cloud part 1, Collaborate and manage data in the cloud part 2, Working with components, Move and align components, Create a Rigid Group, Use joints to align components in an assembly, Create as-built joints, Define contact sets, Set up motion study, Apply top-down design methodology

Unit IV –Exercises in Rendering

Rendering, animation, and drawings, Rendering part 1: assign and edit materials, Rendering part 2: assign decals, setup the scene and render on the PC and online, Rendering part 3: Creating animation, Rendering part 4: Create an animated exploded view, Create technical drawings

Unit V –Exercises in CAM

Computer Aided Manufacturing (CAM), CAM Overview, CAM Setup, CAM Drilling, CAM Tool Library, CAM Derived tool path, CAM Simulation overview, CAM Post process

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF MECHANICALENGINEERING

Certificate Program on

RECENT TECHNOLOGY IN AUTOMATION (ROBOTICS)

Course Description

This course will give the basic idea about the robotics, sensor, grippers and manipulators, robot programming, selection of robots and application of robots. Also it elaborates the kinematic and dynamic study of robots mechanism and intelligent robots.

COURSE DURATION	: 30 HRS
TIME	: 4:45 PM TO 6:45 PM
DATE OF COURSE STARTS	: 04.01.2016
YEAR OFFERED	: 2015-16

Course Instructors

Mr. A.Pandianathan, AP/Mech,
Mr. S. Renold Elsen, AP/ Mech,
Mr. S. Kumaradevan, AP/Mech, Mr.
M. Kirubakaran, AP/Mech,
Mr. L S Narendhira, AP/Mech and
Mr. T. Prabakaran, AP/Mech

Course Objectives

- To familiarize the students in automation techniques and Robotics structures in detailing using Mechatronics Laboratory

Course Syllabus

Course Code and Name: ME15162 and Recent technology in automation (Robotics)

Unit I – Basics of Robotics

Classification of Sensors-Position sensors, Velocity sensors, Proximity sensors, Touch and Slip Sensors, Force and Torque sensors. Characteristics of robots, Grippers, Application of robots in manufacturing, Robot programming.

Unit II – Exercises in Grippers and Manipulators

Gripper joints, Gripper force, Serial manipulator, Parallel Manipulator, selection of Robot-Selection based on the Application.

Unit III – Exercises in Position and orientation

Kinematics-Manipulators Kinematics, Rotation Matrix, Homogenous Transformation Matrix, Direct and Inverse Kinematics for industrial robots for Position and orientation. Differential Kinematics and static- Dynamics-Lagrangian Formulation, Newton-Euler Formulation for RR & RP Manipulators.

Unit IV – Application of Robots in production systems

Application of robot in welding, machine tools, material handling, and assembly operations parts sorting and parts inspection.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 - 2660 303

DEPARTMENT OF MECHANICALENGINEERING

Certificate Program on

ADVANCE IN KINEMATICS OF MACHINES

Course Description

This course will give the basic idea of advanced mechanisms, velocity and acceleration analysis of advanced mechanisms, and synthesis of mechanism, modeling and simulation of mechanism, Gears, Gear trains and Cams using Autodesk Inventor software

COURSE DURATION	: 30 HRS
TIME	: 4:45 PM TO 6:45 PM
DATE OF COURSE STARTS	: 04.01.2016
YEAR OFFERED	: 2015-16

Course Instructors

Mr. S.Dhakshinamoorthy, Prof/Mech
Mr. M. Dhandayuthabani, ASP/ Mech
Mr. S. Kamatchisankaran, AP/Mech
Mr.A. Hussainlal, AP/ Mech
Mr. K.Ramesh, AP/Mech
Mr. P.Pradeep, AP/ Mech

Course Objectives

- To Impart the Knowledge to the students advancement in the mechanism simulation.
- To familiarize the concept of kinematic simulation using Simulation software.

Course Syllabus

Course Code and Name: ME15163 and Advances in kinematics of machinery

Unit I – Basics of Mechanisms

Rigid body, Mechanism and Machine, Kinematic Link, Kinematic Pair, Degrees of Freedom, Classification, Kinematic Chain, Linkage, Mechanism and Structure Mobility, Four Bar mechanism, Slider- Crank mechanism, Kinematic inversions, Double slider-crank mechanism, Inversions

Unit II – Velocity Analysis

Velocity analysis: Instantaneous centre method, Kennedy's theorem, locating instantaneous centres, Relative velocity method for slider-crank mechanism, and crank and slotted lever mechanism.

Unit III –Acceleration analysis

Klein's construction, slider crank mechanism, Coriolis acceleration component, Crank and slotted lever mechanism.

Unit IV –Kinematic Synthesis

Dimensional synthesis, function generation, path generation and motion generation, Synthesis of Four Bar linkage for specified Instantaneous conditions, Hirsch horn's method of components.

Unit V –Gears, Gear trains and Cams

Classification, Terminology, Simple gear train, compound, reverted gear train, planetary/epicyclic gear train, Sun and planet gear. Face and knife edge follower, Analysis of follower motion.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF MANAGEMENT STUDIES

Certificate Program on

SIX SIGMA

Course Description

This Course will provide the basic concepts of Networking. It also covers the topics of Installing OS, Assembling, types of area Networks, methods of Messaging and Routing protocols.

