# 20CS22P2- OPERATING SYSTEMS LABORATORY

|  |  |  |  |
| --- | --- | --- | --- |
| Course Category: | Program Core | Credits: | 1.5 |
| Course Type: | Practical  | Lecture-Tutorial-Practical: | 0-0-3 |
| Prerequisite: | Knowledge on basic operating system concepts and programming fundamentals | Sessional Evaluation:Univ. Exam Evaluation:Total Marks: | 4060100 |
| Objectives: | * Use various OS concepts to implement some of the real world issues practically and to give better exposure regarding its functionality.
 |

|  |  |
| --- | --- |
| Course Outcomes | Upon successful completion of the course, the students will be able to acquire knowledge on Scheduling strategies, Memory and File Allocation Techniques and Deadlock concepts |
| Course Content | 1. Simulate the following CPU scheduling algorithms.
	1. FCFS b. SJF c. Priority d. Round Robin.
2. Simulate the following file allocation strategies.
	1. Sequential b. Indexed c. Linked.
3. Simulate MVT and MFT.
4. Simulate the following File Organization Techniques.
	1. Single level directory b. Two level
5. Simulate Bankers Algorithm for Dead Lock Avoidance.
6. Simulate the following page replacement algorithms.
	1. FIFO b. LRU c. Optimal d. LFU
7. Simulate Paging Technique of memory management.
 |
| Text Books &ReferencesBooks | **TEXT BOOKS:**1. “Operating System Concepts”, Abraham Silberchatz, Peter B Galvin, Greg Gagne, 9th Edition, John Wiley & Sons Publication, 2016.

**REFERENCE BOOKS:**1. “Operating System Concepts”, Abraham Silberchatz, Peter B Galvin, Greg Gagne, 9th Edition, John Wiley & Sons Publication, 2016.
2. “Modern Operating Systems”, Andrew S. Tanenbaum, Herbert Bos, 4th Edition, Pearson Education, 2016.
3. “Operating Systems – Internals and Design Principles”,William Stallings,9th Edition, Pearson Education, 2018.
 |
| E-Resources | 1. <https://nptel.ac.in/courses>
2. <https://freevideolectures.com/university/iitm>
 |

**CO-PO Mapping:** 3-High Mapping, 2-Moderate Mapping, 1-Low Mapping, - -Not Mapping

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** |
| **CO1** | 2 | 3 | 2 | 2 | 3 | - | 2 | - | 2 | 2 | 2 | 3 |