Syllabus of Skill-based Job oriented course:: Internet of Things (IoT)

Sl No	Particulars	No. of Hours
1	**Introduction to IOT:** Understanding IoT fundamentals IOT Architecture Various Platforms for IoT Real time Examples of IoT Overview of IoT components	8 Hours
2	Introduction embedded system: Understanding Embedded System Microcontroller vs. Microprocessor Common features of Microcontroller. Different types of microcontrollers.	7 Hours
3	**Overview of basic electronics and digital electronics:** Elementary electrical theory: current, voltage, resistance, and Ohm's Law. Reading a simple schematic. Wiring on a solder less breadboard. Voltage dividers: resistor/resistor, resistor/switch, resistor/photoresistor, resistor/LED. Using a multimeter to measure voltage and resistance.	14 Hours
4	**Getting Started with Arduino:** Introduction to Arduino Pin configuration and architecture. Device and platform features. Concept of digital and analog ports.	6 Hours
5	**Introduction to Programming Languages:** Setup the IDE, Writing Arduino Software Understanding Embedded C programming for Arduino Arduino Libraries	15 Hours
6	**Introduction to Sensors, Actuators:** What are Sensors and Actuators? Various Basic Industrial Sensors-IR- Analog Sensor IR Digital Sensor Application of Sensor How to Interface Sensor and actuator	5 Hours
7	**LIVE Projects using Arduino Uno and ESP-32:** LED Blinking Interfacing of Temperature, Humidity, Proximity, Light and Gas Sensor with Arduino Interfacing Arduino with LCD or OLED module ESP32 Web Server Smart Home automation	45 Hours
		Total : 100 Hours