COURSE DURATION	: 30HRS
TIME	: 9:00 AM TO 5:30 PM
DATE OF COURSE STARTS	: 05.06.2015
YEAR OFFERED	: 2015-16

Course Co-ordinator

Mrs.T.Sathiyapriya

Course Objectives

To gain more knowledge in quality standards

Course Syllabus

Course Code and Name: MBA15161 SIX SIGMA

Unit-I

Meanings of Six Sigma. General History of Six Sigma & Continuous Improvement .Deliverables of a Lean Six Sigma Project

Unit -II

The Problem Solving Strategy Y = f(x) .Voice of the Customer, Business and Employee . Six Sigma Roles & Responsibilities

Unit-III

The Fundamentals of Si Sigma. Defining a Process .Critical to Quality Characteristics (CTQ's)

Unit –IV

Cost of Poor Quality (COPQ) .Pareto Analysis (80:20 rule). Basic Six Sigma Metrics a. including DPU, DPMO, FTY, RTY Cycle Time, deriving these metrics and these metrics Selecting Lean Six Sigma Projects . Building a Business Case & Project Charter . Developing Project Metrics

Unit –V

Financial Evaluation & Benefits Capture. The Lean Enterprise. Understanding Lean. The History of Lean. Lean & Six Sigma. The Seven Elements of Waste. Over production, Correction, Inventory, Motion, Over processing, Conveyance, Waiting.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 - 2660 303

DEPARTMENT OF MANAGEMENT STUDIES

Certificate Program on

Career Communication skills

Course Description

This course is designed to develop the following professional skills: 1. Students will understand how to communicate while attending an interview. 2. Students will be able to recognize communication meanings that are rooted in cultural experience. 3. Students will demonstrate techniques to graphically communicate information for written and oral communication. 4. Students will understand the ethical goals of business communication and tools for communicating ethically in business.

COURSE DURATION	: 31HRS
TIME	: 9:00 AM TO 5:30 PM
DATE OF COURSE STARTS	: 20.07.2015
YEAR OFFERED	: 2015-16

Course Co-ordinator

Mr.M.Kathiravan

Course Objectives

Improvement in communications skills, able to write business reports, facing the interview with proper portfolio

Course Syllabus

Course Code and Name: MBA15162 Career Communication skills

Unit I – Introduction to Communication

Definition, Process & Importance, Types of Communication, Barriers of Effective communication, Facing Today's Communication Challenges

Unit II –BusinessCorrespondence

Business Correspondence, Writing Techniques, E-Mail and Memorandum, Routine Letters and Goodwill Messages,Persuasive Messages, Negative Messages, Planning Business Messages

Unit III– Career Guidance

Building Careers -Mastering Team Skills and Interpersonal Communication, Communicating in a World of Diversity,CV Preparation, Application for Job offer and Facing an interview

Unit IV –Interview Skills

Group Discussion, Aptitude and Reasoning-Importance on Interview, Team Building skills& Leadership skills

Unit V –Report Preparation

Report-Proposals, Letters, Memo etc, Writing effective& concise letters and memos, Utilization of electronic software for presentation.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 - 2660 303

DEPARTMENT OF MANAGEMENT STUDIES

Certificate Program on

Talent Management

Course Description

1. To teach the practices used by organizations to attract, engage, develop, and retain talent across cultural settings.
2. To educate the impact of culture, gender, and age differences represented in today's workforce.
3. To highlight process and importance of assessing the talent and its stages.
4. To inculcate the talent strategies that to be applied in organizations for better performance.

COURSE DURATION	: 32HRS
TIME	: 9:00 AM TO 5:30 PM
DATE OF COURSE STARTS	: 21.09.2015
YEAR OFFERED	: 2015-16

Course Co-ordinator

Mr.P.Aranganathan

Course Objectives

Students will be able to synthesize and practically apply the various strands of learningrelated to talent management within their overall program of study

Course Syllabus

Course Code and Name: MBA15163 Talent Management

Unit-I TALENT MANAGEMENT

Introduction, History and Scope of Talent Management, Need of Talent Management, Key Processes of Talent Management, Source of Talent Management, Tools for Managing Talent.

Unit-II TALENT MANAGEMENT SYSTEM

Talent In Organizations, Effective Talent Management System, Building Blocks of Effective Talent Management System, Factors to Create Talent Management System, Key Elements of Talent Management System.

Unit-III LIFE CYCLE OF TALENT MANAGEMENT

Assessing Talent – Meaning, Linkage between Talent Management Process and Workforce, Importance of Talent Management Process, Important Steps to Assess Talent Management Process, Stages of Talent Management, Essentials of Talent Management Process.

Unit-IV APPROACHES TO TALENT MANAGEMENT

Talent Management Approaches, Developing a Talent Management Strategy, Mapping Business Strategies and Talent Management Strategies, Post Recession Challenges of Talent Management.

Unit-V TALENT ENGAGEMENT AND RETENTION

Introduction, Concept of Talent Engagement, Retention, Employee Engagement and Retention, the Race for Talent: Retaining and Engaging Workers, Best Practices for Talent Engagement, Improving Employee Retention.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: www.miet.edu
Ph: 0431 - 2660 303

DEPARTMENT OF CIVIL ENGINEERING

Certificate Program on

ROCK MECHANICS AND APPLICATIONS FOR CIVIL ENGINEERING

Course Description

This course will deals the applications of rock mechanics in civil engineering fields. To strengthening the rocks, Stress calculation in rocks and stability characteristics of rocks will be taught.

COURSE DURATION	: 34 HRS
TIME	: 9:30 AM TO 5:00 PM
DATE OF COURSE STARTS	: 04.07.2016
YEAR OFFERED	: 2016-17

Course Instructors

Mr.P.Swaminathan, AP/Civil & Mr.M.Karthikeyan,AP/Civil.

Course Objectives

- To describe the importance of Rock Mechanics in the field of mining and identify of the physical and mechanical properties of rocks.
- To understand stress and strain in rocks and the physical and mechanical properties of rocks, and failure criteria for rock and rock mass.
- To understand the methods of in-situ strengths of rock mass, rheological models and elastic constants of rocks.

Course Syllabus

Course Code and Name: CE16171 and Rock Mechanics and Applications for Civil Engineering

Unit 1: Classification

Types of Rocks - Index properties and classification, competent and incompetent rock - value of RMR and ratings in field estimations.

Unit 2: Strength Criteria of Rocks

Behaviors of rock under hydrostatic compression and pediatric loading - Modes of rock failure - characteristics - joint testing, Mohr - Coulomb failure. Hook and Brown Strength criteria with discontinuity sets.

