**CSE321 LAB Activity Plan**

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| Week | Topic | Description |
| 1 | Basic Shell Commands | Objectives: Familiarize with Linux kernel, works with Terminal Panel. Learn how can access and operates on different directory and files by Terminal using commends. |
| 2 | Start with Shell Programming Concept | Objectives: Why shell script? How to program on shell scripting. Variable Declaring , Expression Syntax, If-else, Switch Case, Declaring Functions, Arguments, while loop etc. |
| 3 | Shell Programming | Objectives: Solve advanced level problems using shell Script, String Comparison. |
| 4 | Thread Concept | Objectives: Concept of thread, thread creation, ways to create thread, work with multithreading concept in Java. |
| 5 | Threading | Thread synchronization, Thread Pool, thread wait, interrupt, notify |
| 6 | Review of Lab 1, 2, 3, 4, 5  + Lab mid | Objectives: To discuss any problems that the students have regarding the previous labs. Review all topics covered so far and take a quiz. This is to prepare students for their midterm. |
| 7 | CPU Scheduling Algorithms | Objectives: Implements CPU schedule Algorithms (FCFS, Preemptive/Non-Preemptive SJF) |
| 8 | CPU Scheduling Algorithms | Objectives: Implements CPU schedule Algorithms (Preemptive/Non-Preemptive Priority Scheduling, Round Robin) |
| 9. | Process Synchronization related problems | Objectives: Learn the concept of semaphore. Solve Producer Consumer problem and Peterson’s algorithm. |
| 10. | Deadlock Handling | Objectives: Implement Banker’s Algorithm for deadlock avoidance. |
| 11. | Page Replacement Algorithms | First in first out (FIFO) replacement, Least recently used (LRU) replacement algorithms |
| 12 | Review of Lab 1, 2, 3, 4, 5, 7, 8, 9, 10, 11  + Lab Final | Objectives: To review the whole syllabus and take a quiz to prepare students for their Final Exam. |