National Computer Education Accreditation Council
NCEAC

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

PROGRAM (S) TO BE EVALUATED BS (CS), Spring 2021

A. Course Description

Course Code	CS220
Course Title	OPERATING SYSTEM
Credit Hours	3 + 1
Prerequisites by Course(s) and Topics	ITC and DS
Assessment Instruments with Weights (homework, quizzes, midterms, final, programming assignments, lab work, etc.)	Midterms 30% Class activity written + Assignments 10% Projects 10% Final Exam 50%
Course Supervisor	Anaum Hamid
URL (if any)	
Current Catalog Description	
Textbook (or **Laboratory Manual** for Laboratory Courses)	• Operating Systems Concepts, 10th edition, by Abraham Silberschatz, Peter Baer Galvin, and Greg Gagne.
Reference Material	• Operating Systems – Internals and Design Principles, 8th edition, by William Stallings.
Course Goals	- To Describe the basic organization of computer system. - To provide a grand tour of major component of operating system - To give an overview of the many types of computing environments. - To explore several open source operating system.
Topics Covered in the Course, with Number of Lectures on Each Topic (assume 15-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**			
	Week 6: **FIRST MID TERM EXAMINATION**			
	Week 7: Multithread Programming Models			
	Week 8: Process Synchronization			
	Week 9: Process Synchronization			
	Week 10: Memory Management Strategies			
	Week 11: SECOND MID TERM EXAM			
	Week 12: Memory Management Strategies			
	Week 13: Virtual Memory			
	Week 14: Virtual Memory			
	Week 15: Deadlock			
	Week 16: Disk Scheduling			
Laboratory Projects/Experiments Done in the Course	Lab manual available separately			
Programming Assignments Done in the Course	Programming Assignments will be given.			
Class Time Spent on (in credit hours)	**Theory**	**Problem Analysis**	**Solution Design**	**Social and Ethical Issues**
	20%	30%	40%	10%
Oral and Written Communications	Every student is required to submit a project along with its report of not more than 8 pages.			