Course Description Form

1. Course Name: Operation Systems II

2. Course Code:

3. Semester / Year: 2nd Semester/ 2026

4. Description Preparation Date: 22/10/2025

5. Available Attendance Forms: Mandatory / on campus

6. Number of Credit Hours (Total) / Number of Units (Total): (30 hour lecture + 30 hour lab) / 15

7. Course administrator's name (mention all, if more than one name)

Name: Ghassan Abdulhakeem Mahmood
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Lab instructors: Farah Saad, Zainab Haider, Assad Thary

8. Course Objectives

Course Objectives	• Understand the main mechanisms like process management and process synchronization, • Explore the main and virtual memory management strategies • Understand the file system and how it is implemented.

9. Teaching and Learning Strategies

Strategy	• Lecture-based learning • Technology-based learning • Individual learning • Inquiry-based learning

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Understanding essential facts, concepts, and theories relating to process scheduling	Process scheduling, Part 1	Lecture and Inquiry-based learning	-
2	4		Process scheduling, Part 2	Lecture and Inquiry-based learning	

3	4		Process scheduling, Part 3	Lecture and Inquiry-based learning	Quiz
4	4	Understanding Tools and methodologies used in synchronization	Synchronization, Part 1	Lecture and Individual-based learning	
5	4		Synchronization, Part 2	Lecture and Inquiry-based learning	
6	4		Mid 1 exam		
7	4	Knowing the problem and plan strategies for their solution	Deadlocks	Lecture and Individual-based learning	Quiz
8	4	Understanding essential facts, concepts, and theories relating to memory management	Memory Management, Part 1	Lecture and Individual-based learning	
9	4		Memory Management, Part 2	Lecture and Individual-based learning	
10	4		Memory Management, Part 3	Lecture and Individual-based learning	Quiz
11	4	Knowing essential facts, concepts, and theories relating to file system interface	File System Interface, Part 1	Lecture, Technology and Individual-based learning	Final report submission
12	4		Mid 2 exam		
13	4		File System Interface, Part 2	Lecture, Technology and Individual-based learning	
14	4	Understanding the modeling and design of file systems.	File System implementatio	Lecture, Technology and Individual-based learning	Quiz
15	4	Understanding the basic facts about I/O systems	I/O Systems	Lecture, Technology and Individual-based learning	

11.Course Evaluation

Mid exams: 10%
Quiz: 8 %
Lab exam: 15%
Report: 7%
Final Exam: 50%
Final Lab Exam: 10%

12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Operating Systems Concepts, 10th Edition, Abraham Silberschatz
Main references (sources)	Operating Systems Concepts, 10th Edition, Abraham Silberschatz
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	https://codex.cs.yale.edu/avi/os-book/OS10-global/slide-dir/index.html