S. No.	Course Code	Course Name	Course Type	Cd	L	T	P	Marks		
								Sessional	Final Exam	Total
5	ECE-511	Internet of Things Lab	ESC	2	0	0	4	50	-	50

Course Outcomes:

At the end of the course the student will be able to:	
CO1	Analyze the components of IoT system.
CO2	Develop an application with Node MCU and Arduino Nano.
CO3	Develop a sensor interface for IOT application.
CO4	Develop an interface between sensor and cloud to capture the real time data.
CO5	Design an application which can control an actuator using internet.

List of Experiments of IoT Lab

S. No.	Experiments
1	Study of Arduino Uno, Raspberry Pi, ESP8266 and Arduino IDE
2	Interfacing of Analog sensor with Arduino and display the value in serial monitor
3	Interfacing of DHT-11 with Arduino Uno to acquire the temperature and humidity data
4	Communicate two XBEE modules in AT mode using Arduino Uno/Raspberry Pi
5	Controlling LED from remote location and publish the status on ThingSpeak cloud
6	Interfacing of ultrasonic sensor with Arduino Uno /Raspberry pi and display the distance in LCD
7	To interface Bluetooth with Arduino/Raspberry Pi and write a program to send sensor data to Smartphone using Bluetooth.
8	Write a program on Arduino/Raspberry Pi to upload and retrieve temperature and humidity data to/from ThingSpeak cloud.
9	Write a program to create TCP server on Arduino/Raspberry Pi and respond with humidity data to TCP client when requested.
10	Write a program to create UDP server on Arduino/Raspberry Pi and respond with humidity data to UDP client when requested.
11	Read Cloud data with ESP8266 using Web Client/Server and control the actuator according to theParameter
12	Upload the DHT-11 sensor data to MQTT cloud service using Node MCU