

**DEPARTMENT OF INFORMATION TECHNOLOGY & COMPUTER
ENGINEERING**



LESSON PLAN

SUBJECT: INTERNET OF THINGS(LAB)

BRANCH: 6TH SEM, IT

FACULTY NAME: MR.SABYASACH SARANGI

Jharsuguda Engineering School, Jharsuguda

JES,JHARSUGUDA

Department of Information Technology

Vision:

To focus on development of skilled and confident personalities of today and tomorrow by using cutting edge technology in the department of Information Technology to accept need based challenges with a sense of social responsibilities.

Mission:

- M1: To impart quality education by implementing state-of-the-art teaching-learning methods to enrich the academic competency, credibility and integrity of the students.
- M2: To implement the educational program in our department from fundamental engineering to recent technology as per emerging trends in the field of Information Technology.
- M3: To facilitate a conducive ambience and infrastructure to develop professional skills and nurture innovation in students.
- M4: To inculcate sensitivity towards society, respect for environment and promote high standards of ethics.

JES,JHARSUGUDA

Learning Outcomes

1. Understand basics of IoT and Arduino programming.
2. Write and execute C programs using Arduino IDE.
3. Interface sensors and actuators with Arduino.
4. Display sensor data using LCD and serial monitor.
5. Implement Bluetooth-based IoT applications.
6. Develop simple IoT-based automation systems.

JES, JHARSUGUDA

JES, JHARSUGUDA

Lesson Plan

Name	SABYASACHI SARANGI	Total Periods Planned	60
Subject Code/Name	PR-2	Subject	IoT Lab
Semester / Programme	6th Sem / Diploma	Department	Information Technology
Session	2025-26	Periods per Week	04

Course Objectives

1. To understand basics of Arduino and IoT.
2. To interface sensors and actuators with Arduino.
3. To implement IoT applications using Arduino.
4. To develop practical problem-solving skills using IoT.

Practical Lesson Plan (Total Periods = 60)

Sl. No	Experiment / Practical Description	No. of Periods	Cumulative Periods
1	Basics of C language using Arduino IDE	8	8
2	Arduino IDE basics, variables, loops and functions	6	14
3	Interfacing LED and Button	6	20
4	Interfacing LDR and LED – Automatic night lamp	8	28
5	Interfacing Temperature / Humidity Sensor (LM35/DHT11)	8	36
6	Interfacing LCD – Display sensor data	8	44
7	Interfacing Air Quality Sensor (MQ135)	8	52
8	Bluetooth based home automation using relay	8	60

JES, JHARSUGUDA

Books Recommended

Sl. No	Name of the Author	Title of the Book	Name of the Publisher
1	Vijay Madiseti, Arshdeep Bahga	Internet of Things	University Press
2	Yashavant Kanetkar, Shrirang Korde	21 Internet of Things (IoT) Experiments	BPB Publications
3	Neerparaj Rai	Arduino Projects for Engineers	McGraw Hill

Sabyasachi Dasgupta
SUBJECT FACULTY

Anil Kumar
HOD

DEAN

PRICIPAL