KIIT POLYTECHNIC, BHUBANESWAR

LESSON PLAN
Session (2023-2024)

Discipline: Electronics and Telecommunication Engineering	Semester: 6th , Summer/2024	Name of the Faculty: Pampa Nandi Asst. Prof. Email ID: pnandifet@kp.kiit.ac.in
Subject: Internet of Things TH.4(ii)	No. of Days/week: 04	Start Date: 16/01/2024 End Date: 26/04/2024

Week	Class Day	Theory Topic
1st	1st	Unit 1: What is IoT, Architectural Overview
	2nd	Design principles and needed capabilities, IoT Applications, Sensing, Actuation
	3rd	Basics of Networking, M2M and IoT Technology
	4th	Fundamentals- Devices and gateways
2nd	5th	Data management
	6th	Business processes in IoT, Everything as a Service(XaaS)
	7th	Role of Cloud in IoT, Security aspects in IoT
	8th	Revision, Assignment1
3rd	9th	Unit 2: Hardware Components- Computing (Arduino)
	10th	Hardware Components- Computing (Raspberry Pi)
	11th	Communication, Sensing, Actuation, I/O interfaces
	12th	Software Components- Programming API's (using Python)
4th	13th	Software Components- Programming API's (using Python)
	14th	Software Components- Programming API's (using Arduino)
	15th	Software Components- Programming API's (using Arduino)
	16th	Practice programming & Assignment
5th	17th	Protocols-MQTT, ZigBee, Bluetooth, CoAP, UDP, TCP
	18th	Protocols-MQTT, ZigBee, Bluetooth, CoAP, UDP, TCP
	19th	Quiz test1
	20th	Unit 3: Solution framework for IoT applications

6th	21st	Implementation of Device integration, Data acquisition and integration
	22nd	Device data storage- Unstructured data storage on cloud/local server
	23rd	Authentication, authorization of devices
	24th	Revision & Assignment2
7th	26th	Unit 4: Understanding the IoT Big Picture
	27th	Building the Internet of Things
	29th	Understanding Smart Devices, Building Blocks
	28th	Understanding Network Connections
8th	29th	Understanding IP Adresses
	30th	Understanding cellular Network & Mesh Network
	31st	Revision
	32nd	Student presentation
9th	33rd	Unit 5: What is Smart TV & its use
	34th	What is inside Smart TV
	35th	What a Smart TV does
	36th	Smart TV Operating Systems
10th	37th	What is Smart TV Set-Top Devices
	38th	Integrating Smart TV in to IOT
	39th	Revision, Assignment3
	40th	Video class / Swayam/ NPTEL
11th	41st	Unit 6: IoT case studies a. Smart Home
	42nd	Smart Home
	43rd	b. Smart car
	44th	c. Smart Cities
12th	45th	c. Smart Cities
	46th	d. Smart Drones
	47th	Arduino Programming for Smart city
	48th	Arduino Programming for Smart home
13th	49th	Industrial automation
	50th	Industrial automation
	51st	Revision, Assignment 4
	52nd	Quiz2
14th	53rd	Revision
	54th	Practice short question

	55th	Question discussion previous semesters
	56th	Practice programming
15th	57th	Mock Test
	58th	Very similar test / Practice Test
	59th	Practice
	60th	Practice