Edutainer
TECHNICALLY SIMPLIFIED

Summer Camp
Course Content
Basic IoT
(Internet of Things)

Week	Content	Hours
1.	• IoT Introduction	
	I. Introduction to IOT	1
	II. Components of IOT	1
	• IoT using Arduino	
	I. Arduino Introduction	1
	a. Basic Programming	3
	b. Sensor Introduction	1
	c. LED Blinking	1
	d. Multiple LED's	1
	e. Seven Segment	2
	II. Interaction Components	
	a. Potentiometer	1
	b. Buzzer	0.5
	c. Button	0.5
	III. Displaying Components	
	a. LCD	1
	b. TFT	2
	c. OLED	2
	Total	18
2.	IV. Motors	
	a. DC Motor	1
	b. Servo Motor	1
	c. Stepper Motor	1
	V. Sensors	
	a. Flame Sensor	1
	b. Light Sensor	0.5
	c. Temperature and Humidity Sensor	1
	d. Ultrasonic Sensor	1
	e. PIR Sensor	1
	f. Water Sensor	1
	g. Flex Sensor	2
	VI. Sensor Networks	1
	VII. Protocols in IOT	1
	VIII. Machine to Machine Communication	1
	IX. Remote Controls	2
	X. Bluetooth Module	2
	Total	17.5

3.	XI. Esp8266 Module XII. Node MCU Module XIII. Voice Recognition Module XIV. RFID Module • IOT Using Raspberry PI a. Raspberry PI Introduction b. Installation Process c. As Desktop d. Python Programming Total	4 4 3 2 1 1 1 2 18
4.	• LED Blinking • Sensor in Raspberry PI • Actuators in IOT a. Actuators b. Relay • IOT Cloud a. IOT Cloud Introduction b. IOT Cloud Benefits c. IOT Cloud Example Using NodeMCU d. IOT Cloud Challenges • Case Studies : I. Measuring Temperature (Display ON LCD) 2hr II. Home Automation (controlling Lights, fans and other electronic devices) a. Using Remote Control b. Using Bluetooth Module c. Using Web app d. Using Android App III. Attendance system based on RFID Total	1 1 1 1 0.5 0.5 2 0.5 2 1 1 2 2 2 17.5