

Course Information

Course Code	5670348
Course Section	3
Course Title	INTRODUCTION TO LOGIC DESIGN
Course Credit	3
Course ECTS	5.0
Course Catalog Description	Binary systems and Boolean algebra. Boolean function simplification. Combinational logic. Sequential synchronous logic. Registers and counters.
Prerequisites	No prerequisites
Schedule	Monday , 15:40 - 16:30, EA208 Wednesday, 14:40 - 16:30, EA208

Instructor Information

Name/Title	Prof.Dr. ŞENAN ECE SCHMİDT
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Office Hours	None

Course Objectives

To teach students the basics of combinational and sequential logic design, To prepare the students for advanced courses in microprocessors, computer architecture and VLSI.

Tentative Weekly Outline

Week	Topic	Relevant Reading	Assignments
1	1- Introduction		(1 class hour)
2	2- Number systems, signed arithmetic		(3 class hours)
3	3- Boolean Algebra and logic gates,		(3 class hours)
4	4- Simplification of Boolean functions, Karnaugh map,		(3 class hours)
5	5- 2-level implementations		(2 class hours)
6	6- Design of Combinational circuits,		(3 class hours)



Week	Topic	Relevant Reading	Assignments
7	7- MSI circuits, (4 class hours)		
8	8- Basic flipflops, (2 class hours)		
9	9- Analysis of synchronous sequential logic, (3 class hours)		
10	10- Design of synchronous sequential circuits, (6 class hours)		
11	11- Registers and serial mode of operation. (6 class hours)		
12	12- Counters and timing signals. (6 class hours)		

Course Textbook(s)

M. Morris Mano and Michael D. Ciletti, *Digital Design*, 4th ed., Prentice-Hall, 2006

Course Grading

Deliverable	Grade Points
MT	30
MT	30
Final	30
Quiz	10
Attendance (conditional bonus)	5
Total	105

Course Policies

Class Attendance

5% bonus if you attend 100% of the lectures. Proportionally decreased bonus down to 80% attendance.

Make up for Exams and Assignments

You can have a makeup if you have a valid health excuse report on the exam date.

Final Exam Entrance Conditions

Student can attend the final exam if at least one midterm exam is attended (unless there is a valid health excuse) and if at least two quizzes are attended.



Students who do not attend the final exam (unless there is a valid health excuse) will be graded as NA.

Other

Any attempt of cheating will be considered as a disciplinary action.

Academic Honesty

The METU Honour Code is as follows: *"Every member of METU community adopts the following honour code as one of the core principles of academic life and strives to develop an academic environment where continuous adherence to this code is promoted. The members of the METU community are reliable, responsible and honourable people who embrace only the success and recognition they deserve, and act with integrity in their use, evaluation and presentation of facts, data and documents."*