Unit 3: Stresses in Rocks

Hydraulic fracturing, flat jack, over coring and under coring methods - stress around underground excavations – Design aspects of openings in rocks - case studies

Unit 4: Stability and Bearing Capacity

Rock slopes - Role of discontinuities in slop failure, slope analysis and factor of safety - Remedial measures for critical slopes – Bearing capacity of foundations on rocks – case studies

Unit 5: Rock Reinforcement.

Reinforcement of fractured and joined rocks – shotcreting, bolting, anchoring, installation methods - case studies

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF CIVIL ENGINEERING

Certificate Program on

MODERN CONSTRUCTION TECHNOLOGY

Course Description

This course will deals the recent advancement in concrete technology. New construction techniques, formwork and cost effective construction Techniques will be Taught.

COURSE DURATION	: 31 HRS
TIME	: 9:30 AM TO 5:00 PM
DATE OF COURSE STARTS	: 04.07.2016
YEAR OFFERED	: 2016-17

Course Instructors

Mr. S.Arun Sahaya Raj AP/Civil ,& Mr.R.Elangovan, AP/Civil.

Course Objectives

- To study different methods of construction to successfully achieve the structural design with recommended specifications.
- To involve the application of scientific and technological principles of planning, analysis, design and management to construction technology.
- To study of construction equipments and temporary works required to facilitate the construction process.

Course Syllabus

Course Code and Name: CE16172 and Modern Construction Technology

Unit – I INTRODUCTION

Introduction to mix design - Reinforced and prestressed concrete construction - Prefabricated structures - Production of ready mixed concrete - Productivity analysis

Unit – II CONSTRUCTION TECHNIQUES

Construction techniques associated with steel and reinforced concrete framing-Floor systems-Roof systems; Masonry construction - Curtain walls- Building insulation and interior and exterior finishes

Unit – III FORMWORK

Concrete formwork design-Construction techniques for high rise buildings-Fire resistant construction techniques

Unit – IV COST EFFECTIVE CONSTRUCTION TECHNIQUE

Cost Effective Construction Technique (CECT) - Repair techniques, innovative construction techniques-Prefabrication and pre-casting-Modular construction, in-situ pre-fabrication -Lift slab and tilt up construction

Unit – V CASE STUDIES

Case Studies, Implementation in case of housing sectors, Non Destructive Testing, Modern Construction Materials, Smart Materials

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF CIVIL ENGINEERING

Certificate Program on

ANALYSIS AND DESIGN OF CONCRETE STRUCTURES USING ETABS SOFTWARE

Course Description

This course will give the basic idea of Analysis and design of Concrete structures using Etabs software, Modeling, Properties assigning are carried out manually. Design of concrete frame and Detailing of diagrams was carried out.

COURSE DURATION	: 34 HRS
TIME	: 9:30 AM TO 5:00 PM
DATE OF COURSE STARTS	: 19.12.2016
YEAR OFFERED	: 2016-17

Course Instructors

Mr.U.Bala Vignesh, AP/Civil & Mr.M.Jeganraj, AP/Civil

Course Objectives

- How to create models in less time and interpret the results while working with the physical member based objects.
- Applicable to line objects and the program determines the appropriate design procedure when the analysis is run.
- To introduce bar bending schedule.
- Various options from response spectrum analysis to large deformation nonlinear time analysis.

Course Syllabus

Course Code and Name: CE16173 and Analysis And Design Of Concrete Structures Using Etabs Software

Unit I : Introduction about Etabs

Introduction Structural Analysis and Design Software's–History and Advantages, An Integrated Approach-Modeling Features, Analysis Features,-Design Features, Detailing Features

Unit II – Modeling in Etabs for Concrete Structures

Begin a New Model, Select the Base Units and Design Codes-Set up Grid Lines, Draw Grids, Define and edit Story Levels-Draw Dimension Lines, Draw Joint Objects, Save the Model

Unit III – Properties Assigning

Editing Properties-Defining Properties (Material Properties, Section Properties, Load Patterns)-Draw Structural Objects-Assigning Properties-Assign Loads to Frame Shell, Checking the model for any errors and eliminating if any.

Unit IV – Analysis and designing of RCC Structures

Analyze the Model, Display Results for Checking-Checking and understanding the results and designing structural elements-. Concrete Frame Design.

Unit V – Detailing

Reinforcement Drawings for structural elements-Measurement of each structural steel reinforcement in a structural element. Cutting length of steel – Calculation- Bar bending schedule. QA in usage of steel. Process of Rusting – models.-Summary Report-Export Results

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: www.miet.edu
Ph: 0431 - 2660 303

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Certificate Program on

REINFORCEMENT OF PROGRAMMING IN JAVA

Course Description

This Course covers the Fundamentals of Java. It provides the knowledge of AWT,Exceptions, Generic programming. It also includes the multi threadedPrograaming concepts.

COURSE DURATION	: 36 HRS
TIME	: 9:00 AM TO 5:00 PM
DATE OF COURSE STARTS	: 4.07.2016
YEAR OFFERED	: 2016-17

Course Instructors

Mr. R.Venkatesan, AP/CSE
Mrs.S.Shanmuga Priya., AP/CSE

Course Objectives

To understand the concepts of object-oriented, event driven, and concurrent programming paradigms and develop skills using these paradigms in Java

Course Syllabus

Course Code and Name: CS16171 and Reinforcement of Programming in Java

UNIT I –FUNDAMENTALS

Introduction of OOP - Objects and classes in Java – defining classes – methods – accessspecifiers – static members – constructors — Arrays – Strings -Packages

UNIT II-INHERITANCE

Inheritance – class hierarchy – polymorphism – dynamic binding – final keyword –abstract classes– interfaces – object cloning

UNIT III –EVENT-DRIVEN PROGRAMMING

Basics of event handling – event handlers – adapter classes – actions – mouse events – AWT event hierarchy – introduction to Swing – Model-View- layout management – Swing Component

UNIT IV –EXCEPTIONS &GENERIC PROGRAMMING

Introduction of generic programming – generic classes – generic methods – generic code and virtual machine – exceptions – exception hierarchy – throwing and catching exceptions

UNITV –MULTI-THREADED PROGRAMMING

Interrupting threads – Multi-threaded programming -thread states – thread properties– Executors – synchronizers – threadsand event-driven programming .

