

Lesson Plan

Name of Faculty : Rakesh Kumar
 Discipline : Computer Engg.
 Semester : 1st
 Subject : INTERNET OF THINGS AND ARTIFICIAL INTELLIGENCE
 Lesson Plan Duration : 15 Weeks (from July-2018 to Nov-2018)
 Work Load (Lecture / Practical) per Week (in h) : Lecture - 0 Practical - 2

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/test)	Practical Day	Topic
1"			1st	1. Introduction to Internet of Things (IoT) Applications, architecture, protocols Characteristics of IoT Physical Design/Logical Design of IoT Functional blocks of IoT, Communication Models
2"			1st	2. Basics of C language using Arduino IDE Understating basics of Arduino IDE
3"			1st	Variables, datatype, loops, control statement, function
4"			1st	3 Practical using Arduino-interfacing sensors i.) Interfacing Light Emitting Diode(LED)- Blinking LED ii.)Interfacing Button and LED – LED blinking when button is pressed
5"			1st	iii. Interfacing Light Dependent Resistor (LDR) and LED, displaying automatic night lamp iv. Interfacing Temperature Sensor(LM35) and/or humidity sensor (e.g. DHT11)
6"			1st	v. Interfacing Liquid Crystal Display(LCD) – display data generated by sensor on LCD
7"			1st	vi. Interfacing Air Quality Sensor-pollution (e.g. MQ135) - display data on LCD , switch on LED when data sensed is higher than specified value.
8"			1st	vii. Interfacing Bluetooth module (e.g. HC05)- receiving data from mobile phone on Arduino and display on LCD
9"			1st	viii. Interfacing Relay module to demonstrate Bluetooth based home automation application. (using Bluetooth and relay).
10"			1st	4 Introduction to Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL). Role of AI in IoT and its applications
11"			1st	Managing and Analysing data generated by IoT devices – Big Data
12"			1st	Machine learning (ML) Techniques e.g. classification, linear regression, etc.
13"			1st	Numerical based on above techniques
14"			1st	Understanding excel for analysing data