



ADDON COURSES (2018-19) –Program Report

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Date: 18.12.2018

PROGRAM REPORT

Name of the Add on Course: Fundamentals on Arduino Interfacing home Appliances

Day/Duration: 10.12.2018 to 17.12.2018 (7 Days) – 36 Hrs

Time: 09:30 AM to 04:30 PM

Resource Person: Mr M. Suyog ,Aakar, IIT, Mumbai

Name of the Coordinator: Mr .K. Vamsi, Assistant Professor, Dept. of EEE, VIEW .

Number of Participants: 68

Course Objectives:

- To explain about the overview of Arduino Programming.
- To describe the fundamental coding of Sensors.

Topics Covered: The following topics covered in this program

1. Introduction to Arduino, Hardware Overview, Arduino IDE and Sketch Overview, Understanding Arduino Syntax Coding,
2. Various Basic Industrial Sensors-IR- Analog Sensor, Light Sensor, Basic working Technique of Sensor, A
3. Blink an LED Without using the delay () Function, Challenge Discussion,
4. Analog I/O and Serial Communications, Strings and Text Files
5. Fundamentals of Computational Device, Transistor, Logic Gates
6. Basic LED interfacing and coding, LED, RGB interfacing and coding
7. Running LEDs, Sand Glass Filling of LEDs, Sensor Interfacing, Seven Segment Display.

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Able to understand about Arduino Programming.	PO1,PO3, PO5	3
CO2	Able to apply various coding techniques of Arduino Programming for different Sensors	PO1,PO5	3

Assessment Procedure: The assessment of the Add-on course is conducted in Multiple Choice Questions through offline mode.



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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Date: 18.12.2018

PROGRAM REPORT

Name of the Value Added Course: Internet of Things (IoT) Using Raspberry Pi

Day/Duration: 10.12.2018 to 17.12.2018 (7 Days) - 36 Hrs

Time: 09:30 AM to 04:30 PM

Resource Person: Dr. S. Srinivas, Professor, GITAM (Deemed) University.

Name of the Coordinator: Mr. G. Ravi Kumar, Assistant Professor, Dept. of EEE, VIEW.

Number of Participants: 56

Course Objectives:

- To explain about the overview of Understanding IoT fundamentals.
- To describe the Introduction to Raspberry Pi.

Topics Covered: The following topics covered in this program

1. Understanding IoT fundamentals, IOT Architecture and protocols, Real time Examples of IoT, Overview of IoT components and IoT Communication Technologies.
2. Definition of an embedded system in terms of its interface, Components of an embedded system, Hardware and software components in IoT devices.
3. Overview of Sensors working, Analog and Digital Sensors, Interfacing of Temperature, Humidity, Motion, Light and Gas Sensor with Arduino.
4. Introduction to Raspberry Pi, Understanding SoC architecture and SoCs used in Raspberry Pi , On-board components of Raspberry Pi and their functions.
5. Concept of users and the login process, Viewing and modifying the file system.
6. Installation of LAMP Web Server on Raspberry Pi.
7. MQTT Protocol, Controlling the hardware through a Web Page – creating custom web pages using HTML

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Able to understand about IoT fundamentals.	PO1,PO3	3
CO2	Able to apply various techniques on Raspberry Pi.	PO5	3

Assessment Procedure: The assessment of the Add-on course is conducted in Multiple Choice Questions through Offline mode.




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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Date: 25.09.2018

PROGRAM REPORT

Name of the Value Added Course: **Basic PYTHON Programming**

Day/Duration :17.09.2018 to 24.09.2018(7 Days) - 42 Hrs

Time: 09:30AM to 04:30 PM

Resource Person: Mrs. P. Vijaya Bharathi, Assistant Professor. of CSE, VIEW.

Name of the Coordinator: Ms. V. V. Sai Santoshi, Assistant Professor, Dept. of EEE, VIEW.

Number of Participants: 58

Course Objectives:

1. To acquire programming skills in core Python.
2. To develop the skill of designing Graphical user Interfaces in Python.
3. To develop the ability to write database applications in Python

Topics Covered: The following topics covered in this program

1. Introduction to Python, Working with Data, Data Types and Variables
2. Python functions, Boolean expressions, selection structure
3. Define and use functions and modules, working with recursion, Basic skills for working with list
4. An introduction to file I/O, use text files, use CSV files, use binary files
5. Object Oriented Programming
6. override object methods, Illustrative programs, Exercises
7. An introduction to relational databases, SQL statements for data manipulation
8. Using Python to work with a database, Creating a GUI that handles an event, working with components, Illustrative programs, Exercises

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Problem Solving and Programming Capability	PO3 ,PO5	3
CO2	Implement object oriented concepts	PO3,PO5	3
CO3	Implement database and GUI applications		3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions through offline mode.



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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Date: 25.09.2018

PROGRAM REPORT

Name of the Add-on Course : SMPS for home appliances

Day/Duration : 17.09.2018 to 24.09.2018 (7 Days) - 42 Hrs

Time : 09:30AM to 04:30 PM

Resource Person: Dr. Akanksha Mishra, Associate professor, Department of EEE, VIEW college

Name of the Coordinator: Mr. K. V. Sri Ram Prasad, Assistant professor, Dept of EEE, VIEW College

Number of Participants : 62

Course Objectives:

1. This course introduces the basic concepts of switched-mode converter circuits for controlling and converting electrical power with high efficiency.
2. Principles of converter circuit analysis are introduced, and are developed for finding the steady state voltages, current, and efficiency of power converters.

Topics Covered: The following topics covered in this

1. Switched mode power conversion – Overview
2. Non-isolated converters.
3. Isolated converters.
4. Modeling of converters,
5. Controller basics.
6. Controller design principles
7. Modeling of PID Controller

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Understand what a switched-mode converter is and its basic operating principles and molding of SMPS	PO1, PO5	3
CO2	Be able to solve for the steady-state voltages and currents of step-down, step-up, inverting, and other power converters	PO3	3
CO3	Design an Average equivalent circuit model and Solve for the Converter efficiency	PO1, PO5	3

Assessment Procedure: The assessment of the Add-on course is conducted through Multiple Choice Questions through Offline line Mode.



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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Date: 13.09.2018

PROGRAM REPORT

Name of the Add-on Course: **IoT applications with Arduino**

Day/Duration : 04.09.2018 to 12.09.2018 (7 Days) - 42Hrs

Time: 09:30AM to 04:30PM

Resource Person: Dr.R.V.S.S Lakshmi Kumari, Assoc. Prof., Dept. of EEE, GVPW

Name of the Coordinator: K.Vamsi, Assistant professor, Dept of EEE, VIEW College

Number of Participants: 41

Course Objectives:

1. To understand the recent application domains of IoT in everyday life
2. To design and build an actual IoT system.

Topics Covered: The following topics covered in this program

- Introduction to IOT
- Arduino Simulation Environment
- Sensor & Actuators with Arduino
- Basic Networking with ESP8266 Wi-Fi module
- IoT Protocols
- Cloud Platforms for IOT
- Arduino and interfacing with components

Course Outcomes:


COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Able to choose the right hardware, software and protocols for the proposed application.	PO3, PO5	3
CO2	Able to learn the fundamentals of this emerging technology.	PO3, PO5	3

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Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions through offline mode.




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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Date: 13.09.2018

PROGRAM REPORT

Name of the Value Added Course: EV Technology

Day/Duration: 04-09-2018 to 12-09-2018 (7 Days) - 42Hrs

Time: 09:30 AM to 04:30 PM

Resource Person: Mr.M. Suyog ,Aakar, IIT Bombay

Name of the Coordinator: Mr. A. Chandhraiah,Assistant professor, Dept of EEE, VIEW College

Number of Participants: 45

Course Objectives:

1. To develop the practical knowledge and skill on Motor, Controller, Battery Pack Design, BMS, Charger equipment's and Charging Station.
2. To discuss various Industrial scenarios and business opportunities and analyze various electric drives suitable for hybrid electric vehicles.

