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| Logo Fast | **NATIONAL UNIVERSITY**  **of Computer & Emerging Sciences, Lahore** |

Department of Computer Science

**Lab Course CL-205 – Operating Systems Lab**

**FALL 2018**

**Instructor Name:** Ahsan, Rehman **Instructor Name:** Shakeel, Zafar

**Email address:** ahsan.rehman@nu.edu.pk **Email address:** shakeel.zafar@nu.edu.pk

**Office Location/Number:** M130 **Office Location/Number:** M109

**Office Hours:** TUES 11-1 PM, Fri 11-1 PM **Office Hours:** Mon, Wed 11:00 to 1:00 PM

**Lab Information**

**Program:** BS **Credit Hours:** 1 **Type:** Core

**Pre-requisites (if any):** Data Structures

**Course Website (if any):**

**Class Meeting Time:** Section C: Friday, 2 – 5 PM **Class Venue: Lab 4**

**Lab Objectives/Goals?**

Operating System Lab focuses to provide an introduction to the basic working of a Linux/Unix based Operating System. It also provides students with the basics of how Processes/Programs are scheduled, how they communicate, how they share the resources. How the System Calls work.

The goals of this lab shall be:

* To introduce students to the basics of Operating System with the help of C/C++ Language Programming.

**Tentative Weekly Schedule**

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| Week | Topics to be covered |
| 1 | Introduction To UBUNTU and C/C++ |
| 2 | Make File, Command line arguments |
| 3 | System Calls, fork, exec, wait |
| 4 | Inter process communication through unmade pipes |
| 5 | Inter process communication through shared memory |
| 6 | Threads |
| 7 | Mid |
| 8 | Semaphores |
| 9 | Threads with semaphores |
| 10 | Implement Singleton Pattern |
| 11 | File System |
| 12 | MMAP |
| 13 | Final |

**(Tentative) Grading Criteria**

1. 2 Quizzes (10%)
2. In labs (30%)
3. 1 Midterm Exam (20%)
4. Final Exam (40%)

**Lab Policies**

1. Quizzes may be un-announced.
2. No makeup for missed quiz or assignment.
3. 80% attendance.
4. Minimum requirement to pass this course is to obtain at least 50% marks.
5. All labs and post labs must be done individually.
6. Plagiarism in any work (Labs, Quiz, Assignment, Midterms, and Final Exam) from any source (Internet or a Student) will result in F grade.