CS230 System Programming (Fall 2024)

Course:	CS230 System Programming
Instructor:	Jongse Park E3-1 4403 Phone: 350-3580 jspark@casys.kaist.ac.kr
Teaching Assistants	TBA
Class Meetings	TTh 14:30-15:45PM
Textbook	**Computer Systems: A Programmer's Perspective, Third Edition, Prentice Hall, 2011,** Randal E. Bryant and David R. O'Hallaron Auxiliary textbook (not required): Brian W. Kernighan and Dennis M. Ritchie, The C Programming Language, Second Edition, Prentice Hall, 1988
Course Objectives	In this course, you will learn how computers work from a programmer's perspective. This course serves as a foundation for courses on computer organization, operating systems, compilers, and networks.
Prerequisites	Basic understanding of programming (CS101)
Assignments	There will be about 6 or 7 programming assignments. The assignments are the most important part of this course. All the assignments are single-student assignments.
Evaluation	Mid-term and Final : 60% Assignments: 35% Attendance: 5%
Late submission policy	• Assignments will be due at 11:59pm on the specified due date. • You will lose 30% of the grade on the first late day. After the first late day, your submission will not be accepted.
Academic conduct	• You are encouraged to discuss course material with your classmates. However, collaboration on assignments is prohibited. Academic misconduct will have a heavy penalty. • Possession and/or use of another group's code is strictly prohibited. It is also the student's responsibility to protect his or her work from unauthorized access. • We will be using a sophisticated automated program to correlate projects to find copied codes.

Fall 2022 Tentative Schedule

Lecture	Topic
1	Introduction
2	Bits, Bytes, and Integers
3	Floating Point
4	Machine-level Programming I: Basics (1/2)
5	Machine-level Programming I: Basics (2/2)
6	Machine-level Programming II: Control (1/2)
7	Machine-level Programming II: Control (2/2)
8	Machine-level Programming III: Procedure (1/2)
9	Machine-level Programming III: Procedure (2/2)
10	Machine-level Programming IV: Composite Data Types (1/2)
11	Machine-level Programming IV: Composite Data Types (2/2)
12	Machine-level Programming V: Advanced Topics (1/2)
13	Machine-level Programming V: Advanced Topics (2/2)
14	Linking (1/2)
	Midterm Exam Week
	Midterm Exam Week
15	Linking (2/2)
16	Exceptional Control Flow: Exceptions and Processes (1/2)
17	Exceptional Control Flow: Exceptions and Processes (2/2)
18	Exceptional Control Flow: Signals (1/2)
19	Exceptional Control Flow: Signals (2/2)
20	Virtual Memory (1/2)
21	Virtual Memory (2/2)
22	Dynamic Memory Allocation (malloc) (1/2)
23	Dynamic Memory Allocation (malloc) (2/2)
24	System-Level I/O
25	Network Programming (1/2)
26	Network Programming (2/2)
27	Concurrent Programming
28	Synchronization
	Final Exam Week
	Final Exam Week