

## **CSCI 375 – SECTION 1**

Class Location: Westport 103W      Meeting Days/Time: Tuesday and Thursday,  
9:25AM ~ 10:40AM

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

### **TEXT& REFERENCE MATERIAL**

Operating System Concepts, 9<sup>th</sup> edition update, Silberschatz, Galvin, and Gagne, John Wiley & Sons Inc, 2012 (ISBN 978-1-118-06333-0)

Binder ready version (ISBN 978-1-118-12938-8)

E-Book (ISBN 978-1-118-55961-1)

<https://www.wileyplus.com/WileyCDA/Section/id-610235.html>

Class Homepage:

<http://jjcweb.jjay.cuny.edu/~jwkim/class/csci375-fall-18/>

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 basic principles and techniques used in the design and implementation of operating systems. The course follows text; however, supporting material is introduced throughout the course. Topics are basic and advanced features of modern operating systems including concept of processes, processor scheduling, memory systems, I/O systems and file systems. We will also explore several security issues in modern operating systems including Windows, Mac OS, and Linux.

### **COURSE REQUIREMENT**

Prerequisites: CSCI 271, and CSCI 272 or the equivalent.

### **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 (CO1)	HW 1
2	3-4	Processes (CO2)	HW 2
3	5	Multithreads (CO2)	Project 1
4	6	CPU Scheduling (CO2)	HW 3
5	7	Synchronization (CO2)	HW 4
6	7	Hardware support for Synchronization (CO3)	Project 2
7	7	Synchronization: Semaphores (CO2)	
8	7	Semaphores: Readers/Writers Problem (CO2)	
9		<b>Midterm Exam</b>	
10	8	Deadlock (CO2)	HW 5
11	9	Memory Management (CO2)	Project 3
12	9	Paging and Segmentation (CO4)	HW 6
13	10	Demand Paging and Virtual Memory (CO3)	
14	10	Page Replacement Algorithms (CO4)	
15	11-14	File System (CO2) (CO3)	HW 7
16		Security (CO2) (CO4)	
17		<b>Final Exam</b>	

## 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)