Gebze Technical University
Computer Engineering Department
CSE 344 System Programming
2017-2018 Spring

Section	Instructor	Course Hours	Office Hours
01	Erchan Aptoula (Erhan Abdullah)		
02	Erkan ZERGEROĞLU		

Week	Subject	Sections in the book
1	Introduction, history of Unix/Linux/Posix, fundamental concepts	Chapters 1-2
2	System programming basics, system calls, error handling, heap and stack, environment variables, process basics	Chapters 3-6-7
3	File I/O, buffering, attributes, file events	Chapters 4-5-13-15-19
4	Signals, Process creation, termination	Chapters 21-22-23-24-25
5	Waiting for the children, SIGCHLD, orphans, zombies, daemons	Chapters 26-27-28-37
6	Introduction to IPC, pipes and fifos	Chapter 43-44-45
7	**Midterm Exam**	
8	Semaphores and shared memory	Chapters 47-48-
9	classic synchronization problems (producer consumer, diners' table, readers-writers, bakers, barber's waiting room)	Chapters 53-54
10	Threads, creation, cancellation, condition variables	Chapters 30-31
11	Monitors, classic synchronization problems with monitors	Chapters 32-33
12	Sockets, local, internet, server model	Chapters 56-57-58
13	Internet domains, threadpooled servers	Chapters 59-60-61
14	**Review**	

This schedule is tentative and subject to change.

Course Books:
(1) "The Linux programming interface a Linux and UNIX system programming handbook", Michael Kerrisk, No Starch Press (2010), (main)
(2) "Unix Systems Programming , Communications, Concurrency and Threads", Prentice Hall, Robins and Robins, 2003 (Supplementary)
(**3)** "Linux Application Development", 2/E, M.K. Johnson, E.W. Troan (Supplementary)
(4) "Windows System Programming :...." Third Edition Johnson M. Hart (Supplementary)

.Prerequests :
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Attendance: <u>80% attendance</u> is required.

Grading Policy:
Home-works 30% , Midterm 30%, Final Exam 40%
(minimum of 3 of 8 home-works are required)