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Certificate Program on

FUNDAMENTALS OF PHP

Course Description

This course comprises of fundamentals of PHP, arrays operations of strings. This also includes the concepts of functions of PHP. It helps to gain the knowledge about working with files.

COURSE DURATION	: 35 HRS
TIME	: 9:00 AM TO 5:00 PM
DATE OF COURSE STARTS	: 19.12.2016
YEAR OFFERED	: 2016-17

Course Instructors

Mr. P.Christopher, AP/CSE

Mr.P.Manikandan, AP/CSE

Course Objectives

- To provide the necessary knowledge to design and develop dynamic, database-driven applications using PHP.

Course Syllabus

Course Code and Name: CS16172 AND Fundamentals of PHP

UNIT I – INTRODUCTION TO PHP

Evaluation of PHP-Basic Syntax- Defining variable and constant- PHP Data type- Operator and Expression-Decisions and loop - Making Decisions- Doing Repetitive task with looping- Mixing Decisions and looping with HTML.

UNIT II – ARRAY

Anatomy of an Array- Creating index based and Associative array- Accessing array Element- Looping with Index based array- Looping with associative array using each() and foreach()- Some useful Library function.

UNIT III –STRING

Creating and accessing String- Searching & Replacing String- Formatting String- String Related Library function-regular expression- Pattern matching in PHP- Replacing text- Splitting a string with a Regular Expression

UNIT IV- FUNCTION

Function - function Call by value and Call by reference - Recursive function -StringCreating and accessing - String Searching & Replacing- String Formatting- String Related Library function.

UNIT V – FILE AND DIRECTORIES

Understanding file& directory- Opening and closing a file- Copying - renaming and deleting-file- Working with directories- Building a text editor- File Uploading & Downloading.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@mlet.edu, contact@mlet.edu
Website: - www.mlet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Certificate Program on

Analysis and Design principle of Microwave Antenna

Course Description

The purpose of this course is to apply the basic principles and evaluate antenna parameters and link power budgets and also can Design and assess the performance of various antennas

COURSE DURATION	: 36Hrs
TIME	: 09.00 AM – 5.30 PM
DATE OF COURSE STARTS	: 05.07.2016
YEAR OFFERED	: 2016-17

Course Instructors

Mrs.A.S.Biji AP/ECE
Ms.T.Nithya AP/ECE

Course Objectives

- An understanding of microwave waveguides, passive & active devices, tubes and network analysis.
- An ability to design microwave matching networks.
- An ability to Understand microwave Components

Course Syllabus

Course Code and Name: EC16171 and Analysis and Design principle of Microwave Antenna

Unit-1 Basic of Microwave antenna

Review of TEM, TE, and TM mode solutions of Maxwell's equations; TEM mode transmission lines: lossless line, line with small losses, power flow in a terminated line; QuasiTEM mode lines: Fields in microstriplines and striplines, losses in Microstrips, Microstrip discontinuities, coupled lines, slot lines and coplanar waveguides; Surface waveguides: Surface waves along an impedance plane, dielectric-coated conducting plane, slab waveguide, corrugated plane; Wave velocities.

Unit-2 Microwave Circuit Theory Principles:

Equivalent voltages and currents; Z, Y, S, and ABCD parameters; Equivalent circuit representation of microwave junctions; Scattering parameter analysis of microwave junctions; Coupling of waveguides through probes, loops, and apertures.

Unit-3 Impedance Transformers:

Review of single-, double- and triple-stub tuners, waveguide reactive elements, quarter-wave transformers, design of maximally flat and Chebyshev transformers; Introduction to tapered transmission lines.

Unit-4 Power Dividers and Couplers:

Scattering matrix of 3- and 4-port junctions; Design of T-junction and Wilkinson power dividers; Design of hybrids and 180°90 hybrids.

Unit-5 Filters and Resonators:

Analysis of periodic structures, Floquet's theorem, filter design by insertion loss method, maximally flat and Chebyshev designs,Resonators- Principles of microwave resonators, loaded, unloaded and external Q, open and shorted TEM lines as resonators, microstrip resonators, dielectric resonators.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: www.miet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Certificate Program on

Enclosure design of Electronics Equipment

Course Description

The purpose of this course is to sensitize a registrant to various aspects of an electronics product. Specifically on n on electrical aspects like mechanical design and detailing. Starting from a need translated into specifications, leading to design and prototyping and ending up in a manufacturable physical prototype.

COURSE DURATION	: 34Hrs
TIME	: 09.00 AM – 6.00 PM
DATE OF COURSE STARTS	: 19.12.2016
YEAR OFFERED	: 2016-17

Course Instructors

Mrs. D.Rekha AP/ECE
Mr.S.M.Muthupandi AP/ECE

Course Objectives

- Introduction to designing enclosures for electronic products
- Provide the basics of designing for the various environments that the products must survive in.
- capacitance effect, propagation.

Course Syllabus

Course Code and Name: EC16172 and Enclosure design of Electronics Equipment

UNIT 1: Introduction to design of electronic product enclosures

Enclosure design for Electronics Equipment Introduction, Aspects and features that are non-electrical and are essential to Electronic Product Realization, Enclosure Design in electronic equipment, Design as applied to small electronics products and projects.

UNIT 2: Embodiment design of enclosures

Alternate Designs in an everyday item, Sheet metal in small equipment (PSU), Layouts and Materials of small equipment, Materials used for construction, Materials Selection, Materials choice, Aluminum for common equipment, Use of Aluminium extrusions, Application of Sheet metal, Sheet Metal bending.

UNIT 3: Making enclosures with sheet metal

Development of enclosures for bending, Video of Fabrication, What can be done in the lab Bending Issues in bending and folding, Making a quick model, Making enclosures with Plastic, Detailing in plastic, Fabricating with flat plastic, Video in ID Lab, Off the shelf enclosures, Readymade enclosures.