Topics Covered: The following topics covered in this program

1. Introduction to the electric vehicle
2. Introduction to sources of electric vehicle
3. Introduction to latest technology in battery
4. Introduction to electric motor
5. Simulation model of implementation with controllers
6. Real time proto type model design

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Able to Understand the architecture of E-Vehicle	PO3, PO5	3
CO2	Able to know Specific Source for E-Vehicle	PO1, PO3, PO5	2
CO3	Able to convert topology for E-Vehicle	PO3, PO5	3
CO4	Able to Understand the Simulink model environment of E-Vehicle Able to know the hardware proto type model	PO3,PO5	3

Assessment Procedure: The assessment of the Addon course through offline mode. Multiple Choice Questions



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DEPARTMENT OF MECHANICAL ENGINEERING

Date: 28.08.2018

PROGRAM REPORT

Name of the Add-on Course: Hands on Experience in Welding (Foundation Level)

Day/Duration: 20.08.2018 to 25.08.2018 (6 Days) - 36 Hours

Time: 09:30 AM to 03:30 PM

Resource Person: Mr. A. Srinivasulu, Assistant Professor, JNTUK-UCEV

Name of the Coordinator: Mrs. B. Swathi, Assistant Professor.

Number of Participants: 38

Course Objectives:

1. Identifying and selecting the appropriate electrode, polarity, amperage setting, and electrode manipulation for a specific application
2. Describing and employing safe work practices

Topics Covered: The following topics covered in this program


1. Worksite Safety and Orientation
2. Oxy Fuel Welding and Cutting
3. Basic Shielded Metal Arc Welding
4. Basic Gas Metal Arc Welding
5. Air Arc and Plasma Arc Cutting
6. Advanced Shielded Metal Arc Welding

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Able to understand the various processes involved in welding.	PO3	3
CO2	Able to selecting appropriate trade-related equipment for the job.	PO4	3

Assessment Procedure: The assessment of the Add-on course is conducted in Multiple Choice Questions.




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DEPARTMENT OF MECHANICAL ENGINEERING

Date: 03.10.2018

PROGRAM REPORT

Name of the Add-on Course: Design and development of Equal channel angular pressing set up.

Day/Duration: 24.09.2018 TO 01.10.2018

(7Days) - 42 Hours

Time: 09:30AM to 04:30PM

Resource Person: Mr. V. Ananda Babu, Assistant Professor, VIEW, Visakhapatnam

Name of the Coordinator: Mrs. U. Ramya Sri, Assistant Professor.

Number of Participants: 46

Course Objectives:

1. To describe the process of Severe Plastic Deformation
2. To explain the Equal Channel Angular Pressing

Topics Covered: The following topics covered in this program

1. Properties of Aluminum Alloy 6061-T6
2. Mechanical Properties of AA 6061-T6
3. Chemical Composition of D2 Tool Steel
4. Equal Channel Angular Pressing Process
5. Scanning Electron Microscopy
6. Vicker's Micro Hardness Test
7. Hardness of ECAPed samples in Route C


Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	understand production Equal Channel Angular Pressing Process	PO3	3
CO2	conduct Vicker's Micro Hardness Test	PO5	3

Assessment Procedure: The assessment of the Add-on course is conducted in Multiple Choice Questions.




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DEPARTMENT OF MECHANICAL ENGINEERING

Date: 18.02.2019

PROGRAM REPORT

Name of the Add-on Course: Fabrication and Characterization of Composite Material

Day/Duration: 11.02.2019 to 15.02.2019(5 Days) - 35 Hours

Time: 09:00AM to 5:00PM

Resource Person: Dr. V.V. Bhaskara Rao, Scientist-G, NSTL, Visakhapatnam.

Name of the Coordinator: Mr. Ch. Suresh, Assistant Professor.

Number of Participants: 49

Course Objectives:

1. Develop and understanding of the design, processing, and behavior of composite materials.
2. Undertake a design project involving application of fiber reinforced laminates by using computer software.

Topics Covered: The following topics covered in this program

1. Composite technology Characteristics of advanced composite materials
2. Material forms
3. Composite Laminate Design/Analysis
4. Composites Manufacturing Methods
5. Physical Characterization of Composites

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Understand the various processes involved in manufacturing of composites.	PO5	3
CO2	Design a composite material based on application.	PO4	3

Assessment Procedure: The assessment of the Add-on course is conducted in Multiple Choice Questions.




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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Date: 12-12-2018

PROGRAM REPORT

Name of the Addon Course: PCB Design and Testing

Day/Duration: 03-12-2018 to 08-12-2018 (6 days)- 36 Hrs.

Time: 9.30AM – 4.30PM

Resource Person: Mr. T. Pradeep, Applyvolt

Name of the Coordinator: Mr. D. Tilak Raju, Asst.Professor.

Number of Participants: 63

Course Objectives:

1. To gain knowledge on interfacing sensors to Raspberry Pi.
2. To develop an application based product to solve real-world issues.

Topics Covered: The following topics covered in this program


1. PCB Fundamentals: PCB Advantages, Components of PCB, Electronic Components, Microprocessors and Microcontrollers, IC's, Surface Mount Devices (SMD), Classification of PCB, Single, Double, Multilayer and Flexible Boards, Manufacturing of PCB, PCB Standards.
2. Schematic and Layout Design: Schematic Diagram, General, Mechanical and Electrical Design Considerations, Placing and Mounting of Components, Conductor Spacing, Routing Guidelines, Heat Sinks and Package Density, Net List, Creating Components for Library, Tracks, Pads, Vias, Power Plane, Grounding.
3. Technology of PCB: Design Automation, Design Rule Checking, Exporting Drill and Gerber Files, Drills, Footprints and Libraries, Adding and Editing Pins, Copper Clad Laminates, Materials of Copper Clad Laminates, Properties of Laminates (Electrical and Physical), Types of Laminates, Soldering Techniques, Film Master Preparation, Image Transfer, Photo Printing, Screen Printing, Plating Techniques Etching Techniques, Mechanical Machining Operations, Lead Cutting and Soldering Techniques, Testing and Quality Controls.
4. PCB Technology: Trends, Environmental Concerns in PCB Industry.


Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Understand the steps for PCB circuit design and fabrication.	PO3,PO4	3
CO2	Develop PCB board for hardware components soldering and testing.	PO4, PO8	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions.




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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Date: 12-12-2018

PROGRAM REPORT

Name of the Addon Course: Computational thinking and problem solving skills using C

Day/Duration: 03-12-2018 to 08-12-2018 (6days)-36 Hrs.

Time: 9.30AM-4.30PM

Resource Person: Mrs. P. Vijaya Bharathi, Assoc .Prof. , Dept. of CSE.

Name of the Coordinator: Mrs. Ch. Anitha Bhavani, Asst.Professor

Number of Participants:75

Course Objectives:

1. To gain basic knowledge in C- programming.
2. To solve the problems involved in C-language.

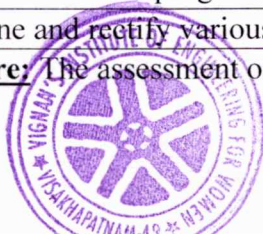
Topics Covered: The following topics covered in this program

1. **Basics:** Introduction, Information and data, Data encoding. Logic: Boolean logic, Applications of propositional logic
2. **Problem Solving and Algorithmic Thinking:** Problem definition, Logical reasoning, Problem decomposition, Abstraction. Flowcharting, Name binding, Selection, Repetition, Modularization. Data organization: List and Arrays. Simple algorithms, comparison of performance of algorithms.
3. **Problem Solving Techniques:** Factoring and Recursion Techniques, Search and Sort techniques, Text processing and Pattern matching
4. **Introduction to C:** History of C, Features of C, Structure of C Program, Character Set, C Tokens- Keywords, Identifiers, Constants, Variables, Data types, Operators.
5. **Statements:** Selection statements (Decision Making)- if and switch statements with examples, Repetition statements (loops)- while, for, do-while statements with examples, Unconditional statements- break, continue, go to statements with examples.
6. **Functions:** Designing Structured Programs, Types of Functions-User defined functions, Standard functions, Categories of functions, Parameter Passing techniques, Storage classes, Recursion.
7. **Arrays:** Declaration and Initialization, One dimensional Arrays, Two dimensional Arrays
8. **Strings:** Declaration and Initialization, String Input / Output functions, String manipulation functions.
9. **Pointers:** Introduction, Definition and Declaration of pointers, address operator, Pointer variables, Pointers with Arrays.
10. **Structures:** Introduction, Declaration and Initialization, Array of Structures, Unions.

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	To interpret the basic programming in C-language	PO1,PO2	2
CO2	To examine and rectify various errors in C-language.	PO1,PO2	2

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions.



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Date: 12-12-2018

PROGRAM REPORT

Name of the Addon Course: Principles of Electronics

Day/Duration: 03-12-2018 to 08-12-2018 (6 days)-36 Hrs

Time: 9.30AM -4.30PM

Resource Person: Mr. Md.Ajmal, Data Pro.

Name of the Coordinator: Mr. P. Sudhakar, Asst.Prof.

