

# LESSON PLAN

Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks
		Overview of operating System	Blackboard & Chalk	Unit-1 Started
1	1	Operating Systems Services	"	"
2	1	Types of operating Systems	"	"
3	1	Types of operating Systems	"	"
4	1	System calls	"	"
5	1	Types of System calls	"	"
6	1	Process Concept	"	"
7	1	Process scheduling	"	"
8	1	Process scheduling	"	"
9	1	Operations on Processes	"	"
10	1	Scheduling Criteria	"	"
11	1	Scheduling algorithms and Evaluation	"	Unit-1 Continued
12	1	Process Synchronization	Blackboard & Chalk	Unit-2 Started
13	2	Critical Section Problem	"	"
14	2	Peterson's Solution	"	"
15	2	Synchronization b/w.	"	"
16	2	Semaphores.	"	"
17	2	Classic problems of synchronization	"	"
18	2	System Model	"	"
19	2	Deadlock Characterization.	"	"
20	2		"	"

\*Black Board / LCD / OHP / Other Method



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Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks	Contact Hour (Cumulative)
21	2	Deadlock Prevention	Black board & Chalk.	Unit-2 Started	21
22	2	Deadlock Detection and avoidance	"	"	22
23	2	Recovery from Deadlock.	"	"	23
24	3	Swapping	Black Board & Chalk	Unit-3 Started	24
25	3	Contiguous memory Allocation.	"	"	25
26	3	Paging	"	"	26
27	3	Structure of the Page table	"	"	27
28	3	Segmentation.	"	"	28
29	3	Virtual memory	"	"	29
30	3	Demand Paging	"	"	30
31	3	Page Replacement algorithms	"	"	31
32	3	FIFO, LRU and Optimal Page replacement	"	"	32
33	3	Thrashing	"	Unit-3 Completed	33
34	4	The Concept of File System	Blackboard & Chalk.	Unit-4 Started	34
35	4	File access Methods: Sequential access	"	"	35
36	4	Direct access and Indexed Access	"	"	36
37	4	Directory Structure	"	"	37
38	4	File sharing and Protection.	"	"	38
39	4	File System Structure	"	"	39
40	4	Allocation methods: Contiguous allocation.	"	"	40

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Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks	Contact Hour (Cumulative)
41	4	linked allocation and indexed allocation.	Blackboard & chalk	Unit 4 Start	41
42	4	Free space Management	"	Unit 4 Continue	42
43	5	Overview of Mass Storage Structure.	Blackboard & chalk	Unit 5 Start	43
44	5	Disk structure, Disk attachment.	"	"	44
45	5	Disk management, Disk scheduling	"	"	45
46	5	FCFS, SSTF, SCAN, C-SCAN	"	"	46
47	5	I/O devices, Device Controller	"	"	47
48	5	Organization of I/O function	"	"	48
49	5	I/O Buffers	"	Unit 5 Continue	49
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Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks
30/12/24 6(1)	I	Data Science :- Definition Data fiction	Chalk & dalle	
2/1/25 1(2)		Exploratory Data Analysis The Data Science Process	"	
2(3)		Data Scientist Role in this Process	"	
1(4)		Numpy Basics: The Num Py ndarray	"	
6(5)		A multidimensional array object, Creating ndarray	"	
1(6)		Data types of ndarray Operations between arrays	"	
2(7)		Basic indexing & slicing Boolean Indexing	"	
1(8)		Fancy Indexing Data Processing using arrays	"	
6(9)		Expressing conditional logic as array operations Methods for Boolean arrays	"	
1(10)		Sorting, unique.	"	
2(11)	II	Getting started with Pandas:	PPT	
		Introduction to Pandas	PPT	
1(12)		Library Architecture, features	Chalk & talk	
6(13)		Applications, Data Structures, Series	"	
1(14)		Data frame Index objects	"	
2(15)		Essential functionality Reindexing	"	
1(16)		Dropping entries from an axis, Indexing	"	
6(17)		Selection and filtering Sorting and Ranking	"	
1(18)		Summarizing and Computing Descriptive Statistics	"	
2(19)		unique values, Value counts	"	

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## LESSON PLAN

Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks
1 (20)	III	Handling missing data	chalk & talk	
		filtering and missing data	"	
6 (21)		Data loading, storage and file formats	chalk & talk	
1 (22)		Reading & writing Data in text format	"	
2 (23)		Reading text files in pieces	"	
1 (24)		writing Data out to text format	"	
6 (25)		Manually working with Delimited formats	PPT	
		JSON Data		
1 (26)		XML and HTML: web scraping	PPT	
2 (27)		Binary Data formats	PPT	
1 (28)		using HDFS format, Reading Microsoft Excel files	Chalk & talk	
6 (29)		Interacting with Data bases	"	
1 (30)		Sorting & loading Data in MongoDB	"	
2 (31)	IV	Data wrangling!	chalk & talk	
1 (32)		Combining & merging Datasets	"	
6 (33)		Database style Data frame merges	"	
1 (34)		Merging on index	"	
2 (35)		Concatenating Along an axis	"	
1 (36)		Combining Data with overlap	"	
6 (37)		Reshaping and pivoting	"	

[illegible]

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## LESSON PLAN

Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks
1 (39)		Reshaping with Hierarchical indexing	chalk & talk	
2 (40)		Data Transformation	"	
1 (41)		Removing Duplicates	"	
		Replacing values	"	
6 (41)	V	Plotting and visualization	chalk & talk	
1 (42)		A Brief Matplotlib API Primer	"	
2 (43)		Figures & Subplots, Colors, Markers	"	
1 (44)		and Line styles, Ticks, Labels	"	
		and legends,	"	
6 (45)		Annotations and Drawing on a Subplot	"	
1 (46)		Saving plots to file	"	
2 (47)		Plotting Functions in Pandas	PPT	
1 (48)		Line plots, Bar plots	"	
6 (49)		Histograms and Density Plots	"	
1 (50)		& Scatter plots	"	

4/3/25