UNIT 4: Safety and Environmental Classes of Electronic Enclosures

Application documentation and Selection, Index of protection, Safety, NEMA and related, Testing for IP class, Sealed Enclosures Video, How enclosures can be designed to protect, Public utility boxes, EMI Sealing, Sealed Enclosures.

UNIT 5: Connectors

Connectors, Common connectors, Connectors (multi way) and CoAx, MIL C connectors, Using CAD to design electronic enclosures, CAD in Layout Drawing, Types of CAD, CAD for enclosure Design.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
UG - CSE, EEE & MECH Programs Accredited by NBA, New Delhi.
(An ISO 9001:2015 Certified Institution)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Certificate Program on

PCB Designing

Course Description

The course is intended to give the students the necessary knowledge and of PCB design steps, starting from simple schematics, through creating new components, and all the way to down a final PCB layout

COURSE DURATION	: 31HRS
TIME	: 9.30 AM – 05.00 PM
DATE OF COURSE STARTS	: 04-07-2016
YEAR OFFERED	: 2015-2016

Course Coordinator
Mr.S.SamayaSanjeevi., AP/EEE

Course Objectives

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 Syllabus

Course Code and Name: EE16171&PCB Designing

Unit I – Introduction to PCB designing concepts
Introduction & Brief History-Difference between PWB and PCB-Types of PCBs- PCB Materials-Electronic design Automation (EDA)- Different EDA tools-SPICE and PSPICE Environment-Working of PROTEUS

Unit II – Component introduction and their categories
Active Components -Passive Components -Component Package Types-Through Hole Packages -Axial lead -Radial Lead -Single Inline Package(SIP) -Dual Inline Package(DIP) -Transistor Outline(TO) -Pin Grid Array(PGA) -Metal Electrode Face(MELF) -Leadless Chip Carrier(LCC) -Small Outline Integrated -Circuit(SOIC) -Quad Flat Pack(QPF) and Thin QFP (TQFP) -Ball Grid Array(BGA) -Plastic Leaded -Chip Carrier(PLCC)

Unit III –Introduction to Development Tools
Introduction to PCB Design using OrCAD tool - Introduction to PCB Design using PROTEUS tool

Unit IV – Detailed description and practical of PCB designing
PCB Designing Flow Chart-Description of PCB Layers-Keywords & Their Description-PCB Materials-Rules for Track-Study of IPC Standards

Unit V –Lab practice and designing concepts
Starting the PCB designing-Auto routing-PCB Designing Practice-Post Designing & PCB Fabrication Process

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
UG - CSE, EEE & MECH Programs Accredited by NBA, New Delhi.
(An ISO 9001:2015 Certified Institution)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@mlet.edu, contact@mlet.edu
Website: - www.mlet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Certificate Program on

Fundamentals of Mi power

Course Description

The course is designed to provide a foundation for future research in the field of power systems. The basic objective of this workshop is to train the students to use professional power system software to solve practical power system problems.

COURSE DURATION	: 31HRS
TIME	: 9.30 AM – 05.00 PM
DATE OF COURSE STARTS	: 04-07-2016
YEAR OFFERED	: 2015-2016

Course Coordinator
Mr.E.Muthukumaran., AP/EEE

Course Objectives

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 Syllabus

Course Code and Name: EE16172&Fundamentals of Mi power

Unit I – Introduction

Introduction to Power System Tools-Basics of MiPower Software-Modules

Unit II –Power system studies using MiPower

Analyzing Load Flow problems-procedure to draw Bus-Transmission

line-generator-Load-single line diagram

Unit III –Control system studies using MiPower

Controllers-Time domain analysis-Transient stability analysis

Unit IV –Mathematical modeling using MiPower

Eigen values-Time domain response-Network analysis

Unit V –Case study

Harmonics Analysis-Relay Coordination-Stability analysis-Contingency analysis

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 – 2660 393

DEPARTMENT OF MECHANICALENGINEERING

Certificate Program on

RECENT DEVELOPMENTS IN IC ENGINES

Course Description

This certificate course will delivers the basics of IC Engines and its parts, Function of fuel system, pattern and spray behavior. It also delivers the Emission from the engines and method to reduce the emission. The alternate fuel need for the future trends will be presented in this course.

COURSE DURATION	: 32 HRS
TIME	: 4:45 PM TO 6:45 PM
DATE OF COURSE STARTS	: 18.07.2016
YEAR OFFERED	: 2016-17

Course Instructors

Mr. P. Sundaram, AP/Mech
Mr. S. Kamatchi Sankaran, AP/ Mech
Mr. S.Dhakshinamoorthy, Prof/Mech
Mr. K. Ramesh, AP/ Mech
Mr. T. Prabakaran, Prof/Mech
Mr. P.Pradeep, AP/ Mech

Course Objectives

- To familiarize the students in Developments of the engines and automation structures in detailing using thermal and cad cam Laboratory.

Course Syllabus

Course Code and Name: ME16171 and Recent developments in IC engines

Unit I – Basics of IC engines

Mixture requirements – Fuel injection systems – Monopoint, Multipoint & Direct injection - Stages of combustion – Normal and Abnormal combustion – Knock - Factors affecting knock – Combustion chambers.

Unit II – CI engines

Diesel Fuel Injection Systems - Stages of combustion – Knocking – Factors affecting knock – Direct and Indirect injection systems – Combustion chambers – Fuel Spray behaviour – Spray structure and spray penetration – Air motion - Introduction to Turbocharging.

Unit III –Pollution norms and Driving cycle

Pollutant – Sources – Formation of Carbon Monoxide, Unburnt hydrocarbon, Oxides of Nitrogen, Smoke and Particulate matter – Methods of controlling Emissions – Catalytic converters, Selective Catalytic Reduction and Particulate Traps – Methods of measurement – Emission norms and Driving cycles.

Unit IV –Engine Modifications and alternative fuel

Alcohol, Hydrogen, Compressed Natural Gas, Liquefied Petroleum Gas and Bio Diesel -Properties, Suitability, Merits and Demerits - Engine Modifications.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website : www.miet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF MECHANICALENGINEERING

Certificate Program on

ADVANCED 3D MODELLING IN AUTODESK INVENTOR 2016

Course Description

This course will give the basic idea about the basic modeling using Autodesk Inventor software and part, assembly modeling of various parts of the Engine. The Computer Aided Manufacturing technique also explained as practical session.