Number of Participants: 66

Course Objectives:

1. To gain basic knowledge in electronic circuits and devices.
2. To analyze the characteristics of the electronic circuits

Topics Covered: The following topics covered in this program

1. Network theorems: conventional and electron flow, Concept of voltage source, Concept of current source, Kirchoff's current and voltage law, superposition theorem, reciprocity theorem, Thevenin's theorem, Norton's theorem, maximum power transfer theorem, impedance, parameters for two-port network, principle of duality, reduction of complicated circuit method T and π form, conversion of T and π sections To study the characteristics of various active devices.
2. AC through RC, RL, RLC series and parallel circuits, resonance in series and parallel RLC circuits, graphical representation of series and parallel resonance circuits, band width and Q – factor of series RLC circuits To design the various circuits.
3. Energy Bands in Solids, Electrical conductivity, Carrier Concentration and Fermi level of intrinsic Semiconductor, Donor and Acceptor, Carrier density and Fermi level in extrinsic semiconductor (Qualitative Idea). Dependence of Fermi Level on donor and acceptor concentration, Idea of carrier mobility, Drift and Diffusion current, Einstein relation
4. P-N junction: barrier formation, barrier potential, transition capacitance, qualitative mechanisms of junction breakdown: avalanche breakdown and zener breakdown, Zener diode, Idea of biasing, biasing of P –N junction, current across P – N junction, diode equation, diode resistances, load line of diode circuit
5. Half wave and full wave rectifier, bridge rectifiers, ripple factor, rectification efficiency, clipping and clamping circuits, basic working idea of solar cell, LED.

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	To gain the basic knowledge in electronics.	PO1,PO2,PO3	3
CO2	To solve the problems involved in electronics.	PO1,PO2,PO3,PO4	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions.



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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Date: 18-07-2018

PROGRAM REPORT

Name of the Addon Course : Introduction to Arduino for IoT applications.

Day/Duration : 09-07-2018 to 14-07-2018 (6 days) - 36 Hrs.

Time: 9.30am- 4.30pm

Resource Person: Mr. Seshu Patnaik, Electro Pro

Name of the Coordinator: Mr. P. Gopi Krishna, Asst.Prof.

Number of Participants: 61

Course Objectives:

1. To gain the knowledge about arduino board.
2. To develop the hardware projects using different sensors.

Topics Covered: The following topics covered in this program

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 Architecture, Setup the IDE, Writing Arduino Software, Arduino Libraries, Basics of Embedded C programming for Arduino, Interfacing LED, push button
3. **Sensor and 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. **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 Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	To understanding the basic concepts of arduino hardware with sensors.	PO1,PO2	3
CO2	To model various IoT application hardware using arduino board.	PO3,PO5	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions.



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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Date: 19-07-2018

PROGRAM REPORT

Name of the Addon Course: Fundamentals of ARM926 processor and its applications

Day/Duration : 09-7-2018 to 14-7-2018

Time: 9.30am- 4.30 pm

Resource Person: Mr. T. Pradeep, Applyvolt

Name of the Coordinator: Mrs. S. Malathi

Number of Participants: 63

Course Objectives:

1. To gain the basic knowledge about ARM926 processor.
2. To understand basic programming with peripheral devices.

Topics Covered: The following topics covered in this program

1. **ARM Embedded Systems :** Introduction to Embedded Systems, The RISC Design Philosophy, The ARM Design Philosophy, Embedded System Hardware, Embedded System Software
2. **ARM Processor Fundamentals:** The Acron RISC Machine, The ARM programmer's model, Current Program Status Register, Exceptions, Interrupts, and the Vector Table, ARM Processor Families
3. **ARM Organization and Peripherals:** 3-stage pipeline ARM organization, 5-stage pipeline ARM organization, ARM instruction execution, Peripherals: GPIO, UART, I2C, SPI, ADC/DAC, Timers, Displays, Interrupts and DMA.
4. **Efficient C Programming for ARM :** Data types, Expressions and Conditional statements, Loops, Functions and procedures, Use of memory, Pointer Aliasing, Bit-Field
5. **ARM Assembly Language Programming:** Data processing instructions, Data transfer instructions, Control flow instructions, Writing simple assembly language programs

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	To understand the basic concept of ARM926 processor.	PO1,PO2	2
CO2	To compute various interfacing programming using keil software.	PO3,PO5	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions



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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Date: 18-07-2018

PROGRAM REPORT

Name of the Addon Course: Embedded system design

Day/Duration : 09-07-2018 to 14-07-2018(6 days) - 36Hrs.

Time: 9.30am-4.30pm

Resource Person: Mr. S. Venkatesh , Electropro

Name of the Coordinator: Mr. K. Sridhar , Asst. Prof.

Number of Participants: 73

Course Objectives:

1. To gain the knowledge towards basic architecture of embedded systems.
2. To design embedded hardware using different software co-design tools.

Topics Covered: The following topics covered in this program

1. Introduction, basic architecture, operation, super-scalar and VLSI architecture, application specific instruction set processors (ASIPS), Micro-controllers, digital signal processors, selecting a microprocessor.
2. Buffers and latches, Crystal, Reset circuit, Chip select logic circuit, timers and counters and watch dog timers, Universal asynchronous receiver, transmitter (UART), Pulse width modulators, LCD controllers, Keypad controllers. Design trade-offs due to thermal considerations and Effects of EMI/ES etc.
3. Challenges and issues in embedded software development, Co-design
4. Real time operating systems, Kernel architecture: Hardware, Task/process control subsystem, Device drivers, File subsystem, system calls, Embedded operating systems, Task scheduling in embedded systems: task scheduler, first in first out, shortest job first, round robin, priority based scheduling, Context switch: Task synchronization: mutex, semaphore, Timers, Types of embedded operating systems, Programming languages: assembly languages, high level language..
5. Embedded system development process, Determine the requirements, Design the system architecture, Choose the operating system, Choose the processor, Choose the development platform, Choose the programming language, Coding issues, Code optimization, Efficient input/output, Testing and debugging, Verify the software on the host system, Verify the software on the embedded system Case study of different embedded prototype applications.

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	To understand the basic concepts of embedded systems.	PO1,PO2	3
CO2	To demonstrate various prototype applications in embedded systems	PO5	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions.



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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Date: 05-01-2019

PROGRAM REPORT

Name of the Addon Course: IoT application development using AVR studio

Day/Duration : 26-12-2018 to 01-01-2019 (6Days) - 36 Hrs.

Time: 9.30am- 4.30 pm

Resource Person: Mr. Md. Ajmal, Datapro

Name of the Coordinator: Mr. K. Rajendra Prasad, Asst. Professor.

Number of Participants:63

Course Objectives:

1. To gain basic knowledge on IoT architectures.
2. To implement various IoT applications using specific hardware boards.

Topics Covered: The following topics covered in this program

1. Introduction to IoT: Architectural overview, Design principles and needed capabilities, IoT Applications, Sensing, Actuation, Basics of Networking, M2M and IoT Technology Fundamentals- Devices and gateways, Data management, Business processes in IoT, Role of cloud in IoT
2. Elements of IoT:Hardware components : computing (Arduino, Raspberry Pi), communication, Sensing, Actuation, I/O interfaces Software Components- Programming APIs (Using python/Arduino) for communication protocols-MQTT, Zigbee, Bluetooth, CoAP, UDP, TCP.
3. Sensing and Actuation: Definition of Sensor, Sensor features, Resolution, Classes, Different types of sensors, Actuator, Different types of Actuators, purpose of Sensors and Actuators in IoT ,Implemented various IoT
4. IoT Application Development: Solution frame work for IoT Applications-Implementation of Device integration, Data acquisition and Integration, Device data storage on cloud/local server, Authentication, authorization of Devices
5. IoT Case Studies: IoT Case studies and mini projects based on industrial Automation, Transportation, Agriculture, Healthcare, Home Automation

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	To interpret IoT architecture.	PO1	2
CO2	To develop various application- oriented hardware using sensors and actuators.	PO3,PO5	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions.



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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Date: 05-01-2019

PROGRAM REPORT

Name of the Addon Course : Multi Resolution Techniques

Day/Duration : 26-12-2018 to 01-01-2019

Time:9.30 am – 4.30 pm

Resource Person: Dr. Puvvada Ramesh, Rtd.Professor

Name of the Coordinator: Mrs. P. Kamala, Asst.Professor

Number of Participants: 64

Course Objectives:

1. To understand the image representation in Fourier & wavelet basis and frames
2. To understand the algorithm, available to solve real time image processing using pixel – level features.

