

**Computer Science Laboratory Course-I
(System Programming)**

Semester: VI

Subject Code: BSP61707

Lectures: 60

Objectives:

The syllabus aims in equipping students with,

- Designing and implementation of System programs with minimal features to understand their complexity.

Unit 1: Line Editor	12
Unit 2: Simulator	08
Unit 3: Assembler	12
Unit 4: Macro processor	12
Unit 5: DFA driver RE TO NFA	8
Unit 6: Demonstration of Development Utilities . Activity Based on the development utilities for 5 marks.	4

*Contact hours – 04 hours

Reference Books:

1. D.M.Dhamdhere, *Systems Programming and Operating Systems*, Second Revised Edition.[chapter 3,4]
2. Alfred V. Aho, Ravi Sethi, Jeffrey D. Ullman, *Compilers: Principles, Techniques, and Tools*
3. Leland L. Beck, *System Software - An introduction to Systems Programming*, Pearson Education [Chapter: 1] .
4. John R. Levine, Elsevier Moegan Kaufmann, *Linkers and Loaders*. [chapter 6]



**Computer Science Laboratory Course-I
(Operating System)**

Semester: VI

Subject Code: BSP61707

Lectures: 60

Objectives:

The syllabus aims in equipping students with,

- Designing and implementing simulations of operating system level procedures

Unit 1: Toy shell	08
Unit 2: Implementing CPU Scheduling algorithms: FCFS, Shortest Job First(Preemptive &non preemptive), Priority (Preemptive &non preemptive), Round Robin	12
Unit 3: Deadlock detection using Banker's algorithm	08
Unit 4: Page Replacement Algorithms FIFO, Optimal, Least Recently Used, Most Frequently Used.	12
Unit 5: File Allocation methods	08
Unit 6: Demonstration of LEX and YACC Activity Based on the LEX and YACC for 5 marks.	4

*Contact hours – 04 hours

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1. D.M.Dhamdhare, *Systems Programming and Operating Systems*, Second Revised Edition.[chapter 3,4]
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