

Branch Name:	Artificial Intelligence & Data Science
Program Code:	ET108
Course Name:	Fundamentals of Internet of Things Practical
Course Code:	2ET1080402P
Pre-requisite Course:	Fundamentals of computer network, wireless sensor network, communication & Internet technology, web technology, information security.

Course Objective:

This course will enable students:

- To study Vision and Introduction to IoT.
- To understand IoT Market perspective.
- To understand Data and Knowledge Management and use of Devices in IoT Technology.
- To understand State of the Art –IoT Architecture.
- To learn Real World IoT Design Constraints, Industrial Automation and Commercial Building Automation in IoT.

Teaching and Examination Scheme:

Credit	Teaching Scheme Hours per week				Evaluation Scheme (Marks)								Total(Marks)
					Theory (Marks)				Practical (Marks)				
	L	T	P	Total	SEE		CCA		SEE		CCA		
					Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
1	-	-	2	2	-	-	-	-	10	25	10	25	50

Sr. No	Detail of Practical	Content Hours
1	Study the fundamental of IOT software and components	02
2	Install and study about Arduino Uno.	02
3	To study about controlling the LED with push button.	02
4	To study about about Raspberry Pi.	02
5	To study about DHT11 sensor with Arduino	02
6	To study about how to interface OLED with Arduino.	02
7	To study about interfacing Bluetooth.	02
8	To study about interfacing LED with Arduino using Wifi	02
9	To interface Bluetooth with Arduino/Raspberry Pi and write a program to send sensor data to smart-phone using Bluetooth	02
10	To interface motor using relay with Arduino/Raspberry Pi and write a program to turn ON motor when push button in pressed.	02
11	To interface Bluetooth with Arduino/Raspberry Pi and write a program to turn LED ON/OFF when '1'/'0' is received from smartphone using Bluetooth	02
12	Write a program on Arduino/Raspberry Pi to upload temperature and humidity data to thingspeak cloud.	02
13	Write a program on Arduino/Raspberry Pi to retrieve temperature and humidity data from thingspeak cloud.	02