COURSE DURATION	: 31 HRS
TIME	: 4:45 PM TO 6:45 PM
DATE OF COURSE STARTS	: 13.02.2017
YEAR OFFERED	: 2016-17

Course Instructors

Mr. M. Visvam, AP/Mech
Mr. S. Kumaradevan, AP/ Mech
Mr. M.Vivekanandan, AP/Mech
Mr. Pandianathan A, AP/Mech
Mr. M. Kirubakaran, AP/Mech
Mr. S. Renold Elsen, AP/Mech

Course Objectives

- To familiarize the students in 3Dmodeling, Assembly, Generating drawings and CAM by using AutoDesk Inventor 2016.

Course Syllabus

Course Code and Name: ME16172 and Advanced 3D Modelling in Autodesk Inventor 2016

Unit I – Basics

Introduction to inventor 2016, Introduction to sketching and 2D constraints, Introduction to 3D modeling

Unit II – Exercises in Modeling

Aesthetic design and solid modeling in inventor 2016, Create, Modify and Fine tune organic forms using t-splines, Create a form based on a reference image, Create solid model from a sketch, Create solid model from sculpted body

Unit III –Exercises in Assembly

Collaboration and assembly design in inventor 2016, Collaborate and manage data in the cloud part 1, Collaborate and manage data in the cloud part 2, Working with components, Move and align components, Create a Rigid Group, Use joints to align components in an assembly, Create as-built joints, Define contact sets, Set up motion study, Apply top-down design methodology

Unit IV –Exercises in Rendering

Rendering, animation, and drawings, Rendering part 1: assign and edit materials, Rendering part 2: assign decals, setup the scene and render on the PC and online, Rendering part 3: Creating animation, Rendering part 4: Create an animated exploded view, Create technical drawings

Unit V –Exercises in CAM

Computer Aided Manufacturing (CAM), CAM Overview, CAM Setup, CAM Drilling, CAM Tool Library, CAM Derived tool path, CAM Simulation overview, CAM Post process

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 - 2660 303

DEPARTMENT OF MECHANICALENGINEERING

Certificate Program on

COGENERATION AND RESIDUAL HEAT RECOVERY SYSTEMS

Course Description

This course will give the theoretical and practical knowledge on cogeneration and residual heat recovery system. The functions of different parts of the plants and plant system designs will be explained.

COURSE DURATION	: 30 HRS
TIME	: 4:45 PM TO 6:45 PM
DATE OF COURSE STARTS	: 13.02.2017
YEAR OFFERED	: 2016-17

Course Instructors

M. Dhandayuthabani ASP/Mech,
S. Thulasiram AP/Mech,
R.Sankardoss AP/Mech,
K.Mohan AP/Mech,
K.Rajasekar AP/Mech, and
D. Senthil Kumar AP/Mech

Course Objectives

- To familiarize the students to study the significance of waste heat recovery systems and carry out its economic analysis.

Course Syllabus

Course Code and Name: ME16173 and Cogeneration and residual heat recovery systems

Unit I – Introduction

Introduction – principles of thermodynamics – cycles – topping – bottoming – combined cycle – organic rankine cycles – performance indices of cogeneration systems – waste heat recovery – sources and types – concept of tri and quad generation.

Unit II – Cogeneration technology

Configuration and thermodynamic performance – steam turbine cogeneration systems – gas turbine cogeneration systems – reciprocating IC engines cogeneration systems – combined cycles cogeneration systems – advanced cogeneration systems: fuel cell, Sterling engines etc.

Unit III – Issues of Cogeneration systems

Cogeneration plants electrical interconnection issues – utility and cogeneration plant interconnection issues – applications of cogeneration in utility sector – industrial sector – building sector – rural sector – impacts of cogeneration plants – fuel, electricity and environment.

Unit IV – Residual heat recovery

Selection criteria for waste heat recovery technologies – recuperators – Regenerators – economizers – plate heat exchangers – thermic fluid heaters – Waste heat boilers – classification, location, service conditions, design Considerations – fluidized bed heat exchangers – heat pipe exchangers – heat pumps – sorption systems.

Unit V – Design system

Selection and design – load curves – sensitivity analysis – regulatory and financial frame work for cogeneration and waste heat recovery systems.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 - 2660 303

DEPARTMENT OF MANAGEMENT STUDIES

Certificate Program on

Investor Awareness

Course Description

1. To teach the students regarding the investment alternatives.
2. To educate that the framework of their analysis with related to investment
3. To highlight the role of SEBI towards investor protection.

COURSE DURATION	: 34HRS
TIME	: 9:00 AM TO 5:30 PM
DATE OF COURSE STARTS	: 08.07.2016
YEAR OFFERED	: 2016-17

Course Co-ordinator

Mr.S.Kumar

Course Objectives

The students can be able to find out the best portfolio of investment which is being very important for the establishment of business as well as for the personal life.

Course Syllabus

Course Code and Name: MBA16171 Investor Awareness

Unit- 1 Investment

Investment- Introduction & decision process – Need and Importance - Types of Investments – Commodities, Real Estate and Financial Assets (Equity, Mutual funds, Debt).

Unit- 1I Indian Securities Market

The Indian securities market, the market participants (Stock exchanges, Stock brokers, Clearing House, Depositories, Depository Participants, FIIs, Domestic institutional investors, Individual investors), Online and offline trading in securities, security market indices.

Unit- 1II Analysis of Equity and Debt Instruments

Fixed Income Securities - Bond features, types of bonds, estimating bond yields, Bond Pricing, Bond market indices. Approaches to Equity Analysis - Introduction to Fundamental Analysis, Technical Analysis and dividend capitalisation models.

Unit- 1V Portfolio Analysis and Financial Derivatives

Portfolio and Diversification, Portfolio Risk and Return; Mutual Funds; Introduction to Financial Derivatives; Financial Derivatives Markets in India.

