B. P. Poddar Institute of Management & Technology
Department of Electrical Engineering

LESSON PLAN
2025-26

Program : B.Tech Electrical Engineering **Credit: 3**
Contact: 3L hours/Week.
Course Name : Internet of Things
Course Code :OE EE701B

Lectures Number	Topics Covered	Text Books / Reference	Teaching Aids	Teaching Methodology
L1	Introduction to Internet of Things: Definition and characteristics of IoT	T1,T4,W1	CHALK & TALK	Lecturing☐ STUD. SEMINARS
L2	Physical design of IoT IoT Protocols	T1,T3,W1	CHALK & TALK	Lecturing☐ STUD. SEMINARS
L3	IoT communication models Iot Communication APIs	T1,T3,W1	LCD/SMART BOARDS	Lecturing☐ STUD. SEMINARS
L4	IoT enabled technologies – Wireless sensor networks,	T1,T3,W1	CHALK & TALK	Lecturing☐ STUD. SEMINARS
L5	Cloud computing, Big data analytics,	T1,T3,W1	LCD/SMART BOARDS	Lecturing☐ STUD. SEMINARS
L6	Communication protocols, Embedded systems, IoT levels and templates,	T1,T3,W1	CHALK & TALK	Lecturing☐ STUD. SEMINARS
L7	Domain specific IoTs – Home, City, Environment,	T1,R2,W2	LCD/SMART BOARDS	Lecturing,
L8	Energy, Retail, Logistics, Agriculture, Industry, health and Lifestyle.	T1,R2,W2	CHALK & TALK	
L9	IoT and M2M	T1,T3,W1	CHALK & TALK	Lecturing,
L10	Software defined networks, network function virtualization	T1,T3,W1	LCD/SMART BOARDS	Lecturing,

L11	Difference between SDN and NFV for IoT.	T1,T3,W1	CHALK & TALK	Lecturing,
L12	Basics of IoT System Management with NETCOZF	T1,T3,T4,R 2,W2	LCD/SMAR T BOARDS	Lecturing,
L13	YANG- NETCONF	T1,T3,T4,R 2,W2	CHALK & TALK	Lecturing,
L14	YANG, SNMP NETOPEER	T1,T3,T4,R 2,W2	LCD/SMAR T BOARDS	Lecturing,
L15	Introduction to Python: Language features of Python	T1,T2,R1	CHALK & TALK	Lecturing,
L16	Data types in Python data structures,	T1,T2,R1	LCD/SMAR T BOARDS	Lecturing,
L17	Tupple, List,String etc.	T1,T2,R1	CHALK & TALK	Lecturing,
L18	Control of flow, functions, modules, packaging contd.	T1,T2,R1	LCD/SMAR T BOARDS	Lecturing,
L19	file handling, data/time operations, classes,.	T1,T2,R1	CHALK & TALK	Lecturing,
L20	Hands on on Python Programming	T1,T2,R1	LCD/SMAR T BOARDS	Guest lecture
L21	Exception handling. Python packages - JSON	T1,T2,R1	CHALK & TALK	Lecturing,
L22	XML,HTTP	T1,T2,R1	LCD/SMAR T BOARDS	Lecturing,
L23	Lib, URL Lib, SMTP Lib.	T1,T2,R1	CHALK & TALK	Lecturing,
L24	IoT Physical Devices and Endpoints:	T1,T2,R1	LCD/SMAR T BOARDS	Lecturing,
L25	Introduction to Raspberry PI	T1,T2,R1	CHALK & TALK	Lecturing,
L26	Interfaces serial, SPI, I2C.	T1,T2,R1	LCD/SMAR T BOARDS	Lecturing,
L27	Interfaces, I2C	T1,T2,R1	CHALK & TALK	Lecturing,
L28	Programming – Python program with Raspberry PI with focus of interfacing external gadgets	T1,T2,R1	CHALK & TALK	Lecturing,
L29	Programming – Python program with	T1,T2,R1	LCD/SMAR	Guest lecture

	Raspberry PI with focus of interfacing external gadgets **Hands ON**		T BOARDS	
L30	controlling output, reading input from pins Hands ON	T1,T2,R1	CHALK & TALK	Guest lecture
L31	IoT Physical Servers and Cloud Offerings	T1,T3,T4,R 2,W2	LCD/SMAR T BOARDS	Lecturing,
L32	Introduction to Cloud	T1,T3,T4,R 2,W2	CHALK & TALK	Lecturing,
L33	Storage models and communication APIs.	T1,T3,T4,R 2,W2	LCD/SMAR T BOARDS	Lecturing,
L34	Web server for IoT,	T1,T3,T4,R 2,W2	CHALK & TALK	Lecturing,
L35	Cloud for IoT	T1,T3,T4,R 2,W2	LCD/SMAR T BOARDS	Lecturing,
L36	Python web application framework.	T1,T3,T4,R 2,W2	CHALK & TALK	Lecturing,
L37	Designing a RESTful web API	T1,T3,T4,R 2,W2	LCD/SMAR T BOARDS	Lecturing,
L38	Overview of Full curriculum		STUD. SEMINARS	

Text Books:

T1. Internet of Things - A Hands-on Approach, Arshdeep Bahga and Vijay Madisetti, UniversitiesPress, 2015.

T2. Getting Started with Raspberry Pi, Matt Richardson & Shawn Wallace, O'Reilly (SPD), 2016.

T3. IoT Fundamentals: Networking Technologies, Protocols, and Use Cases for the Internet of Things, David Hanes, Gonzalo Salgueiro, Patrick Grossetete, Robert Barton, Jerome Henry, Pearson Education, 2017.

T4. Internet of Things, K.G. Srinivasa , G.M. Siddesh, R.R. Hanumantha, CENGAGE Leaning India,2018

Reference Books:

R1. R1. Internet of Things (A Hands-on-Approach), Arshdeep Bahga and Vijay Madisetti, VPT, 2014.

R2. R2. Internet of Things: Architecture and Design Principles, Raj Kamal , McGraw Hill Education, 2017.