Topics Covered: The following topics covered in this program

1. **Multi resolution:** Multi resolution Techniques span an exceptionally broad range of algorithms, models, methods, and concepts. Central to the multi resolution approach is to somehow express short-range, mid-range, and long-range relationships explicitly.
2. **Wavelet Methods:** Problems in which a wavelet transform is used to decompose an image or video into multiple scales, very commonly for image/video denoising, or for feeding the coefficients at multiple scales into a classifier for image classification and segmentation.
3. **Hierarchical Models:** A model in which a pixellated, finest-scale random field is explicitly represented using a set of random fields over scales. In many cases the multi-scale model may be simpler, using principles of Markov decomposition to decouple the problem into pieces. A multi-scale model allows different models to be asserted at different scales, usually simpler or more meaningful than having a single-scale model which needs to assert all of the various scale-dependent behaviours simultaneously.
4. **Hierarchical Algorithms:** Even if there is no explicitly hierarchical model, it is possible for the processing algorithm to be hierarchical. Best known examples include multigrid methods, whereby a single-scale linear system is solved by casting the problem onto a hierarchy, and wavelet methods in image processing, whereby the image is transferred into a set of multiscale coefficients in the wavelet domain,

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	To Analyze images using wavelet transforms	PO4,PO5	3
CO2	To Illustrate images in different resolutions.	PO4,PO5	2

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Date: 05-01-2019

PROGRAM REPORT

Name of the Addon Course : IC Technology

Day/Duration : 26-12-2018 to 01-01-2019 (6 Days) - 36 Hrs.

Time: 9.30 am-4.30pm

Resource Person: Mr. A. Sesha Rao, Rtd.Scientist, NSTL.

Name of the Coordinator: Mrs. B. Manjula, Asst.Prof.

Number of Participants: 59

Course Objectives:

1. To explain fundamental principles involved in the fabrication of VLSI devices and circuits
2. To demonstrate the fabrication process of VLSI circuits

Topics Covered: The following topics covered in this program

1. Environment and Crystal Growth for VLSI Technology

Environment: Semiconductor technology trend, Clean rooms, Wafer cleaning

Semiconductor Substrate: Phase diagram and solid solubility, Crystal structure, Crystal defects, Czochralski growth, Bridgman growth of GaAs, Float Zone growth, Wafer Preparation and specifications

2. Fabrication Processes Part 1

Deposition: Evaporation, Sputtering and Chemical Vapor Deposition

Epitaxy: Molecular Beam Epitaxy, Vapor Phase Epitaxy, Liquid Phase Epitaxy, Evaluation of epitaxial layers

Silicon Oxidation: Thermal oxidation process, Kinetics of growth, Properties of Silicon Dioxide, Oxide Quality, high κ and low κ dielectrics

Diffusion: Nature of diffusion, Diffusion in a concentration gradient, diffusion equation, impurity behavior, diffusion systems, problems in diffusion, evaluation of diffused layers

Ion Implantation: Penetration range, ion implantation systems, process considerations, implantation damage and annealing

3. Fabrication Processes Part 2

Etching: Wet chemical etching, dry physical etching, dry chemical etching, reactive ion etching, ion beam techniques

Lithography: Photo-reactive materials, Pattern generation and mask making, pattern transfer, Electron beam, Ion beam and X-ray lithography

Device Isolation, Contacts and Metallization: Junction and oxide isolation, LOCOS, trench isolation, Schottky contacts, Ohmic contacts, Metallization and Packaging

CMOS Process Flow: N well, P-well and Twin tub

Design rules, Layout of MOS based circuits (gates and combinational logic), Buried and Butting Contact

4. Measurements, Packaging and Testing

Semiconductor Measurements: Conductivity type, Resistivity, Hall Effect Measurements, Drift Mobility, Minority Carrier Lifetime and diffusion length

Packaging: Integrated circuit packages, Electronics package reliability



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Testing: Technology trends affecting testing, VLSI testing process and test equipment, test economics and product quality

5. **SOI, GaAs and Bipolar Technologies**

SOI Technology: SOI fabrication using SIMOX, Bonded SOI and Smart Cut, PD SOI and FD SOI Device structure and their features

GaAs Technologies: MESFET Technology, Digital Technologies, MMIC technologies, MODFET and Optoelectronic Devices

Silicon Bipolar Technologies: Second order effects in bipolar transistor, Performance of BJT, Bipolar processes and BiCMOS

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	To demonstrate a clear understanding of CMOS fabrication flow and technology scaling	PO3,PO4	3
CO2	To discuss processes and device characteristics via simulations	PO3,PO4,PO5	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions.



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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Date: 12.12.2018

PROGRAM REPORT**Name of the Addon Course:** Hardware Security**Day/Duration** : 03.12.2018 to 10.12.2018 (7 Days) - 42 Hrs**Time** : 09:30AM to 03:30PM**Resource Person** : Dr. G. Jaya Suma, Prof., Dept. of CSE, UCEV, JNTUK.**Name of the Coordinator:** Mrs. M. Sailaja, Asst. Prof., CSE.**Number of Participants** : 66**Course Objectives:**

1. To understand the different issues of Hardware Security everyday life.
2. To prevent and detect the Hardware Attacks.

Topics Covered: The following topics covered in this program

1. Overview of Different Issues of Hardware Security.
2. Preliminaries: Algebra of Finite Fields, Basics of the Mathematical Theory of Public Key Cryptography, Basics of Digital Design on Field-programmable Gate Array (FPGA)
3. Useful Hardware Security Primitives: Cryptographic Hardware and their Implementation, Optimization of Cryptographic Hardware on FPGA
4. Side-channel Attacks on Cryptographic Hardware: Basic Idea, Current-measurement based Side-channel Attacks Design Techniques to Prevent Side-channel Attacks, Improved Side-channel Attack Algorithms
5. Testability and Verification of Cryptographic Hardware: Fault-tolerance of Cryptographic Hardware, Fault Attacks, Verification of Finite-field Arithmetic Circuits.
6. Hardware Trojans: Hardware Trojan Nomenclature and Operating Modes, Techniques to Prevent/Detect Hardware Trojans.
7. Logic Testing and Side-channel Analysis based Techniques for Trojan Detection.

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of Mapping
CO1	Focus on the importance of addressing different security threats on modern hardware design.	PO3	3
CO2	Learn the manufacturing, installation, and operating practices.	PO5	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions through Offline.

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Date: 12.12.2018

PROGRAM REPORT

Name of the Addon Course: Linux Programming & Scripting

Day/Duration : 03.12.2018 to 10.12.2018 (7 Days) - 42 Hrs

Time : 09:30AM to 03:30PM

Resource Person : Dr.G. Narasimha Raju, Professor, Dept. of CSE, LIET.

Name of the Coordinator: Ms. Y. Vineela Sravya, Asst. Prof, Dept. of CSE.

Number of Participants : 65

Course Objectives:

- The goal of the course is the study of scripting languages such as PERL, TCL/TK , Python and BASH.
- Creation of programs in the Linux environment.
- The study of the principles of scripting languages.
- The study of usage of scripting languages in IC designs Flow.

Topics Covered: The following topics covered in this program

1. Linux Basics: Introduction to Linux, File System of the Linux, General usage of Linux kernel & basic commands, Linux users and group, Permissions for file, directory and users, Searching a file & directory, zipping and unzipping concepts.
2. Linux Networking: Introduction to Networking in Linux, Network basics & tools, File transfer protocol in Linux, Network file system, Domain Naming Services, Dynamic hosting configuration Protocol & Network information Services.
3. Perl Scripting: Introduction to Perl Scripting, working with Simple Values, Lists and Hashes, Loops and Decisions, Regular Expressions.
4. Files and Data in Perl Scripting, References & Subroutines, Running and Debugging Perl, Modules, Object-Oriented Perl.
5. Tcl/tk Scripting: Tcl Fundamentals, String and Pattern Matching, Tcl, Data Structures, Control Flow Commands, Procedures and Scope, Eval, Working With UNIX, Reflection and Debugging.
6. Script Libraries, Tk Fundamentals, Tk by Examples, The Pack Geometry Manager, Binding Commands to X, Events, Buttons and Menus, Simple Tk Widgets, Entry and Listbox Widgets Focus, Grabs and Dialogs.
7. Python Scripting: Introduction to Python, Using the Python, Interpreter, More Control Flow Tools, Data Structures, Modules, Input and Output, Errors and Exceptions, Classes, Brief

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Create and run scripts using Perl / TCL.	PO3	3
CO2	Use Linux environment and write programs for automation of scripts.	PO5	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions through Offline.


