Department of Computer Science and Engineering
National Institute of Technology, Tiruchirappalli

1. Course Outline

Course Title	OPERATING SYSTEMS LABORATORY		
Course Code	CSLR24		
Programme & Department	B.Tech. - CSE *A & B Sections*	No. of Credits	2
Co-requisites Course Code	CSPC26	Faculty Name	Dr. M.Sridevi *Dr. E. SivashanKar*
E-mail	msridevi@nitt.edu	Telephone No.	0431 - 2503216
Course Type	ELR		
Session in Academic Year	January – May 2017 Session (Even Semester)		

2. Course Overview

- This covers design and implementation of Operating System concepts.

3. Course Objectives

- To understand the concept of operating system
- To experience the practical side of the functioning of various blocks in OS

4. Course Outcomes (CO)

- Ability to make use of tools for solving synchronization problems
- Ability to compare and contrast various CPU scheduling algorithms
- Ability to understand the differences between segmented and paged memories

5. Course Outcomes (CO)	Aligned Programme Outcome (PO)							
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8
Ability to make use of tools for solving synchronization problems	S	M	S	S	S	S	B	M
Ability to compare and contrast various CPU scheduling algorithms	S	S	S	S	S	M	B	M
Ability to understand the differences between segmented and paged memories	M	M	S	M	S	M	B	M

S = 0.6   M = 0.4   B = 0.0

6. Course Teaching and Learning Activities

S.No.	Title	Type		Mode of delivery			
		L	T	C&T	PPT	VL/VC	DEMO
1.	Hands on Unix Commands						√
2.	Shell Programming for File handling						√
3.	Shell Script programming using the commands *grep, awk and sed*						√
4.	Implementation of CPU Scheduling algorithms						√
5.	Programming using Pthreads						√
6.	Implementation of synchronization problems using Semaphores						√
7.	Implementation of synchronization problems using Message Queues						√
8.	Implementation of synchronization problems using Shared Memory						√
9.	Handling of Deadlocks						√
10.	Implementation of Memory Management Concept – Allocation						√
11.	Page placement and replacement algorithms						√
12.	Disk Scheduling algorithms						√

7. Course Assessment Methods

Sl. No.	Mode of Assessment	Week / Date	Duration	Marks
1	Continuous Assessment	Every Lab Session	3 hours	40
2	Record	Every Lab Session	-	10
3	Model Exam	6th Week	3 hours	25
4	End Semester Exam	3rd Week of April	3 hours	25
			Total	100

8. Essential Readings (Textbooks, Reference books, Websites, Journals, etc.)

1. Silberschatz, Galvin, Gagne, "Operating System Concepts", John Wiley and Sons, 9th edition, 2013.
2. William Stallings, "Operating Systems –Internals and Design Principles", 8/E, Pearson Publications, 2014.
3. Andrew S. Tanenbaum, "Modern Operating Systems", 4/E, Pearson Publications, 2014.

For Senate's Consideration

M.Lid (-Sankar
(M.SRIDEVI) (E.SIVASANKAR)   S. Selvakuman   3/1/2017

Course Faculty   **Class Committee Chairperson**   **HOD / CSE**

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