

Brooklyn College
Department of Computer and Information Science

CISC 3320 [25] Operating Systems
3 hours; 3 credits

Design and implementation of operating systems for large computers. Multiprogramming, multiprocessing, time sharing. Resource allocation and scheduling. Communications, conversational computing, computer networks. Memory protection, interrupts, segmentation, paging, and virtual memories.

Objectives

By the end of this course, students should be able to

1. Demonstrate understanding of the functions and tasks of an operating system and the development history of current techniques
2. Demonstrate understanding of process handling, including interrupts, short-term scheduling, CPU scheduling, processes and threads, inter-process communication, semaphores, and deadlock.
3. Demonstrate understanding of primary and secondary storage management, including memory management, multiprogramming, virtual memory, secondary storage management and scheduling,
4. Demonstrate understanding of security and protection
5. Write a large program (with subprograms) that incorporates and requires implementation of the techniques taught in the course.

Syllabus

<u>Topic</u>	<u>Chapter</u>
Overview/History of operating systems	1
Operating Systems Functions/Services	3
Interrupts, I/O	2
Processes and Threads	4, 5
CPU Scheduling	6
Memory Management	9
Test 1	
Discussion of Project	handouts
Virtual Memory	10
Process Coordination, Semaphores	7
Deadlock	8
Disk Management	14 (part)
Test 2	
File Management	11, 12
Protection and Security	18, 19

Textbook

Operating System Concepts (6th or 7th edition), by: Silberschatz, Galvin and Gagne