**INSTITUTION National University of Computer and Emerging Sciences, Karachi Campus**

BS (CS), Spring 2020

**PROGRAM (S) TO BE**

**EVALUATED**

1. **Course Description**

|  |  |
| --- | --- |
| **Course Code** | CS220 |
| **Course Title** | OPERATING SYSTEM |
| **Credit Hours** | 3 + 1 |
| **Assessment Instruments with Weights** (homework, quizzes, midterms, final, programming assignments, lab work, etc.) | Midterms 30%  Quiz + Assignments 10%  Projects 10%  Final Exam 50% |
| **Course Coordinator** | Dr. Hasina Khatoon |
| **Textbook** (or **Laboratory Manual** for Laboratory Courses) | Operating system Concepts 10th Edition by Silberchatz |
| **Reference Material** | Modern Operating Systems Tannenbaum  And many more books |
| **Topics Covered in the Course, with Number of Lectures on Each Topic** (assume 16-week instruction and one-hour lectures) | **Week 1: Introduction to Operating system** |
| **Week 2:** **Operating system structure** |
| **Week 3:** **Operating system structure** |
| **Week 4: Process Concept**(Process scheduling, interprocess communication) |
| **Week 5**:**Process scheduling Algorithm** (Algorithms for process scheduling, real time scheduling) |
| **Week 6**: **FIRST MID TERM EXAMINATION** |
| **Week 7: Multi-threaded Programming(**threads models , threads issues) |
| **Week 8: Memory management strategies** |
| **Week 9:** **Memory management strategies** |
| **Week 10: Virtual Memory** |
| **Week 11: SECOND MID TERM EXAM** |
| **Week 12: Virtual Memory** |
| **Week 13: Process Synchronization** |
| **Week 14: Process Synchronization** |
| **Week 15: Dead Lock** |
| **Week 16: Mass Storage management , Protection and Security** |
| **Laboratory Projects/Experiments Done in the Course** | Lab manual available separately |