



GOVERNMENT POLYTECHNIC, BALASORE

Government of Odisha

ସରକାରୀ ବହୁବୃତ୍ତି ଅନୁଷ୍ଠାନ, ବାଲେଶ୍ଵର

LESSON PLAN (WINTER-2026)

Discipline: COMPUTER ENGINEERING & IOT	Semester: 5TH	Name of the Teaching Faculty: Prakash Chandra Das
Subject: IOT COMMUNICATION TECHNOLOGY	No of Days / Per week class allotted: 3	Semester From date: 14TH July, 2026 No of Weeks: 15
Week	Class Day	Theory / Practical Topics
1st	1st	Introduction to IoT Communication (7) Overview of IoT Communication
	2nd	IoT Communication Requirements & Challenges,
	3rd	Types of IoT Networks: PAN, LAN, WAN
2nd	1st	IoT Communication Models & Protocols
	2nd	OSI Model and TCP/IP in IoT
	3rd	OSI Model and TCP/IP in IoT
3rd	1st	OSI Model and TCP/IP in IoT
	2nd	Wireless Communication Technologies for IoT (7) Wi-Fi and Bluetooth in IoT
	3rd	ZigBee, Z-Wave, and LoRaWAN
4th	1st	5G and Cellular IoT (NB-IoT, LTE-M)
	2nd	RF Communication and Near Field Communication (NFC)
	3rd	RF Communication and Near Field Communication (NFC)
5th	1st	Comparative Analysis of Wireless IoT Technologies
	2nd	Comparative Analysis of Wireless IoT Technologies
	3rd	IoT Networking Protocols (7) MQTT (Message Queuing Telemetry Transport)
6th	1st	CoAP (Constrained Application Protocol)
	2nd	HTTP and WebSockets for IoT
	3rd	AMQP (Advanced Message Queuing Protocol)
7th	1st	AMQP (Advanced Message Queuing Protocol)
	2nd	Implementing MQTT and CoAP in IoT Applications
	3rd	Implementing MQTT and CoAP in IoT Applications
8th	1st	IoT Edge and Cloud Connectivity (8) Edge Computing vs. Cloud Computing in IoT
	2nd	Edge Computing vs. Cloud Computing in IoT
	3rd	IoT Gateways and Their Role in Communication
9th	1st	IoT Gateways and Their Role in Communication
	2nd	IoT Data Transmission to Cloud Platforms
	3rd	IoT Data Transmission to Cloud Platforms
10th	1st	Cloud-Based IoT Services, Realtime Data Streaming and Processing
	2nd	Cloud-Based IoT Services, Realtime Data Streaming and Processing
	3rd	IoT Security and Privacy (8) Security Challenges in IoT Communication

11th	1st	Security Challenges in IoT Communication,
	2nd	Secure IoT Communication Protocols (DTLS, TLS, IPSec)
	3rd	Secure IoT Communication Protocols (DTLS, TLS, IPSec)
12th	1st	Secure IoT Communication Protocols (DTLS, TLS, IPSec)
	2nd	Data Encryption in IoT Networks
	3rd	Authentication Mechanisms for IoT Devices
13th	1st	Authentication Mechanisms for IoT Devices
	2nd	IoT Communication in Industrial Applications (8) Smart Cities and Smart Homes
	3rd	Industrial IoT (IIoT) and Smart Manufacturing
14th	1st	Industrial IoT (IIoT) and Smart Manufacturing
	2nd	IoT in Healthcare and Smart Agriculture,
	3rd	Vehicle-to-Everything (V2X) Communication
15th	1st	Vehicle-to-Everything (V2X) Communication
	2nd	IoT Communication in Supply Chain and Logistics
	3rd	IoT Communication in Supply Chain and Logistics


Faculty 14/08/20


HOD 14/08/20