

College of Engineering Technology

***Computer Science Department***

**Course Outline Comp 431 Fall 2024/2025**

***Instructors* :**

Dr. Ali Jaber Munib Al-Masri building , **Room** : 319

#### Text book:-

**Title** : Operating Systems Concepts

**Autor** : Silberschatz & Galvin

**Publisher** : Addison Wesely

#### References:-

1. Title : Modern Operating Systems

Author : Tanenbaum

Publisher : Prentice Hall

(2) Title : Operating Systems : Design and Implementation

Author : Tanenbaum

Publisher : Prentice Hall

***Evaluation:***

1. Quiz 20%
2. Midterm Exam 35%
3. Final exam 45%

***Office hours:***

Please check instructor’s instructions on Ritaj web page or instructor’s office door. If you want to meet one of the instructors outside their office hours please request an appointment by email, Ali Jaber ([alij@birzeit.edu](mailto:alij@birzeit.edu)).

***Overview***

The course provides an overview of the organization of operating systems for general-purpose computers. Students will be exposed to different aspects of operating systems including: Introduction and Overview of OS , Processes , process synchronization , Scheduling , Deadlocks , memory and virtual memory Management , File system Management.

***Course Objectives***

By the end of the course the student should be able:

1. To understand the services provided by and the design of an operating system.
2. To understand the structure and organization of the file system.
3. To understand what a process is and how processes are synchronized and scheduled.
4. To understand different approaches to memory management.
5. Students should understand the data structures and algorithms used to implement an OS.

***Schedule:***

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| ***Week #*** | *Chapters* |
| Week 1 | Chapter 1  Introduction & Basic Concepts |
| Week 2 | Chapter 2  Operating system Structures |
| Week 3-4 | Chapters 3+4  Processes + Threads |
| Week 5-6 | Chapters 5  CPU scheduling |
| Week 7-8 | Chapter 6  concurrency & process synchronization |
| Week 9 | Chapter 7  Deadlocks |
| Week 10-11.5 | Chapter 8  Memory Management |
|  | **Midterm Exam** |
| Week 11.5 12 | Chapter 9  Virtual Memory Management |
| Week 13-14 | Chapters 10 + 11+ 12  File system Interface + File system implementation |
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| Week 15 | Chapter 13  I/O systems |
|  | **Final Exam** |

***Student Responsibilities***

* **Class participation and independent work.** Students are expected to actively participate in all classes and allows perform independent work.
* **Academic Honesty.** Individual work must be each student’s own work. Plagiarism or cheating will result in official University disciplinary review.
* **Home works**. Home works must be worked independently unless stated otherwise, and no homework **will** be accepted after the deadline.

***Important Note:***

Attendance is mandatory according to the university rules and regulations and this will be strictly enforced, you are allowed to skip only 4 classes, you will be forced to drop the course if you miss more than 4. I advise you if you are planning **not** to attend, please drop the course immediately.