INTRODUCTION TO INTERNET OF THINGS

I Year II Semester : CSE/IT/CSIT

Course Code	Category	Hours / Week			Credits	Maximum Marks		
		L	T	P	C	CIA	SEE	Total
A5EC01	ESC	-	-	3	2	30	70	100

Contact Classes: Nil	Tutorial Classes: Nil	Practical Classes: 36	Total Classes:36

COURSE OBJECTIVES:
- To develop basic programming skills through graphical programming
- To learn hardware interfacing and debugging techniques
- To design and develop android apps

Introduction to IOT
1. Introduction to basic electronic components and digital electronic
2. Introduction to sensors and Actuators
3. Introduction to microcontroller
4. Introduction to Arduino IDE

LIST OF EXPERIMENTS

Week-1	1. Blinking of LED with different delays
Week-2	Digital I/O Interface [IR Sensor, PIR Sensor]
Week-3	Analog Interface [ADC, Temperature Sensor]
Week-4	Motor speed And Direction control
Week-5	Serial Communication
Week-6	Wireless Interface –Bluetooth & Wi-Fi Technologies
Week-7	Wireless Control of wheeled robot
Week-8	Smart Home Android App Development
References	

1. Sylvia Libow Martinez, Gary S Stager, Invent To Learn: Making, Tinkering, and Engineering in the Classroom, Constructing Modern Knowledge Press, 2016
2. Michael Margolis, Arduino Cookbook, Oreilly, 2011

COURSE OUTCOMES:
At the end of the course, student will be able to the algorithms for simple problems
CO 1: Able to demonstrate various sensor interfacing using Visual Programming Language.
CO 2: Able to analyze various Physical Components.
CO 3: Able to demonstrate Wireless Control of Remote Devices.
CO 4: Able to design and develop Mobile Application which can interact with Sensors