Certificate Course in IOT using Arduino & Raspberry Pi-

Module with detailed Curriculum	Duration
Basic Understanding of Electronics and Electronic Circuits and practical understanding using Proteus Software	3 Hours
Introduction to Arduino, Arduino IDE and Driver Installation, Hands on with breadboard, multi meter, resistance, transistor etc.	3 Hours
Basic Programming structure , Working with Digital Outputs – Interfacing LEDs with Arduino, Introduction to Digital Inputs – Interfacing push button	3 Hours
Working with Analog inputs – Interfacing Potentiometer	3 Hours
Working with Serial Communication, Analog Inputs – Interfacing LDR, Reed Sensor, Buzzer, PIR with Arduino	6 Hours (2 Sessions)
Working with ESP 8266 Node MCU, GSM Module Interfacing	3 Hours
Interfacing with Motor Drivers, Interfacing ULN2003, demonstrating LED Fading and Bluetooth Control of Devices	3 Hours
Module with detailed Curriculum	**Duration**
Overview of IOT Understanding IOT fundamentals, IOT Architecture, protocols, Various Platforms for IOT	3 Hours
Real Time Experience on IOT: Real Time Examples of IOT, Overview of IOT Components & IOT Communication Technologies	3 Hours
Getting started with Raspberry Pi Introduction to Raspberry Pi, Comparison of various RPI models, Understanding SoC architecture and SoCs used in Raspberry Pi	3 Hours
Raspbian OS- Introduction, Tools Pin Description of Raspberry Pi, On-board components of RPI, Projects using Raspberry Pi, Raspbian OS- Introduction, Tools like leafpad Editor	3 Hours
Booting up RPi- Operating System and Linux Commands Installing Raspbian on Pi, First boot and Basic Configuration of Pi, Commonly used Linux Commands & Practice session	6 Hours (2 Sessions)