Unit- V Investor Protection

Role of SEBI and stock exchanges in investor protection; Investor grievances and their redressal system, insider trading, investor awareness and activism.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 – 2660 303

DEPARTMENT OF MANAGEMENT STUDIES

Certificate Program on

BRANDING STRATEGIES

Course Description

1. To provide an insight about Branding and its impact on sale of a good/service.
2. To provide a knowledge on various models with respect to building brands.
3. To inculcate the need of brand for a good/service in the current scenario.
4. To educate the concept of CBBE with its relevancy

COURSE DURATION	: 32HRS
TIME	: 9:00 AM TO 5:30 PM
DATE OF COURSE STARTS	: 08.08.2016
YEAR OFFERED	: 2016-17

Course Co-ordinator

G.Sathishkumar

Course Objectives

The students can be able to create their own brand for a new product and also understood how to position the brand in the competitive market through the helps of models.

Course Syllabus

Course Code and Name: MBA16172 BRANDING STRATEGIES

Unit I BRANDING

Definition – Impact on Sales – Brand Building – Impact of Brands on Perception of Consumers – ICEBERG Model.

Unit II BUILDING OF BRANDS AND MODELS

Brand Personality – Brand Image – Brand Identity – Kasperer's Model. Brand Equity – David Aaker's Model on Brand Personality and Brand Equity, Brand Architecture – Designing Brand Architecture.

Unit III BRANDED CONTENT VS.TRADITIONAL ADVERTISING

Differences between Branded Content and Traditional Advertising - Influence of Brand Value on a Product - Brand House - Visual Aspects of Brand: Logo, Name and Colors.

Unit IV BRAND ANALYSIS AND POSITIONING

Brand Analysis – Importance for Continues Creativity – Brand Positioning –Preparation of Brand Positioning Statement.

Unit V CONSUMER BASED BRAND EQUITY

CBBE – Five Tenets of Brand Building - CBBE Pyramid - Brand Management Framework – Keller's Model.

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu
Ph: 0431 - 2660 303

DEPARTMENT OF MANAGEMENT STUDIES

Certificate Program on

Design Thinking of Management Skills

Course Description

1. To teach the students regarding the different investment alternatives.
2. To teach the skills that needs to sustain creative and design thinking capabilities.
3. To equip the students with a methodology to put design thinking into action
4. To inculcate how the students can solve problems creatively in any setting by collaborating with design coaches.
5. To create a mindset and managerial levers among the student that need to develop an innovative organizational culture

COURSE DURATION	: 32HRS
TIME	: 9:00 AM TO 5:30 PM
DATE OF COURSE STARTS	: 19.09.2016
YEAR OFFERED	: 2016-17

Course Co-ordinator : K.Rahmathnisha

Course Objectives

The students can learn how to transform their mindset and to think creatively like a designer with the strategic capabilities of a business person.

Course Syllabus

Course Code and Name: MBA16173 Design Thinking of Management Skills

Unit 1 User-Centered Insighting

Design Thinking – Need and importance of design thinking – Process & Core elements - Problems from human perspective – Customer centric business – ways to uncover insights behind unmet customer needs.

Unit 11 Creativity

Creativity – Need and importance for business - Essentials of creativity - Strategies to enable creative ideas

Unit 111 Agile Iterating

Innovation - Agile approach to innovation – testing and applying of ideas in the business process – ways to achieve a desirable product faster.

Unit 1V Creative Organizational Cultures

Organization and its culture – Importance of Organizational Culture - Identification of PLC of the business - key managerial levers to spawn a creative culture.

Unit V Organizational Transformation

Organizational transformation – Meaning and Process - Structured methods for achieving a more innovation-driven culture

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007.

Spoken-tutorial Project, IIT Bombay

E-Brochure

Name of FOSS	Applications	Commercial equivalent	Employability	Department
Linux-Ubuntu	Virus free, robust, Operating System	Windows	Technician or System administrator for Computer Vendors (SME's), Indian Railways, Municipal Corporations, Air India and many SME's	Computer Science, IT, ECE, Electronics
LibreOffice -	Basic computer usage Office suite for documents, spreadsheets, presentations, database etc.	MS-Office	Administration, Data entry personnel, Travel Agency Assistant, Indian Railways, Municipal corporations, Govt. offices	All the departments including Schools
Writer	Word Processing, Documentation	Word		
Calc	Spreadsheets	Excel		
Impress	Presentations	Powerpoint		
Base	Managing Databases	Access		
Draw	Drawing	Windows-based Visio		
Math	Mathematical Operations	MathType		
PHP&MySQL	Web development and Database Management	.NET	Website Developer in all types of small and large enterprises, popular companies hiring PHP & MySQL trained persons are Air-India, Bridge & Roof Co., Media channels, agencies etc.	Computer Science and IT
C/C++, Java, Netbeans and Python	Programming language		Programmer in SMEs working in C, Java, Netbeans and Python, Lab- Assistant in colleges, Popular companies requiring programmers on C / C++, Java and Python are HCL technologies, Wipro, L&T, TCS	Computer Science and IT
Scilab	Scientific computation package for numerical computations	Matlab	Value addition in technical problem solving via use computational methods for engineering problems, Applicable in Chemical, ECE, Electrical, Electronics, Civil, Mechanical, Mathematics, etc.	Computer science, IT, ECE, Electronics, Mechanical
LaTeX	Document markup language and preparation system for Tex typesetting	MS-Word	Value addition to academic Skills set. Essential for International paper presentation and scientific journals.	All the departments
OpenFOAM	For Fluid Mechanics to solve and create fluid movies	Fluent	Companies like AUDI,Tata Steel, Volkswagen, etc. have started using it. Also Indian Govt. agencies like BARC (Babha Atomic Research Center) are making use of this free software	Mechanical

