

DHABALESWAR INSTITUTE OF POLYTECHNIC

LESSON PLAN

Discipline	Semester	Name of the Teaching Faculty
Diploma in CSE Engg.	4th	Manas Ranjan Mohanty.
Subject	No. of days per Week Class Alloted	4th Semester from Dt. <u>10.03.2022</u> To Dt. <u>10.06.2022</u>
operating system	5	No. of Weeks: _____
Week	Class Day	Theory / Practical Topics
First	1st.	1. Introduction:
	2nd.	1.1 → Objective and Explain functions of operating system
	3rd.	1.2 → Evolution of operating system
Second	1st.	1.3 → Structure of operating system
	2nd	Ch-2. process Management:
	3rd.	2.1 → Process concept, process control, interacting processes, inter process messages.
	4th	2.2 → Implementation issues of processes.
	5th	2.3 → Process scheduling, Job scheduling.
Third	1st	2.4 → Process Synchronization, Semaphore.
	2nd	2.5 → principle of concurrency, types of Scheduling
	3rd	Ch-3 → Memory Management
	4th	3.1 → Memory allocation Techniques → contiguous memory allocation → non contiguous memory allocation
	1st	3.2 → Swapping
Fourth.	2nd	3.3 → Paging segmentation, virtual memory using Paging
	3rd	3.4 → Demand Paging, Page Fault handling.
	4th	Ch-4: Device Management
	5th	4.1 → Techniques for device Management → dedicated → shared and → virtual
	1st	4.2 → Device allocation considerations
Fifth	2nd	I/O traffic control → I/O schedule
	3rd	→ I/O device handlers
	4th	

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Operating System	5	No. of Weeks: _____
Week	Class Day	Theory / Practical Topics
Sixth	1st	4.3 → Spooling
	2nd	Ch-5 : Dead Locks
	3rd	5.1 → Concept of dead lock
	4th	5.2 → System Model
Seventh	1st	5.3 → Dead lock Detection
	2nd	5.4 → Resources allocation graph
	3rd	5.5 → Methods of dead lock handling
	4th	5.6 → Recovery and Prevention
Eighth	1st	→ Explain Banker's algorithm and safety algorithm
	2nd	Ch-6 : File Management
	3rd	6.1 → File organization
	4th	→ Directory and File structure
Ninth	1st	→ Sharing of Files
	2nd	6.2 → File access methods
	3rd	→ File Systems
	4th	→ Reliability
Tenth	1st	6.3 → Allocation of disk space
	2nd	→ disk Management
	3rd	→ disk defragmentation
	4th	6.4 → File protection
Eleventh	1st	→ Secondary storage
	2nd	→ Secondary storage management
	3rd	Ch-7 → System programming
	4th	7.1 → Concept of System programming
	5th	

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Operating System	5	
Week	Class Day	Theory / Practical Topics
	4th	→ show difference from application compiler
Eleventh	1st	7.2 → Compiler
	2nd	→ Function of compiler
	3rd	7.3 → compare compiler
	4th	→ compare interpreter
Twelfth	1st	7.4 → compiler phases
	2nd	→ seven phases of compiler
	3rd	→ Brief description of each phase
	4th	
13th	1st	
	2nd	
	3rd	
	4th	
14th	1st	
	2nd	
	3rd	
	4th	
15th	5th	
	8 days	

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Discipline	Semester	Name of the Teaching Faculty
Diploma in CSE Engg.	6th	Manas Ranjan Mehandy .
Subject	No. of days per Week Class Alloted	6th Semester from Dt. <u>14.03.2022</u> To Dt. <u>10.06.2022</u> No. of Weeks: _____
IOT.	05	
Week	Class Day	Theory / Practical Topics
1st.	1st	Ch 1: Introduction to Internet of Things
	2nd	1.1 → Introduction
	3rd	1.2 → Characteristics of IOT.
	4th	1.3 → Application of IOT
	5th	1.4 → IOT categories
2nd	1st	1.5 → IOT Enablers and connectivity layers
	2nd	1.6 → Base line Technologies
	3rd	→ Sensor, Actuator
	4th	→ IOT components and implementation
	5th	→ challenges for IOT
3rd	1st	Ch-2: IOT Networking
	2nd	2.1 → Terminologies
	3rd	2.2 → Gateway prefix allotment
	4th	2.3 → Impact of mobility on addressing
	5th	2.4 → multi homing
	1st	2.5 → Deviation from regular web
	2nd	2.6 → IOT identification and data protocols
	3rd	Ch-3: connectivity technologies
	4th	3.1 → Introduction
4th	1st	3.2 → IEEE 802.15.4
	2nd	3.3 → ZigBee, 6LoWPAN
	3rd	3.4 → RFID, HART and wireless HART
	4th	3.5 → NFC, Bluetooth, ZWave, ISA100.11A
	5th	Ch-4: wireless sensor Networks
	1st	4.1 → Introduction
	2nd	4.2 → components of a sensor node
	3rd	4.3 → Modes of detection
	4th	4.4 → Challenge in WSN
	5th	4.5 → Sensor web
	1st	4.6 → Cooperation and behaviour of nodes in WSN
	2nd	4.7 → Self Management
	3rd	

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Internet of Things	05	
Week	Class Day	Theory / Practical Topics
6th	4th	4.8) Social Sensing WSN.
	1st	4.9) Application of WSN.
	2nd	4.10) Wireless Multimedia sensor network.
	3rd	4.11) Wireless Non Sensor Network.
7th	4th	4.12) WSN Coverage
	1st	Ch-5) M2M Communication
	2nd	5.1) M2M Communication
	3rd	5.2) M2M Eco System
8th	4th	5.3) M2M Service Platform
	1st	5.4) Interoperability
	2nd	Ch-6) Programming with Arduino
	3rd	6.1) Features of Arduino
9th	4th	6.2) Components of Arduino board
	1st	6.3) Arduino IDE
	2nd	6.4) Case Studies.
	3rd	Ch-7) Programming with Raspberry Pi
10th	4th	7.1) Architecture and Pin Configuration
	1st	7.2) Case Studies.
	2nd	7.3) Implementation of IoT with Raspberry Pi
	3rd	Ch-8) Software Defined Networking
11th	4th	8.1) Limitation of Current Network.
	1st	8.2) origin of SDN
	2nd	8.3) SDN Architecture
	3rd	8.4) Rule Placement open flow protocol.
12th	4th	8.5) Controller Placement.
	1st	Ch-9) Smart homes.
	2nd	9.1) Smart home implementing
	3rd	9.2) Home Area Network
13th	4th	Ch-10) Smart cities
	1st	10.1) Characteristics of smart cities

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Internet of Things	05	
Week	Class Day	Theory / Practical Topics
11th	4th.	10.2) Smart City frameworks.
	1st	10.3) Data fusion
	2nd	10.4) Smart Packaging
	3rd	10.5) Energy Management.
	4th	Revision =>
12th		11
	1st	11
	2nd	11
	3rd	
13th	4th	
	1st	
	2nd	
	3rd	
14th	4th	
	1st	
	2nd	
	3rd	
	4th	
15th	5th	
	8 days.	