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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Date: 12.12.2018

PROGRAM REPORT

Name of the Addon Course : **R Programming Fundamentals**

Day/Duration : 03.12.2018 to 10.12.2018 (7 Days) - 42 Hrs

Time : 09:30AM to 03:30PM

Resource Person : Dr.A.S.N. Chakravarthy, Asst. Professor, Dept of CSE, UCEV-JNTUK

Name of the Coordinator : Mr. L. Bhupathi Rao, Asst. Prof, Dept. of CSE.

Number of Participants : 65

Course Objectives:

- The basics of statistical computing and data analysis.
- How to use R for analytical programming.
- How to implement data structure in R.
- R loop functions and debugging tools.

Topics Covered: The following topics covered in this program

- The R Statistical Programming Language
- The RStudio Integrated Development Environment (IDE)
Data importation methods
- Basic R Data Types
- Data processing and manipulation techniques
- External add-in packages for R
- Summary statistic functions
- Data visualisations using gplot
Error types

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Download and install R and RStudio.	PO5	3
CO2	Navigate and optimize the R integrated development environment (IDE) RStudio.	PO5	2
CO3	Learn the main R data structures – vector and data frame.	PO4	2
CO4	Compute basic summary statistics.	PO6	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions through Offline.



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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Date: 02.7.2018

PROGRAM REPORT

Name of the Addon Course : **Advanced Databases**

Day/Duration : 25-6-2018 to 30-6-2018 – 36 Hrs

Time : 09:30AM to 04:30PM

Resource Person : Dady Lalitha, PL/SQL Developer, TCS

Name of the Coordinator: Mrs. G. Sandhya, Asst. Prof.

Number of Participants : 63

Course Objectives:

- To provide a strong foundation in advanced database concepts from an industry perspective.
- To cover advanced data modeling concepts like OOD Modeling and ORD Modeling
- To learn query processing and transaction management concepts for object-relational database and distributed database

Topics Covered: The following topics covered in this program

1. Basic concepts of query processing; converting SQL queries into Relational Algebra; Basic Algorithms for executing query operations; Query tree and query graph; Heuristic optimization of query tree
2. Overview of Object-oriented database; OO Concepts; Encapsulation of Operations and methods; Inheritance; Object Model; Object definition language; Object Query Language; Object Relational Concepts
3. Introduction; Distributed databases principles; architectures; design; implementation; Fragmentation; Transparencies in Distributed Databases; Transaction control in Distributed Database; Query Processing in Distributed Database
4. Web interfaces to the Web, Overview of XML; Structure of XML data, Document schema, Querying XML data.
5. Storage of XML data, XML applications; The semi structured data model, Implementation issues, Indexes for text data
6. Data warehousing and Data Mining; Active database; Spatial Database; Deductive database; Temporal database; Multimedia database. Big data concept , Sensor Database System.

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Identify advance database concepts and database models.	PO2	3
CO2	Produce data modeling and database development process for object –oriented DBMS.	PO4	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions through offline.



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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Date: 02.07.2018

PROGRAM REPORT

Name of the Addon Course : Problem Solving and Programming in Python

Day/Duration : 25-6-2018 to 30-6-2018 – 36 Hrs

Time : 09:30AM to 04:30PM

Resource Person : S.Gopi, K.S.Kumar, P.Sahu, Technical Trainers ,APSSDC

Name of the Coordinator: Ms. Rita Roy, Asst. Prof.,Dept. of CSE

Number of Participants : 63

Course Objectives:

- To understand the basics of algorithmic problem solving.
- To learn to solve problems using Python conditionals and loops.
- To define Python functions and use function calls to solve problems.

Topics Covered: The following topics covered in this program



1. Python interpreter and interactive mode, debugging; values and types: int, float, Boolean, string, and list; variables, expressions, statements, tuple assignment, precedence of operators, comments; Illustrative programs: exchange the values of two variables, circulate the values of n variables, distance between two points.
2. Conditionals: Boolean values and operators, conditional (if), alternative (if-else), chained conditional (if-elif-else); Iteration: state, while, for, break, continue, pass; Fruitful functions: return values, parameters, local and global scope, function composition, recursion.
3. Strings: string slices, immutability, string functions and methods, string module; Lists as arrays. Illustrative programs: square root, gcd, exponentiation, sum an array of numbers, linear search, binary search.
4. Lists: list operations, list slices, list methods, list loop, mutability, aliasing, cloning lists, list parameters; Tuples: tuple assignment, tuple as return value; Dictionaries: operations and methods; advanced list processing – list comprehension; Illustrative programs: simple sorting, histogram, Students marks statement, Retail bill preparation.
5. Files and exception: text files, reading and writing files, format operator; command line arguments, errors and exceptions, handling exceptions, modules, packages; Illustrative programs: word count, copy file, Voter's age validation, Marks range validation (0-100).

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Develop algorithmic solutions to simple computational problems.	PO3	2
CO2	Develop and execute simple Python programs.	PO3	3
CO3	Decompose a Python program into functions.	PO4	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions through offline.




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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Date: 02.7.2018

PROGRAM REPORT

Name of the Addon Course : AWS TECHNICAL ESSENTIALS

Day/Duration : 25-6-2018 to 30-6-2018 (6 Days) - 36 Hrs

Time : 09:30AM to 04:30PM

Resource Person : Mr.K.Ramalinga Murty, Cloud Administrator, Technosoft Solutions, Visakhapatnam

Name of the Coordinator: Mrs. G. Pavani latha, Asst. Prof., Dept. of CSE

Number of Participants : 62

Course Objectives:

- Describe terminology and concepts related to AWS services.
- Navigate the AWS Management Console.
- Articulate key concepts of AWS security measures and AWS Identity and Access Management (IAM).

Topics Covered: The following topics covered in this program

1. Introduction to Amazon Web Services: Introduction to AWS Cloud Security in the AWS Cloud, Hosting the employee directory application in AWS
2. AWS Compute: Introduction to Amazon Elastic Compute Cloud Amazon EC2 instance lifecycle, AWS container service
3. AWS Networking: Introduction to Amazon Virtual Private Cloud (Amazon VPC), Amazon VPC routing, Amazon VPC security
4. AWS Storage: Object storage with Amazon S3 , Choose the right storage service.
5. Databases: Introduction to Amazon DynamoDB, Choose the right AWS database service,
6. Hands-On Lab: Implement and manage Amazon DynamoDB.

Course Outcomes:

COS	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Recognize terminology and concepts as they relate to the AWS platform and navigate the AWS Management Console	PO2	3
CO2	Understand the foundational services, including Amazon Elastic Compute Cloud (EC2), Amazon Virtual Private Cloud (VPC), Amazon Simple Storage Service (S3) and Amazon Elastic Block Store (EBS)	PO3	2

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions through offline.

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Date: 21.02.2019

PROGRAM REPORT

Name of the Addon Course : Deep Learning
Day/Duration : 11-2-2019 to 19-2-2019 (7 Days) - 35 Hrs
Time : 09:30AM to 04:30PM
Resource Person : Dr.Venkatesulu Dondeti, Professor, Department of CSE, VFSTR,
Name of the Coordinator : Mr. T. Hari babu, Asst Prof, Dept of CSE.
Number of Participants : 60

Course Objectives:

- To acquire the knowledge on Deep Learning Concepts
- Automatic analysis and understanding of images and videos.
- Understand the intuition behind Recurrent Neural Networks

Topics Covered:

1. Data Analytics Lifecycle Overview, Key Roles for a Successful Analytics Project, Background and Overview of Data Analytics Lifecycle.
2. Data Preparation, Preparing the Analytic Sandbox, Performing ETL, Learning About the Data, Data Conditioning, Survey and Visualize, Common Tools for the Data Preparation Phase
3. Risk and Loss in Unsupervised Learning, Expectation–Maximization (EM) Algorithm, Clustering via Mixture Models, Mixture Models, EM Algorithm for Mixture Models.
4. Clustering via Vector Quantization, K-Means, Clustering via Continuous Multiextremal Optimization
5. Principal Component Analysis (PCA), Motivation: Principal Axes of an Ellipsoid, PCA and Singular Value Decomposition (SVD).
6. Case Study: Global Innovation Network and Analysis (GINA), Discovery.
7. Data Preparation, Model Planning, Model Building, Communicate Results, Operationalize.

