NM Institute Of Engineering and Technology, Bhubaneswar

DEPARTMENT:CSE

LESSON PLAN: Academic Year 2023-24 (Even Semester) **COURSE: DIPLOMA** **SEMESTER: 4th**

Subject/Code: OPERATING SYSTEM **Faculty Name: Bebarta Chinmayananda Das**

Sl. No.	Name of the Topic to Cover	Text Book	Teaching Method	Course Progress	Remark
1	Introduction, Objectives and functions of operating system.	T1	P		
2	Evolution of Operating system	T3	G		
3	Structure of operating system	T2	P		
4	Process concept, process control	T2	G		
5	Interacting processes, inter process messages, Implementation issues of	T2	G		
6	Processes.	T3	G		
7	Process scheduling	T2	P		
8	Job scheduling	T1	G		
9	Process synchronization	T1	G		
10	Process synchronization (Cont..)	T3	P		
11	Semaphore	T1	G		
12	Principle of concurrency	T2	P		
13	Types of scheduling	T3	G		
14	Types of scheduling (Cont..)	T2	G		
15	Revision and Question answer Discussion	T2	G		
16	Quiz Test	T1	G		
17	Memory allocation Techniques, Contiguous memory allocation	T3	P		
18	Non-contiguous memory allocation, Swapping	T1	G		
19	Paging	T3	G		
20	Segmentation	T2	G		
21	Virtual memory using paging,	T3	G		
22	Demand paging	T2	P		
23	Page fault handling	T3	G		
24	Revision and Question answer Discussion	T2	G		
25	Techniques for Device Management: Dedicated	T1	G		
26	Techniques for Device Management: virtual	T1	G		
27	Device allocation considerations I/O traffic control	T2	P		
28	I/O Schedule	T2	P		
29	I/O Device handlers.	T1	G		
30	SPOOLING.	T3	G		
31	Revision and Question answer Discussion	T2	G		

32	Concept of deadlock, System Model	T1	G		
33	Dead Lock Detection	T3	G		
34	Resources allocation Graph	T3	P		
35	Methods of Deadlock handling	T2	P		
36	Deadlock avoidance	T1	G		
37	Recovery from deadlock	T3	G		
38	Bankers Algorithm	T3	G		
39	Safety Algorithm	T3	P		
40	Revision and Question answer Discussion	T2	P		
41	File organization, Directory & file structure	T1	G		
42	Sharing of files	T2	G		
43	File access methods	T3	G		
44	file systems, reliability	T1	G		
45	Allocation of disk space	T2	P		
46	Allocation of disk space (cont...)	T1	P		
47	File protection	T3	G		
48	Secondary storage management	T3	P		
49	Secondary storage management (Cont..)	T2	P		
50	Hard Disk Structure and its performance	T1	G		
51	Hard Disk Scheduling Algorithms	T2	P		
52	Revision and Question answer Discussion	T1	P		
53	SYSTEM PROGRAMMING: Concept of system programming and show	T2	G		
54	difference from Application Complier	T1	P		
55	Compiler, functions of compiler, Compare compiler and interpreter	T2	P		
56	Seven phases of compiler, brief description of each phase	T1	G		
57	Seven phases of compiler, brief description of each phase (Cont..)	T3	P		
58	Revision and Question answer Discussion	T1	P		
59	Previous End semesters end semester Question answer Discussion	T1	G		
60	Previous End semesters end semester Question answer Discussion	T2	G		
			Method of Teaching		
			G: Green Board Teaching		
			P: Power Point Teaching		

Faculty Signature

At the end of this course, students will be able to:

- Understand the concept and function of operating system.• Understand notion of a process and all computation.
- To introduce the critical – section problem whose solutions can be used to ensure the consistency of the shared data
- Understand the concept of deadlock, its avoidance prevention and recovery
- To provide a detailed description of various memory management techniques.• To describe the benefits of a virtual memory system.
- To describe the details of implementing local file systems and directory structures
- Understand the brief idea of Systems Programming

TEXT BOOKS:

Donovan Operating System TMH		
Silverschz& Galvin, Operating System PHI		
Er.Rajiv Chopra OperatingSystem S.CHAND		