

Syllabus of CS 342 - Operating Systems

Department: Computer Engineering

Credits: Bilkent 4, ECTS 6,5

Semester: 2026-2027 Fall

Section: 001

Instructor(s): Yusuf Sahillioğlu

Office & Office Hours:

Course Schedule:

	Mon.	Tue	Wed	Thu	Fri	Sat	Sun
08:30 09:20							
09:30 10:20							
10:30 11:20		B-Z08 (S)					
11:30 12:20		B-Z08					
12:30 13:20							
13:30 14:20							
14:30 15:20							
15:30 16:20				B-Z08			
16:30 17:20				B-Z08			

 Face-to-Face Lecture S: Office Hour

Contact Hours: 3 hours of lecture per week

Textbook and Other Required Material:

- Required - Textbook: Operating System Concepts, Avi Silberschatz, Peter Baer Galvin, Greg Gagne, 2018 / 10th edition, Wiley [\[download\]](#)
- Supplementary - Textbook: The C Programming Language, B. Kernighan and D. Ritchie, 1998, Prentice Hall [\[download\]](#)

Catalog Description:

Introduction to computer operating systems; processes, threads, interprocess communication, process scheduling, process synchronization, deadlocks, memory management and virtual memory, file systems - interface and implementation, mass-storage structure and management, input/output systems, examples from operating systems such as Linux and Windows.

Prerequisite(s): (CS 202 or CS 211) and CS 224

GenAI Policy: -

Assessment Methods:

	Type	Label	Count	Total Contribution
1	Quiz	Attendance/Quizzes	1	12
2	Homework	Homeworks	1	3
3	Midterm:Essay/written	Midterm	1	25
4	Final:Essay/written	Final	1	30
5	Project	Projects	1	30

Minimum Requirements to Qualify for the Final Exam:

Written in the course web page. Course webpage address: <http://www.cs.bilkent.edu.tr/~korpe/courses/cs342/>

Course Learning Outcomes:

Course Learning Outcome	Assessment
Develop and conduct an experiment	Projects
Analyze and interpret data	Projects
Draw conclusions from experimental data using engineering judgment	Projects

Weekly Syllabus:

1. Introduction, Overview
2. Processes
3. IPC, Sockets
4. Threads
5. Scheduling
6. Synchronization
7. Synchronization
8. Deadlocks
9. Memory Management
10. Virtual Memory
11. File Systems
12. File Systems
13. Mass Storage
14. Input/Output, Protection

ECTS - Workload Table:

Activities	Number	Hours	Workload
Course hours	14	3	42
Preparation for Final exam	1	20	20
Quiz	5	,5	2.5
Individual or group work	14	3	42
Homework	3	2	6
Project (including preparation and presentation if applicable)	4	12	48
Midterm exam	2	2	4
Preparation for Midterm exam	2	12	24
Preparation for Quiz	3	2	6
Final exam	1	2	2
Total Workload:			196.5
Total Workload / 30:			196.5 / 30
			6.55
ECTS Credits of the Course:			6,5

Type of Course: Lecture - Project

Teaching Methods: Exercises - Lecture - Presentations - Assignment