CSCI 375 (Operating Systems) – SECTION 1, 2, 6

Class Location: NB 6.67 (Sec 1, 2, 6)

Meeting Days/Time: Every Tuesday & Thursday, 10:50 AM ~ 12:05 PM (Sec 1), 3:05 PM ~ 4:20 PM (Sec 2), 4:30 PM ~ 5:45 PM (sec 6)

Instructor Name: Jinwoo Kim   E-mail: jwkim@jjay.cuny.edu
Office Hours: Tuesday, 2:00PM ~ 3:00PM at NB 6.67 and by appointment
Office Location: 6.65.17 New Building   Phone: (212) 237-8927

TEXT& REFENCE MATERIAL

Operating System Concepts, 10th edition update, Silberschatz, Galvin, and Gagne, John Wilely & Sons Inc, 2021 (ISBN 978-1-119-80036-1)

Class Homepage:
http://jjcweb.jjay.cuny.edu/jwkim/class/CSCI375-fall-24/

The class homepage provides essential information including class lecture notes, project assignment and announcements. Please note that class handouts will be made available only from class homepage and no hardcopies will be distributed in class.
It is your responsibility to check class homepage often for any changes or updates including exam dates and project assignments.
Class lecture notes will be electronically available at least 24 hours before the class and you are responsible for printing out hard copies and review before class.

CATALOG DESCRIPTION

This course introduces principles and techniques used in the design and implementation of operating systems. Basic and advanced features of modern operating systems are covered including the concepts of processes, processor scheduling, memory systems, I/O systems, and file systems. The class also explores several security issues in modern operating systems including Windows, Mac OS, and Linux.

COURSE REQUIREMENT

Prerequisites: ENG 201, and CSCI 272

COURSE OBJECTIVE

Students will be able to:

CO1.   identify the major concepts in modern operating systems
CO2.   explain how OS provide abstractions with which programmers are familiar and why particular approaches are not suitable.
CO3.   analyze how OS problems are addressed in different systems.
CO4.   understand basic security issues in OS design and implementation (how the first principles of security apply to operating systems)

Module	Chapter	Topics	Assignments
1	1-3	Introduction	HW 1
2	3-4	Processes	HW 2
3	5	Multithreads	Project 1
4	6	CPU Scheduling	HW 3
5	7	Synchronization	HW 4
6	7	Hardware support for Synchronization	Project 2
7	7	Synchronization: Semaphores	
8	7	Semaphores: Readers/Writers Problem	
9		**Midterm Exam**	
10	8	Deadlock	HW 5
11	9	Memory Management	Project 3
12	9	Paging and Segmentation	HW 6
13	10	Demand Paging and Virtual Memory	
14	10	Page Replacement Algorithms	
15	11-14	File System	HW 7
16		Security	
17		**Final Exam**	

GRADING

Mid-term exam: 25%
Final exam: 40%
Projects and homework: 30%
Class participation: 5%

STUDENT INTEGRITY

Statement of the College Policy on Plagiarism
Plagiarism is the presentation of someone else's ideas, words, or artistic, scientific, or technical work as one's own creation. Using the ideas or work of another is permissible only when the original author is identified. Paraphrasing and summarizing, as well as direct quotations require citations to the original source.

Plagiarism may be intentional or unintentional. Lack of dishonest intent does not necessarily absolve a student of responsibility for plagiarism.

It is the student's responsibility to recognize the difference between statements that are common knowledge (which do not require documentation) and restatements of the ideas of others.
Paraphrase, summary, and direct quotation are acceptable forms of restatement, as long as the source is cited.

Students who are unsure how and when to provide documentation are advised to consult with their instructors. The library has free guides designed to help students with problems of documentation. (*John Jay College of Criminal Justice Undergraduate Bulletin*, http://www.jjay.cuny.edu/academics/654.php, see Chapter IV Academic Standards)