

Teacher: **Mohsen Ramezani**

E-mail: m.ramezani@uok.ac.ir

Webpage: eng.uok.ac.ir/mramezani/teaching

References: 1-Operating Systems concepts (**Silberschatz**). 2-Modern Operating Systems (**Tanenbaum**).
3-Operating Systems (**Stallings**)

Projects and Homeworks will be uploaded on the LMS (lms.uok.ac.ir) every Thursday.

Evaluation: 15% Midterm+60% final exam+25% project and Homework.

Session No.	Week	Topic
Session 1	1	Introduction to Operating Systems
Session 2	1	Computer System organization and architecture+Operating System structure and operations
Session 3	2	Important Tasks of OS
Session 4	2	OS services+OS interfaces+Introduction to System call
Session 5	3	OS design and implementation+OS structures
Session 6	3	Virtual Machines+introduction to Processes
Session 7	4	Process scheduling+CPU performance
Session 8	4	CPU performance examples
Session 9	5	Operations in processes+interprocess communications (1)
Session 10	5	Interprocess communications (2)+IPC examples
Session 11	6	Introduction to Threads+Multi-threading models
Session 12	6	Thread libraries+Thread examples(PThread)
Session 13	7	Introduction to scheduling+performance metrics+scheduling algorithms(1)
Session 14	7	Midterm
Session 15	8	scheduling algorithms(2)+examples
Session 16	8	More-examples+Thread scheduling+multiple processor scheduling
Session 17	9	Introduction to critical section problem+examples
Session 18	9	Peterson's solution for critical region+Synchronization hardware+introduction to semaphores
Session 19	10	Semaphores+Monitors
Session 20	10	Monitors+examples
Session 21	11	Introduction to deadlock problem+methods for handling deadlocks (1)
Session 22	11	Methods for handling deadlocks (2)
Session 23	12	
Session 24	12	Introduction to Memory management+swapping
Session 25	13	Contiguous Memory allocation+paging
Session 26	13	Paging+page table
Session 27	14	Introduction to Virtual Memory+demand paging
Session 28	14	Page replacement+allocation of frames
Session 29	15	Introduction to file concept+directory structures
Session 30	15	File-system mounting+protection and sharing
Session 31	16	Presentations
Session 32	16	Overview