Course Outcomes:

Cos	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Develop own applications using deep learning techniques effectively.	PO3	3
CO2	Apply Convolutional Neural Networks in practice.	PO1	2
CO3	Acquires knowledge on Image Recognition.	PO1	2

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions.



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Date: 21.02.2019

PROGRAM REPORT

Name of the Addon Course : Image Processing & Applications
Day/Duration : 11-2-2019 to 19-2-2019 (7 Days) - 35 Hrs
Time : 09:30AM to 04:30PM
Resource Person : Dr.Srilakshmi Uppalapati, , Assoc Professor, Dept of CSE, VFSTR
Name of the Coordinator : Mr. P. Praveen Kumar, Asst Prof, Dept of CSE.
Number of Participants : 63

Course Objectives:

- Acquiring knowledge on Creation of an enhanced image from the original image.
- To learn Image acquisition which is a preprocessing in image processing
- To learn about Compression process which used to reduce the storage required to save an image or the bandwidth required to transmit it.

Topics Covered:

1. Visualization - Find objects that are not visible in the image
2. Recognition - Distinguish or detect objects in the image
3. Sharpening and restoration - Create an enhanced image from the original image
4. Pattern recognition - Measure the various patterns around the objects in the image
5. Retrieval - Browse and search images from a large database of digital images that are similar to the original image
6. Image Acquisition. Enhancement, Restoration, Wavelets and Multiresolution Processing and Segmentation.
7. Video processing: It involves frame rate conversion, motion detection, reduction of noise and color space conversion etc.

Course Outcomes:

Cos	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Develop an application in Medical Image Retrieval.	PO3	3
CO2	Build an application of Image processing which can be used to recover corrupt parts.	PO3	2

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions.



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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Date: 21.02.2019

PROGRAM REPORT

Name of the Addon Course : Machine Learning Applications

Day/Duration : 11-2-2019 to 19-2-2019 (7 Days) - 35 Hrs

Time : 09:30AM to 04:30PM

Resource Person : Mr.M.Pardha Saradhy,CEO, Amun Technologies, Visakhapatnam

Name of the Coordinator : Mr. R. Ravi,Asst. Prof, Dept of CSE.

Number of Participants : 60

Course Objectives:

- To learn Machine learning algorithms which build a model based on sample data, known as training data, in order to make predictions or decisions.
- To learn a wide variety of applications, such as in medicine, email filtering, speech recognition, and computer vision.

Topics Covered:


1. Fundamental concepts in machine learning and popular machine learning algorithms.
2. Supervised learning algorithms including linear regression, logistic regression, decision trees, k-nearest neighbor.
3. Various methods related to the application of machine learning algorithms.
4. Logistic Regression, Support Vector Machine, Kernel function and Kernel SVM.
5. Computational learning theory, PAC learning model,
6. Sample complexity, VC Dimension, Ensemble learning, Applications development: Speech Recognition, Traffic prediction.
7. Email Spam and Malware Filtering, Stock Market trading and Medical Diagnosis.

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Build and train supervised machine learning models for prediction and binary classification tasks, including linear regression and logistic regression.	PO3	3
CO2	Build machine learning models in Python using popular machine learning libraries NumPy and scikit-learn.	PO3	3
CO3	Skill to develop applications such as Speech Recognition, Traffic prediction.	PO5	2

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions.




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DEPARTMENT OF INFORMATION TECHNOLOGY

Date: 26.12.2018

PROGRAM REPORT

Name of the Add-on Course: **Website development using Angular**

Day/Duration: 17.12.2018 to 24.12.2018 (8 Days) - 40 Hours

Time: 09:30AM to 03:30PM

Resource Person: Mr. GANESH NAGU DODDI, CEO, Brain O Vision

Name of the Coordinator: Mr. CH. Ramasuri A.N, Assistant Professor, Dept. of IT

Number of Participants: 54

Course Objectives:

1. To develop competences necessary for graduate students to be employed in the area of information technologies and the industry of web development.
2. To develop creativity and individuality in problem solving and performing tasks.
3. To develop Web individually and in teams.

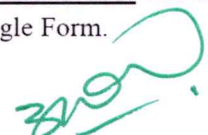
Topics Covered: The following topics covered in this program

1. Introduction to Wed and Angular.
2. Angular JS Building Blocks for Building SPA.
3. Modules: Module Loading and Dependences.
4. Forms (working with select and options).
5. Filters.
6. Expressions and Data Binding.
7. Communication (\$ Ajax Vs \$ Http).
8. Angular JS Internal.

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Able to use various Angular features including directives, components and services.	PO3	3
CO2	Able to get familiar with client-side JavaScript frameworks and the Angular framework.	PO2	3
CO3	Able to implement a functional front-end web application using Angular.	PO2	3

Assessment Procedure: The assessment of the Add-on course is conducted in Multiple Choice Questions through Google Form.


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DEPARTMENT OF INFORMATION TECHNOLOGY

Date: 14.01.2019

PROGRAM REPORT

Name of the Add-on Course: **Game Development & Game Designing**

Day/Duration: 07.01.2019 to 12.01.2019 (6 Days) – 32 Hours

Time: 09:30 AM to 03:30 PM

Resource Person: Mr. G Ravi Kishore, Trainer, APSSDC

Name of the Coordinator: Mrs. S. Kalyani, Assistant Professor, Dept. of IT

Number of Participants: 52

Course Objectives:

1. To develop competences necessary for graduate students to be employed in the area of information technologies and the industry of game development.
2. To develop creativity and individuality in problem solving and performing tasks.
3. To develop games individually and in teams

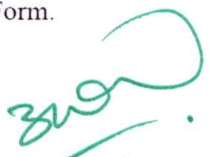
Topics Covered: The following topics covered in this program

1. Introduction to game design and production and 3D games
2. Game Design 101,102 and 103
3. Start on Game Design 1 and Game Programming 103
4. Start on Last major game design: 3D Models and Debugging
5. Programming applications Algorithms & Trees Game design project
6. Creating non-Unity C# applications Web server basics

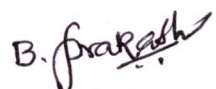
Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1, CO2	Able to apply design and development principles in the construction of two-dimensional (2D) and three-dimensional (3D) computer and mobile games.	PO2	3
CO3	Able to develop software and tools for game development individually and in teams.	PO5	3
CO4	Able to develop competences necessary for graduates students to be employed in the area of information.	PO5	3

Assessment Procedure: The assessment of the Add-on course is conducted in Multiple Choice Questions through Google Form.


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DEPARTMENT OF INFORMATION TECHNOLOGY

Date: 10.07.2018

PROGRAM REPORT

Name of the Add-on Course: **Ethical Hacking and Cyber Security**

Day/Duration: 02.07.2018 to 08.07.2018 (7 Days) - 35 Hours

Time: 09:30 AM to 03:30 PM

Resource Person: Mr. Sai Satish, CEO, Indian Servers

Name of the Coordinator: Mr. P. Mohan Ganesh, Assistant Professor.

Number of Participants: 49

Course Objectives:

1. Evaluate best practices in security concepts to maintain confidentiality, integrity.
2. Learn the difference between a vulnerability assessment and a penetration test.
3. Learn about the different tools and techniques that hackers—including ethical hackers—employ
4. Discover the elements of a four-phase penetration test and how the four phases help a successful test

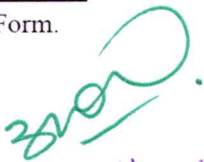
Topics Covered: The following topics covered in this program

1. Introduction to Cyber Security & Ethical Hacking
2. Reasons to learn cyber security, Hacker & Types of Hackers
3. Skills required for Hacker & road-map of becoming the Hacker
4. Different programming languages & their importance in Cyber Security
5. Linux is the best operating system for hacking
6. Best Linux distributions for hacking purpose
7. Cyber Attack, Types of Cyber Attack and Phase of hacking


Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Able to apply the tools for conducting ethical hacking, plan, organize and perform penetration testing on a simple network.	PO5	3
CO2	Able to review and practice computer and network etiquette and ethics found in working environment.	PO2	3
CO3	Able to evaluate and implement new and future technologies into current system.	PO3	3

Assessment Procedure: The assessment of the Add-on course is conducted in Multiple Choice Questions through Google Form.