Name of FOSS	Applications	Commercial equivalent	Employability	Department
Oscad - now eSIM	EDA tool for circuit design, simulation, analysis and PCB design. It is an integrated tool built using open source software such as KiCad, Ngspice and Scilab.	Orcad	PCB designer in SME's and academic institutions, Lab assistant for Electronic Circuit Lab, Electronic network designer.	ECE, Electronics, EEE, Electrical
Firefox	Web browser	Internet Explorer	System Administrator and Lab assistant in SME's and academic institutes.	All the departments
GIMP	Image Editing and Graphic Design	Photoshop	Self employed photo editor, editor in photostudios, graphic design job in gift stores, advertising agencies, etc.	Arts and Textile designing, Fashion designing, Architecture
Q-CAD	Basic 2D design and drafting	AutoCAD		
Blender	Animation and Computer Graphics	Maya 3D	Animator in graphic and animation media, film etc. Sectors, such as advertising computer games, TV, education, interiordecoration, etc.	Arts, Design
Ruby	Programming language		Ruby was used to implemented the reactive control part for the Siemens service robot. Ruby Web Dialogs based app to manage and track oncall and on-site support for the IT help desk and IT operations teams.	Simulations, 3D Modeling, Business, Robotics, Networking, System Administration, etc.
Perl	High-level programming language		Perl has been called the system administrator's best friend for its ability to make common tasks easy. Perl's process, file, and text manipulation facilities make it particularly well suited for tasks involving quick prototyping, system utilities, software tools, system management tasks, database access, graphical programming, networking, and web programming.	Web developers, system administrators. Mathematicians, geneticists, journalists, managers, etc.
Jmol Application	Jmol applet is used to explore the structure of molecules. Jmol applet is used to depict X-ray structures.		Jmol returns a 3D representation of a molecule that may be used as a teaching tool, or for research e.g. in chemistry and biochemistry. There is a standalone application and a development tool kit that can be integrated into other Java applications.	Chemistry, Biochemistry
CellDesigner	Software for Planning & Designing Wireless Communication Systems, Modeling tool		CellDesigner has fully implemented the Korowajczuk 3D model, capable of performing simultaneously outdoor and indoor multi-floor predictions.	BioScience and Biotechnology

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPPALLI-620 007

Name of FOSS	Applications	Commercial equivalent	Employability	Department
GChemPaint	GChemPaint is an editor for 2D chemical structures with a multiple document interface.		GChemPaint is currently being developed as part of The Chemistry Development Kit, and a Standard Widget Tool kit-based GChemPaint application is being developed, as part of Bioclipse.	School level Chemistry
Inkscape	Graphic Designing	Adobe Illustrator, Coreldraw	Photo editing, Photo Manipulation and Graphic Design	All the departments including Schools
Bash	Bash is a "Unix shell" commandline interface for interacting with the operating system. Bash has the ability to run an entire script of commands, known as a "Bash Shell script" or "Shell script".		Familiarity with GNU/Linux command lines, and familiarity with basic programming concepts is a prerequisite for learning BASH. System administrators will greatly benefit by learning to automate common tasks using BASH.	System Administrators
Ascend	ASCEND is a free, open source, mathematical modelling system.		Its main uses have been in the field of chemical process modelling, with its novel modelling language conventions and powerful solver.	Chemical Engineering
Joomla	Content Management System		To build Website.	All the Departments
Biopython	Tool for Computational Biology and Bioinformatics.		To access online database such as NCBI. It can perform common operations such as transcription, translation, obtain complements, reverse complements, parsing, running BLAST.	Biology, Biochemistry and Dept. of Bioinformatics.
Java Business Application	To create a business application from scratch. Example : Library Management System		To built the business application and provide domain expertise	Computer Science and IT
Kturtle	An educational programming environment which helps in learning how to build logic and how to program, in an easy manner.		Some of its features are : intuitive syntax highlighting, simple error messages, integrated canvas to make drawings on, integrated help function, slowmotion or step execution, and more.	School level
Ktouch	Typing tutor teaches how to type using an online interactive keyboard		Learn typing at your own pace. Gradually increase your typing speed and along with it, your accuracy.	
FrontAccounting	FrontAccounting (FA) is a free and open source accounting software.	Alternative to Tally	FrontAccounting (FA) is a professional web-based Accounting system, written in PHP.	Commerce, Management

PRINCIPAL
M.I.E.T. ENGINEERING COLLEG
GUNDUR, TIRUCHIRAPPALLI-620 00

Name of FOSS	Applications	Commercial equivalent	Employability	Department
Avogadro	Avogadro is a free and open source, advanced molecule editor and visualizer designed for cross-platform use in computational chemistry, molecular modeling, material science, bioinformatics, etc.	ChemDraw	Academic positions in Chemistry involving teaching as well as R & D.	Chemistry and Bio-Chemistry
Drupal	Drupal is a free and open source content management system (CMS) written in PHP and distributed under the GNU General Public License		Web developer, Web architect, Computer solutions provider, Web technologies, Information systems, Content Managers, Digital solutions.	MCA, MBA, B.Comm., B.Comm. IT, any Engineering dept.
DWSIM	DWSIM is an open-source CAPE-OPEN compliant chemical process simulator. It allows us to conduct experiments and analyze data using advanced models and operations.	ASPEN Plus, CHEMCAD, PRO/II	As engineer in Power, Petrochemicals, Pharmaceutical, Chemical industry.	Chemical Engineering
Open Modelica	OpenModelica is an open source modelling and simulation environment intended for industrial and academic usage.It is an object oriented declarative multi domain modelling Language for complex systems.	Dymola	As engineer in Power, Automotive, Aerospace industry.	Chemical Engineering, Mechanical, Aerospace.
UCSF Chimera	UCSF Chimera is a program for interactive visualization and analysis of molecular structures and related data. Using Chimera, one can generate high-quality images and animations.	ChemDraw	Academic positions in Chemistry involving teaching as well as R&D. Also in chemical industry R&D.	Chemistry
Arduino	Arduino is open-source hardware, open-source software and microcontroller based kit.		Microcontroller and embedded system manufacturing industry, Robotics.	Electrical, Electronics Physics, and Computer Engineering