



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



FIZ 424E – 2022/2023 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	9-10 Feb 2023	Digital logic fundamentals: digital number systems and Conversion
2	16-17 Feb 2023	Boolean Algebra
3	23 Feb 2023	Digital logic fundamentals: digital logic gates and logic circuits
4	2-3 Mar 2023	Simplification of Boolean functions
5	9 Mar 2023	Logic minimization: Karnaugh maps with 2,3,4 variables
6	16 Mar 2023	Logic minimization: Karnaugh maps with 2,3,4 variables
	17 Mar 2023	MIDTERM
7	23 Mar 2023	Digital combinational circuits; Decoders and encoders
8	30 Mar 2023	Spring break
9	6 Apr 2023	Digital combinational circuits; Multiplexers and de-multiplexers
10	13 Apr 2023	Combinational arithmetic circuits; Adders and subtractors
11	20 Apr 2023	Combinational arithmetic circuits; Comparators, multiplexers, dividers
12	27 Apr 2023	Combinational circuit design: Boolean and arithmetic operations
13	4 May 2023	Sequential circuits: latches & flip-flops
14	11 May 2023	Asynchronous sequential logic circuits
15	18 May 2023	Synchronous sequential logic circuits

* Spring break

Exams

Midterm : 17 Mar 2023, 15:30-17:30.

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

Quizzes

5 Quizzes (24 February 2023, 10 March 2023, 7 April 2023, 21 April 2023, 5 May 2023)

Laboratories

5 laboratories (24 March 2023, 14 April 2023, 28 April 2023, 12 May 2023, 18 May 2023)

Assessment of the Grades

Midterm : 20 %

Quizzes : 20 % (5 Quizzes x 4 %)

Laboratories: 20 % (5 laboratories x 4 %)

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.