



İSTANBUL TEKNİK ÜNİVERSİTESİ
Fen Edebiyat Fakültesi - Fizik Mühendisliği Bölümü
(<https://www.fizik.itu.edu.tr/turhan/digital/>)



FIZ 424E Digital Electronics CRN 10436
2020-2021 Fall

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Lecture : Monday 12:30 – 14:30 (FEB B4 Z02)
Laboratory : Monday 14:30 – 16:30 (FEB Microprocessors Lab.)
Office Hours : Monday 15:30 – 16:30

Textbook:

Digital Electronics, a practical approach

Principles of Modern Digital Design, Parag K.Lala, A John Wiley & Sons Inc. Publication (2007)

Fundamentals of Digital Electronics, Professor Barry Paton Dalhousie University (1998)

Digital Design 2nd Edition

Course Outline

Week		Topic
1	19 October 2020	Introduction to Digital Electronics
2	26 October 2020	Number Systems
3	2 November 2020	Logical Gates
4	9 November 2020	Boolean Algebra and Reduction Techniques
5	16 November 2020	Arithmetic Operations and Circuits
6	23 November 2020	Timing Signals
7	30 November 2020	Code Converter, Multiplexers, and De-multiplexers
8	7 December 2020	Code Converter, Multiplexers, and De-multiplexers
9	14 December 2020	Digital Design
10	21 December 2020	Digital Design
11	28 December 2020	Counter Circuits
12	4 January 2021	Shift Registers
13	11 January 2021	Analog to Digital Converters
14	18 January 2021	Digital to Analog Converters

~~**Quizzes:** Biweekly during class or laboratory session.~~

~~**Assignments:** Assignments can be given before or after the lab to consolidate the experiments.~~

~~**Laboratory:** Consist of 10 project which may be varied or extended during the laboratory session.~~

Dates

1. Midterm : November 16, 2020

2. Midterm : January 4, 2021

Final Exam : January 25 – February 7, 2021 (Exact date and time will be announced by the Student Administration Office.)

Grading:

Midterms : 20% + 20%

Laboratory : 20%

Quizzes : 10%

Final Exam : 100%

In order to take the final exam, you have to take at least a total 14.0 points over 40.0 from the midterms.

Academic Integrity

Students who cheat during an exam or on laboratory session will receive a grade of FF in the course.