Department of Mechatronics Engineering

(Accredited by NBA, New Delhi)

Value Added Course on "Internet of Things"

Course Outcome

To explore knowledge on the concepts of Internet of Things and also to build IoT based applications

IoT Introduction   8 Hours

IoT Introduction - Basics of C Programming - Basic Electronics Setting up Arduino IDE - LED Blinking Traffic Light System Diving deep into C programming (functions) LED control using push button – Motor switching on using relay C pointers - arrays and memory allocation.

Sensors and Types of Arduino Controller   14 Hours

Temperature sensor to display temperature - ESP 32/ ESP8266 architecture- LED and Switch Control basics using ESP Display Interfacing - 7 segment - LCD display - Keypad.

IoT Protocols and Applications   14 Hours

ADC Conversion - keypad relay control - USART - USART Communication Timer – Counter Clock - PWM - PWM Example - Project GSM - GPS GSM - GPS data - Microcontroller EEPROM - Storing Wifi Credentials in EEPROM -I2C - RTC time from RTC - NTP - NODEMCU IOT –Raspberry pi, NVIDIA Jetson Nano - Temperature & Humidity - PIR CLOUD – MQTT - Home automation - Robot control.