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DEPARTMENT OF MASTER OF BUSINESS ADMINISTRATION

Date: 20.11.2018

PROGRAM REPORT

Name of the Addon Course : **STRESS MANAGEMENT**
Day/Duration : 22-10-2018 to 15-11-2018- 40 Hours
Time : 03:00 PM to 05:00PM
Resource Person : DR. V.BALA, Associate Professor-HOD,
MBA-NSRIT
Name of the Co-coordinator : Mrs.M.Satyavathi, Asst. Prof.
Number of Participants : 61

Course Objectives:

1. Understand the basic principles of stress management
2. Recognize your stress triggers and how to manage them.

Topics Covered: The following topics covered in this program

1. Stress Management-Concepts & Approaches
2. Stages of Stress-Stressors, Alarm of stress, Resistance stage, Exhaustion, Coping strategies.
3. Managing Stress
4. Stressors and stress triggers
5. Brief Mindfulness Exercise

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Develop proactive responses to stressful situations	PO3	3
CO2	Use coping tips for managing stress both on and off the job	PO4	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions.

M. Satya Vathi
Coordinator



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DEPARTMENT OF MASTER OF BUSINESS ADMINISTRATION

Date: 25.02.2019

PROGRAM REPORT

Name of the Addon Course : **The Fundamentals of Computer**
Day/Duration : **22.01.2019 – 23.02.2019 (20 Days) - 40 Hrs**
Time: **3.00 PM – 5.00 PM**
Resource Person: **Mr. Ganta Anil Kumar, Programmer, Data Pro**
Name of the Coordinator: **Mrs. M. Sirisha Rani, Asst. Prof.**
Number of Participants: **81**

Course Objectives:

1. To understand basics of computer and working with OS.
2. To develop working skills with productivity tools, graphics designing and Internet.
3. To acquire basic programming skills.
4. To apply computing in problem solving.

Topics Covered: The following topics covered in this program

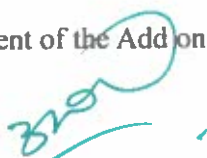
1. Introduction of computer, Hardware and Software, Parts of Computer
2. Types of Computer, Anatomy of Computer System, Computer viruses and security
3. Basic Computer Maintenance, Working with Desktop & Windows.
4. Using the system (Booting & Shutting down), Introduction to the Internet
5. Disadvantages of using computer, Typing and Keyboard shortcuts

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Converse in basic computer terminology. Possess the knowledge of basic hardware peripherals	PO3	3
CO2	Formulate opinions about the impact of computers on society. Know and use different number systems and the basics of programming.	PO3	3

Assessment Procedure: The assessment of the Add on course is conducted in Multiple Choice Questions through offline




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DEPARTMENT OF BASIC SCIENCES AND HUMANITIES

Date: 19.09.2018

PROGRAM REPORT

Name of the Add-on Course: Underground Electricity

Day/Duration : 08.09.2018 to 18.09.2018 (7 Days) - 36Hrs

Time: 09:30 AM to 04:30 PM

Resource Person: Mr.N.Kiran, Assistant .Professor, ANITS

Name of the Coordinator: Mrs.G.Varalakshmi, Asst.Professor

Number of Participants: 39

Course Objectives:

1. Describe three tools used for direct-burying URD cable.
2. Identify and describe three pieces of machinery that are used to install URD cable.
3. Describe the steps involved in installing cable in conduit between two manholes.
4. Identify the rigging devices and equipment used to install cable in conduit between two manholes.

Topics Covered: The following topics covered in this program

1. Planning considerations, Introduction to UG equipment types and applications, Device-locating and system-layout philosophies, Policy considerations.
2. Circuit capacity ratings and configurations
3. Circuit switch and protection
4. Nature of lightning and switching impulses
5. Effective Grounding
6. Direct burial trenches, conduits and ducts, vaults and manholes
7. Technical specifications and installation practices

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	To understand the basic concepts, design and estimation of distribution systems, substation	PO3	3
CO2	To learn the testing of various electrical distribution schemes and equipment	PO1	3
CO3	To enable candidate to design earthing system for residential and commercial	PO2	3
CO4	To learn the testing of various electrical distribution schemes and equipment	PO4	3

Assessment Procedure: The assessment of the Add-on course is conducted in Multiple Choice Questions through Google Form.

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DEPARTMENT OF BASIC SCIENCES AND HUMANITIES

Date: 19/09/2018

PROGRAM REPORT

Name of the Add-on Course: Basics of Electrical Circuits

Day/Duration: 08/09/2018 to 18/09/2018 (06 days) 36 hrs

Time: 09:30AM to 03:30 PM

Resource Person: Dr.P.Devendra, Assoc Prof, Gayathri Women's

Name of the Coordinator: Mrs Nisha Haldar, Asst Prof, Dept of BS&H

Number of Participants: 35

Course Objectives:

By the end of this course, students should be able to;

- To provide an introduction to the field of electrical engineering to the fundamental concepts in the sub-area of electrical circuits.
- To provide the information about circuits and required of all electrical engineering majors.
- To prepare students to take some more advanced courses in the area of circuits and electronics.

Topics Covered: The following topics covered in this program

1. Introduction to electric circuit variables and elements
2. Superposition, Sinusoidal steady state analysis (a.c. circuits).
3. Thevenin and Norton equivalent circuits, Operational Amplifiers.
4. Maximum power transfer. Introduction to inductance and capacitance.

Course Outcomes:

Cos	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	To apply basic laws to resistive circuits.	PO3	3
CO2	To perform mesh and nodal analysis.	PO2	3
CO3	To apply circuit theorems.	PO3	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions.



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DEPARTMENT OF BASICSCIENCES & HUMANITIES

Date: 19/09/2018

PROGRAM REPORT

Name of the Add- on Course: **NanoMaterials**

Day/Duration :08/09/2018 to 18/09/2018 (6 Days) - 36Hrs

Time :09:30AM to 04:30PM

Resource Person :Dr. V. Ananda Babu, Associate Profssor,VIEW

Name of the Coordinator:Dr.G. Muni Sarala., Asst. Professor

Number of Participants:19

Course Objectives:

1. Understand and use the properties of Nano-materials in diverse fields.
2. Achieve knowledge about the Nanomaterials, their properties, behavior, interaction and use of them over many discipline of science.
3. A highlight of the course is to provide virtual way of understanding the courses materials. Especially the application based approach.

Topics Covered: The following topics covered in this program

1. Introduction – Types of nanomaterials, classification and synthesis Understand the life stages of human development
2. Synthesis of Carbon Nano Tubes – Arc Discharge Method, Chemical Vapour Deposition Method, Plasma eposition. Time management techniques
3. Characterization – SEM, TEM, BET, X – ray diffraction, Developing empathic attitude
4. Applications: Energy source: Solar photo voltaic cell, dye sensitized and organic, Fuel cells, hybrid energy cells
5. Applications: In medical field: Imaging, drug delivery, cancer therapy, tissue regeneration Automobiles, sports, textiles, cosmetics, agriculture, and domestic applications
6. Effect of nano technology on human life and environment.

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Gain knowledge about the Nanomaterials, their properties, behavior, interaction and use of them over many discipline of science.	P1, P6, P12	3, 3, 2
CO2	Understand the basic behaviour of knowledge.	P1, P6, P7	3, 3, 3
CO3	Create awareness about the wide and vast field of nano science and to help students pursue their higher education and career in this field.	P6, P7, P12	3, 3, 3

Assessment Procedure: The assessment of the Add- on course is conducted in Multiple Choice Questions.



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DEPARTMENT OF BASIC SCIENCES & HUMANITIES

Date: 14/12/2018

PROGRAM REPORT

Name of the Add- on Course: A Basic Structure of Computers

Day/Duration : 07/12/2018 to 13/12/2018(6 Days) - 36Hrs

Time : 09:30AM to 04:30PM

Resource Person : Mrs.K.Madhuri, Asst Prof, Dept of CSE ,VIEW

Name of the Coordinator: Mr. K. Ramesh., Asst. Prof of English.,

Number of Participants : 45

Course Objectives:

1. Communicate basic concepts of computer architecture and CPU organization.
2. Understanding various memory devices.
3. Simplifying learning IO communication

Topics Covered: The following topics covered in this program

1. Structure of computers
2. Computer Arithmetic
3. Basic Computer Organization and Design
4. Register Transfer and Micro Operations & Micro programmed control
5. Memory Systems
6. Input Output and Multiprocessors

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Identify various components of computer and their interconnection.	P1, P12	3, 3
CO2	Identify basic components and design of the CPU: the ALU and control unit.	P1, P5, P12	3, 3, 3
CO3	Compare and select various Memory devices as per requirement and various types of IO mapping techniques.	P1, P5, P12	3, 3, 3
CO4	Critique the performance issues of cache memory and virtual memory.	P1, P2, P3, P5, P12	3, 2, 2, 3, 3

Assessment Procedure: The assessment of the Add- on course is conducted in Multiple Choice Questions.



