



T.C.
İSTANBUL TEKNİK ÜNİVERSİTESİ
FEN EDEBİYAT FAKÜLTESİ
FİZİK MÜHENDİSLİĞİ BÖLÜMÜ
MASLAK 34469 İSTANBUL



FIZ 424E – 2024/2025 Spring

TEXTBOOK:

Ciletti, M. D., & Mano, M. M. (2007). *Digital design*. Hoboken: Prentice-Hall.
Roth Jr, C. H., Kinney, L. L., & John, E. B. (2020). *Fundamentals of logic design*. Cengage Learning.
Kime, C. R., & Mano, M. M. (2003). *Logic and computer design fundamentals*. Prentice Hall.

Week	Date	Topics
1	20-21 Feb 2025	Digital logic fundamentals: digital number systems and Conversion
2	27-28 Feb 2025	Boolean Algebra
3	6 Mar- 7 Mar 2025	Digital logic fundamentals: digital logic gates and logic circuits
4	13 Mar 2025	Simplification of Boolean functions
5	20 Mar 2025	Logic minimization: Karnaugh maps with 2,3,4 variables
6	27 Mar 2025	Logic minimization: Karnaugh maps with 2,3,4 variables
7*	3-4 Apr 2025	Spring Break
8	10 Apr 2025	Digital combinational circuits; Decoders and encoders
9	17 Apr 2025	Digital combinational circuits; Multiplexers and de-multiplexers
10	24 Apr 2025	MIDTERM
11	2 May 2025	Combinational arithmetic circuits; Adders and subtractors
12	8 May 2025	Combinational arithmetic circuits; Comparators, dividers
13	15 May 2025	Combinational circuit design: State Machines
14	22 May 2025	Sequential circuits: latches & flip-flops
15	29 May 2025	Sequential circuits: latches & flip-flops

* Spring break

Exams

Midterm : 24 Apr 2025, 14:30-16:30.

Final Exam : Exact date and time will be announced by the Student Administration Office.

Quizzes

5 Quizzes (14 March 2025, 28 March 2025, 18 April 2025, 2 May 2025, 23 May 2025)

Laboratories

5 laboratories (21 March 2025, 11 April 2025, 25 April 2025, 16 May 2025, 30 May 2025)

Assessment of the Grades

Midterm : 30 %

Quizzes : 15 % (5 Quizzes x 3 %)

Laboratories: 15 % (5 laboratories x 3 %)

Final exam : 40 %

Attention

Students failing to score at least 50 % (i.e. 30 out of 60) on the in-term assessments and at least 4 laboratories will not be allowed to attend the final exam and will be graded **VF**.

Please keep track of the web page of Ninova, not to miss any announcements.