PRASAD V. POTLURI SIDDHARTHA INSTITUTE OF TECHNOLOGY

(Autonomous)

KANURU, VIJAYAWADA-520007

II B. Tech – II Sem (Common to CSE (AI&ML and Data Science))

Internet of Things Lab

Course Code:	**20ES1452**	**Year:**	II	**Semester:**	II
Course Category:	ES Lab	**Branch:**	CSE (Data Science)	**Course Type:**	Practical
Credits:	1.5	**L-T-P:**	0-0-3	**Prerequisites:**	
Continuous Internal Evaluation:	15	**Semester End Evaluation:**	35	**Total Marks:**	50

Course Outcomes		
Upon successful completion of the course, the student will be able to		
CO1	Develop various sensor interfacing using Arduino IDE	**L3**
CO2	Evaluate Wireless Control of Remote Devices	**L4**
CO3	Design and develop a Mobile Application which can interact with Sensors and Actuators.	**L5**
CO4	Make an effective report based on experiments.	**L3**

SYLLABUS		
Expt. No.	**CONTENTS**	**Mapped CO**
1	Digital I/O Interface – Blynk LED, Multicolour LED.	**CO1, CO4**
2	Digital I/O Interface - IR Sensor, Slot Sensor	**CO1, CO4**
3	Analog Read and Write - Potentiometer, Led Brightness Control.	**CO1, CO4**
5	Analog Read and Write -Temperature Sensor	**CO1, CO4**
6	Dc Motor Control - Dc Motor Speed and Direction Control.	**CO1, CO4**
7	Serial Communication - Device Control.	**CO1, CO4**
8	Fabrication and direction control of the wheeled robot using Arduino	**CO1, CO4**
9	Wireless Module Interface -Wifi.	**CO1, CO2,CO4**
10	Basic Android App Development using MIT App Inventor.	**CO1,CO3, CO4**
Learning Resources		
Text Books		
1. Invent To Learn: Making, Tinkering, and Engineering in the Classroom, Sylvia Libow Martinez, Gary S Stager, 2016, Constructing Modern Knowledge Press.		
References		
1. Arduino Cookbook, Michael Margolis, 2011, Oreilly.		