

# Course Schedule

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## Metropolitan State University

ICS 462-02 Operating Systems  
Spring 2021

### Class Hours:

Wednesdays, 6:00pm – 9:20pm  
Synchronized meeting

**Zoom Meeting ID: 976 7868 7507 || Passcode: 46202**

January 13 – April 28, 2021

### Note:

1. **Programming Assignments** are due at **5:30pm** on its due date **Wednesdays** (i.e., before class begins).

| Week | Dates     | Description  | Assignments  | Assign. Due |
|------|-----------|--|--|-------------|
| 1)   | 1/13/2020 | <b>Lecture:</b><br>1. C Programming – Overview<br>2. Introduction to Operating Systems | <b>Reading:</b><br>1. <b>Chp002</b> - Introduction to OS   |             |
|      |           |  | <b>Programming:</b><br>1. <b>Project #1:</b> Intro to C & OS   |             |
| 2)   | 1/20/2020 | <b>Lecture:</b><br>1. Processes  | <b>Reading:</b><br>1. <b>Chp004</b> - CPU - Processes<br>2. <b>Chp005</b> - CPU - Process API<br>3. <b>Chp006</b> - CPU - Direct Execution                     |             |
|      |           |  |  |             |
| 3)   | 1/27/2020 | <b>Lecture:</b><br>1. Scheduling   | <b>Reading:</b><br>1. <b>Chp007</b> - CPU - Scheduling<br>2. <b>Chp008</b> - CPU - Scheduling -MLFG<br>3. <b>Chp009</b> - CPU - Scheduling -Proportional Share |             |
|      |           |  |  |             |

|     |           |                                      |   |            |
|-----|-----------|--------------------------------------|---|------------|
| 4)  | 2/3/2020  | Lecture:<br>1. Multithreading        | Reading:<br>1. Chp026 - SYNC - Concurrency<br>2. Chp027 - SYNC - Thread API   | Project #1 |
|     |           |                                      | Programming:<br>1. Project #2: Synchronization  |            |
| 5)  | 2/10/2020 | Lecture:<br>1. Synchronization I     | Reading:<br>1. Chp028 - SYNC - Locks<br>2. Chp030 - SYNC - Condition Variables  |            |
|     |           |                                      |   |            |
| 6)  | 2/17/2020 | Lecture:<br>1. Synchronization II    | Reading:<br>1. Chp031 - SYNC - Semaphores<br>2. Chp032 - SYNC - Common Concurrency Problems   |            |
|     |           |                                      |   |            |
| 7)  | 2/24/2020 | Lecture:<br>1. Memory I              | Reading:<br>1. Chp013 - VM - The Abstraction -Address Spaces<br>2. Chp014 - VM - Interlude -Memory API<br>3. Chp015 - VM - Mechanism -Address Translation | Project #2 |
|     |           |                                      | Programming:<br>1. Project #3: Memory   |            |
| 8)  | 3/3/2020  | MIDTERM EXAM                         |   |            |
| 9)  | 3/10/2020 | SPRING BREAK/NO CLASSES/OFFICES OPEN |   |            |
| 10) | 3/17/2020 | Lecture:<br>1. Memory II             | Reading:<br>1. Chp018 - VM - Paging -Introduction<br>2. Chp019 - VM - Paging -Faster Translations (TLBs)  |            |
|     |           |                                      |   |            |
| 11) | 3/24/2020 | Lecture:<br>1. Memory III            | Reading:<br>1. Chp020 - VM - Paging -Smaller Tables<br>2. Chp021 - VM - Beyond Physical Memory -Mechanisms  |            |
|     |           |                                      |   |            |

|     |           |                                   |   |                   |
|-----|-----------|-----------------------------------|---|-------------------|
| 12) | 3/31/2020 | <b>Lecture:</b><br>1. I/O Systems | <b>Reading:</b><br>1. <b>Chp036</b> - IOS - IO Devices<br>2. <b>Chp037</b> - IOS - Hard Disk Drives<br>3. <b>Chp038</b> - IOS - RAIDs |                   |
|     |           |                                   |   |                   |
| 13) | 4/7/2020  | <b>Lecture:</b><br>1. File System | <b>Reading:</b><br>1. <b>Chp039</b> - FS - Files and Directories<br>2. <b>Chp040</b> - FS - File System Implementation                | <b>Project #3</b> |
|     |           |                                   |   |                   |
| 14) | 4/14/2020 | <b>Lecture:</b><br>1. Security I  | <b>Reading:</b><br>1. <b>Chp053</b> - SEC - Introduction to OS Security<br>2. <b>Chp054</b> - SEC - Authentication                    |                   |
|     |           |                                   |   |                   |
| 15) | 4/21/2020 | <b>Lecture:</b><br>1. Security II | <b>Reading:</b><br>1. <b>Chp055</b> - SEC - Access Control<br>2. <b>Chp056</b> - SEC - Cryptography                                   |                   |
|     |           |                                   |   |                   |
| 16) | 4/28/2020 | FINAL EXAM                        |   |                   |

**NOTE:**

**The instructor reserves the rights to adjust this Schedule and Assignments as needed.**