Course Description Form

1. Course Name:
Operating Systems II
2. Course Code:
CSCL4237
3. Semester / Year:
second Semester/2023-2024
4. Description Preparation Date:
2024-2-20
5. Available Attendance Forms:
In classroom
6. Number of Credit Hours (Total) / Number of Units (Total)
60 hours/3 units
7. Course administrator's name (mention all, if more than one name)
Name: Rana Mohammed Hasan Zaki Rehab Flih hassan Email: rana.m.zaki@uotechnology.edu.iq rehab.f.hassan@uotechnology.edu.iq

8. Course Objectives	
Course Objectives	• What Operating Systems Do • Operating-System Structure • CPU scheduling • memory- management algorithms

9. Teaching and Learning Strategies	
Strategy	-Theoretical lectures - practical laboratories – methodological books - resources (Internet) -Using modern devices to deliver the material to students using data show in addition to the smart board

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 theoretical 2 laboratories	1,3,5,6,7	➢ DeadLock • System Model • Necessary Conditions • Resource-Allocation Graph	Attending lectures Application. Lab	Quiz Homework Attendance Exam Project assessment
2	2 theoretical 2 laboratories	1,3,5,6,7	• Methods for Handling Deadlocks • Deadlock Prevention • Deadlock Avoidance • Safe State • Resource-Allocation-Graph Algorithm	Attending lectures Application. Lab	Quiz Homework Attendance Exam Project assessment
3	2 theoretical 2 laboratories	1,3,5,6,7	• Banker's Algorithm • Safety Algorithm • Resource-Request Algorithm	Attending lectures application. Lab	Quiz Homework Attendance Exam Project assessment
4	2 theoretical 2 laboratories	1, 3,5,6,7	• Dead Lock Detection • Detection-Algorithm Usage • Recovery from Deadlock	Attending lectures application. Lab	Quiz Homework Attendance Exam Project assessment
5	2 theoretical 2 laboratories	1,3,5,6,7	➢ Mass-Storage Structure • Overview of Mass-Storage Structure	Attending lectures application. Lab	Quiz Homework Attendance Exam Project assessment
6	2 theoretical 2 laboratories	1,3,5,6,7	• Magnetic Disks • Disk Scheduling	Attending lectures Application. Lab	Quiz Homework Attendance Exam Project assessment

7	2 theoretical 2 laboratories	1,3,5,6,7	• FCFS Scheduling • SSTF Scheduling	Attending lectures application. Lab	Quiz Homework Attendance Exam Project assessment
8	2 theoretical 2 laboratories	1,3,5,6,7	• SCAN Scheduling • C-SCAN Scheduling • LOOK Scheduling	Attending lectures application.	Quiz Homework Attendance Exam Project assessment
9	2 theoretical 2 laboratories	1,3,5,6,7	Middle Course Exam	Attending lectures application. Lab	Quiz Homework Attendance Exam Project assessment
10	2 theoretical 2 laboratories	1,3,5,6,7	➢ Virtual Memory • Demand Paging	Attending lectures application. Lab	Quiz Homework Attendance Exam Project assessment
11	2 theoretical 2 laboratories	1,3,5,6,7	• Page Replacement • Basic Page Replacement	Attending lectures application. Lab	Quiz Homework Attendance Exam Project assessment
12	2 theoretical 2 laboratories	1,3,5,6,7	• FIFO Page Replacement	Attending lectures application. Lab	Quiz Homework Attendance Exam Project assessment
13	2 theoretical 2 laboratories	1,3,5,6,7	• Optimal Page Replacement	Attending lectures application. Lab	Quiz Homework Attendance Exam Project assessment
14	2 theoretical 2 laboratories	1,3,5,6,7	• LRU Page Replacement	Attending lectures application. Lab	Quiz Homework Attendance Exam Project assessment
15	2 theoretical 2 laboratories	1,3,5,6,7	Final Exam	Attendance Exam	Exam

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

5 marks of attendance
5 marks Assignments and reports

15 marks for mid-course exam (mid) 15 marks for the laboratory exam. Implementing programs for algorithms and file management 60 marks for the end-of-course exam (first semester)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Not required
Main references (sources)	Operating System Concepts – 9^{th} Edition
Recommended books and references (scientific journals, reports…)	Operating System Concepts – 10^{th} Edition Operating System Concepts – 11^{th} Edition
Electronic References, Websites	power point for Operating System Concepts – 9^{th} Editio