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DEPARTMENT OF BASIC SCIENCES & HUMANITIES

Date: 13/12/2018

PROGRAM REPORT

Name of the Add on Course: PC Hardware and Software

Day/Duration : 7/12/2018 To 13/12/2018 (6 Days) - 36 Hrs

Time:09:30AM to 04:30PM

Resource Person: Dr.,K.Vijay Kumar, Associate Profssor,Dept of CSE ,VIEW

Name of the Coordinator: Mr K Rasagna, Dept. of B S&H

Number of Participants: 59

Course Objectives:

- Describe Hardware Devices and Their Uses.
- Finding defects which may get created by the programmer while developing the software.
- Gaining confidence in and providing information about the level of quality.

Topics Covered: The following topics covered in this program

1. Definition of hardware and its structure
2. Processor, hard disk, memory, mainboard, ROM memory
3. Input devices : Keyboard, mouse, screen ,printer and Drives
4. Software Applications
5. System Software
6. Benefits of Software system

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Identify the hardware components of a computer	PO8	3
CO2	Identify software running on a computer.	PO12	3



Head of the Department



DEPARTMENT OF BASIC SCIENCES & HUMANITIES

Date: 14/12/2018

PROGRAM REPORT

Name of the Add on Course: Wage work for women Citizens

Day/Duration: 7/12/2018 To 13/12/2018 (6 Days) - 36Hrs

Time: 09:30AM to 04:30PM

Resource Person: Dr. Siva Satynarayana, Assoc Prof, GITAM, Member JCI

Name of the Coordinator: Mrs. G. Vara Lakshmi, Asst Prof, Dept of BS&H

Number of Participants: 58

Course Objectives:

- The lives of women in the different industry at the turn of the 20th century, and their involvement in unions, consumer's leagues, and coalitions, take center stage as we work to understand how women made efforts to improve the lives of industrial workers.

Topics Covered: The following topics covered in this program

- Ideas of independent womanhood emerged in the age of industrialization
- the 13th, 14th, and 15th Amendments to the Constitution impacted women's political organizing and participation
- women worked to gain legal independence
- women endeavored to improve the lives of industrial workers
- The ways in which women's labor organizing efforts impacted trade unions, protective labor legislation, and regulation of capital
- How married and unmarried women conceptualized their public roles as women, mothers, daughters, and political actors in the early 20th Century

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	What the generational and racial tensions were around strategies and arguments for women's suffrage	PO7	3
CO2	How feminism arose as a word, concept and movement	PO8	3



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DEPARTMENT OF BASIC SCIENCES & HUMANITIES

Date: 08.07.2018

PROGRAM REPORT

Name of the Add on Course: Introduction to MS Office

Day/Duration : 02.07.2018 to 07.07.2018 (6 Days) - 36 Hrs

Time: 09:30AM to 04:30PM

Resource Person: Mr. G. Netaji, Assistant Professor, Dept of IT, VIEW

Name of the Coordinator: Dr. T. Radha Krishna Murty, Professor of English, Dept of BS&H

Number of Participants: 56

Course Objectives:

- To create a Microsoft account
- To be able to create, upload, and share Office documents via Office Online
- To be proficient in important Microsoft Office programs
- To be able to create documents for printing and sharing.

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Learners will be able to claim proficiency in Word and PowerPoint.	PO3	3
CO2	Learners will be able to independently create professional-looking documents and presentations.	PO5	3
CO3	Learners will be familiar with some advanced Word and PowerPoint functions.	PO3	3
CO4	Learners will understand the functional differences between regular Office programs and Office Online.	PO4	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions through Google Form.



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DEPARTMENT OF BASICS AND HUMANITIES

Date: 10-07-2018

PROGRAM REPORT

Name of the Addon Course: Personality Development

Day/Duration: 02-07-2018 TO 07-07-2018 (06 days) 36hrs

Time: 09:30AM to 04:30PM

Resource Person: Dr. V. Radha Krishna, Murthy, Soft Skills Trainer JCI

Name of the Coordinator: Dr G Muni Sarala, Asst Professor, Dept of BS&H

Number of Participants: 56

Course Objectives:

1. Understand the concept of values.
2. Understand, appreciate personality development and respect cultural diversity.
3. Understand the job search techniques, customs, and practices. It also will enable students to always meet the expectations of the employer.
4. Understand and apply the learned concepts and principles at work place and social environment

Topics Covered: The following topics covered in this program

1. Leadership
2. Interpersonal Relations
3. Communication
4. Stress Management
5. Conflict and Time Management
6. Motivation and Skill Development

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	To create awareness in the participants with regard to the different aspects of interpersonal relations.	PO8&9	3
CO2	To empower participants to be better communicators by providing them with Relevant inputs and also sharpening their skills.	PO8&9	3
CO3	To impart relevant knowledge, sharpen the requisite skills and orient attitudes of participants so that they become more efficient with regard to the management of time.	PO8&9	3

Assessment Procedure: The assessment of the Addon Course is conducted in Multiple Choice Questions.



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DEPARTMENT OF BASICSCIENCES & HUMANITIES

Date: 9/7/2018

PROGRAM REPORT

Name of the Add-on Course: **SOFT SKILLS & COMMUNICATION SKILLS**

Day/Duration : 2/7/2018 to 7/7/2018(6 Days) - 36Hrs

Time : 09:30AM to 04:30PM

Resource person: Dr. I.S.V. Manjula, Professor, VIT

Faculty coordinator: Mr.K.Ramesh, Asst. Professor

Number of Participants :59

Course Objectives:

1. To encourage the all-round development of students by focusing on soft skills.
2. To make the engineering students aware of the importance, the role and the content of soft skills through instruction, knowledge acquisition, demonstration and practice.
3. To develop and nurture the soft skills of the students through individual and group activities.

Topics Covered: The following topics covered in this program

1. Introduction to Soft Skills, Aspects of Soft Skills, Effective Communication Skills, Classification of Communication, Personality Development
2. Positive Thinking, Telephonic Communication Skills, non-verbal communication , Listening Skills, Types of Listening
3. Negotiation Skills, Culture as Communication, Organizational Communication
4. Leadership Skills, Group Discussion, Meeting Management, Adaptability & Work Ethics
5. Making Effective Presentations, Speeches for Various Occasions, Interviews, Planning & Preparing: Effective Résumé,
6. Facing Job Interviews, Emotional Intelligence & Critical Thinking

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Effectively communicate through verbal/oral communication and improve the listening skills	P10, P12	3, 2
CO2	Actively participate in group discussion / meetings / interviews and prepare & deliver presentations	P 9, P 10, P12	3, 3, 2
CO3	Become more effective individual through goal/target setting, self-motivation and practicing creative thinking.	P 8, P9, P12	3, 3, 2

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions.



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VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

Approved by AICTE, New Delhi & Affiliated to JNTUK, Kakinada

DEPARTMENT OF BASIC SCIENCES & HUMANITIES

Date: 9/7/2018

PROGRAM REPORT

Name of the Add-on Course: Indian Culture and Heritage

Day/Duration : 2/7/2018 to 7/7/2018 (6 Days) - 36Hrs

Time : 09:30 AM to 04:30PM

Resource person : Mrs. K.G.B. Santoshi kumari, Associate. Professor, VIEW

Faculty coordinator: Mr. Sk. Chaitanya Ch, Asst Professor

Number of Participants :53

Course Objectives: Understand the concept and meaning of culture

- Establish the relationship between culture and civilization
- Establish the link between culture and heritage.
- Discuss the role and impact of culture in human life.

Topics Covered: The following topics covered in this program

Indian Culture: An Introduction to Ancient, Mediaeval and Modern India
Indian Language and Literature
Religion and Philosophy in Ancient, Mediaeval and Modern India
Performing Arts: Music, Dance and Drama
Science and Technology in India: Ancient, Mediaeval and Modern India
Socio Cultural Issues in Contemporary India and spread of Indian Culture Abroad

Course Outcomes:

COs	At the end of the course, the student will have the ability to:	POs Mapped	Strength of mapping
CO1	Describe the meaning and concept of culture and heritage	PO7	3
CO2	Identify characteristics of Indian Culture	PO7	3
CO3	Discuss the cultural identity, religion, region and ethnicity of Indian Culture	PO7	3
CO4	Explain the characteristics of Indian Heritage.	PO7	3

Assessment Procedure: The assessment of the Addon course is conducted in Multiple Choice Questions.



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