Advanced IOT

Course Curriculum

Course Code		Duration	120 Hours

Description:

This program is aimed at training Students in the latest technology trend INTERNET OF THINGS, it is not a second internet – rather it's a network of devices that are connected to the internet that is used every day. As it has not been fully developed and is fragmented, so now it's time to figure out what to do with the technology.

1	Introduction to Digital World
2	Embedded software & tools
3	Hardware & Programming

#	Module Name	Syllabus	NOS Code	Day	Hour Wise Plan	
					Theory	Practical
I	Basics of IOT	1. Introduction to IOT		1-2	2	-
		2. IOT Basic concepts			2	-
		3. What is Internet of IOT			2	-
II	Structure of IOT	1. What Device make it to IOT		3-4	2	-
		2. IOT Platforms			2	-
		3. Architecture of IOT			2	-
		4. Impact of IOT			1	-
		5. Applications and Industry Verticals			2	-
III	IOT Applications	1. IOT, Characteristics, Enabling Technologies, Technical Scope		5-8	2	-
		2. Hardware Components			3	-
		3. What is Controller			2	-
		4. What is Processor			2	-
		5. Difference Between Controller and Processor			2	-
	Assessment – 1			9	3	3
IV	IOT Using ATmega328p/ ESP12	1. Embedded		10-15	2	-
		2. Programming Languages (C & Embedded C)			2	-
		3. What is UNO/ESP12& Types of Arduino Boards			2	-
		4. ARDUINO Environment & IDE			1	-
		5.ESP12 Programming			1	2
		6.Basic hands on practice using ESP12			1	1
	Assessment – 2			16	3	3
V	Hardware Interfacing	1. Hands on practice with Electronic components & ESP12		17-19	2	2

		2. Analog Sensors			2	-
		3. Digital Sensors			2	-
	Assessment – 3			20	3	3
VII	Basic Hands on Experiments	1. Basic LED Blinking & LED Patterns		21-25	1	2
		2. WEB Server			1	2
		3. Temperature & Humidity Sensor Data send to Thingspeak			1	1
VIII	Testing	1. Interfacing All Sensors (Analog & Digital)		26-27	2	2
		2. Why use LCD (16x2/20x4) Display			2	2
IX	Advanced Experiments	1. Introduction to Raspberry Pi		28	2	2
X	Project	PROJECT MODE		29-49		30
	Final Assessment & Certification			50	3	3
XII				-	-	-