



MICROPROCESSOR SYSTEMS

Dr. Gökhan İnce



BLG 212E Microprocessor Systems

Instructor: Asst. Prof. Dr. Gökhan İnce

Office: EEB 4310

e-mail: gokhan.ince@itu.edu.tr

Web: www.gokhanince.com

Assistant: Research Assistant Sila Özen

E-mail: ozens@itu.edu.tr

Web Page: <http://ninova.itu.edu.tr/Ders/2123/Sinif/9603>

- course material
- announcements
- exam grades

Self-Introduction

- Instructor

- Graduated from

- Istanbul Technical University
 - Technische Universitaet Darmstadt
 - Tokyo Institute of Technology

- Worked for

- Honda Research Institute Europe – Germany (2 years)
 - Honda Research Institute Japan (4 years)

- Focus of research: Robotics, AI, Signal Proc., HCI

- Your turn!

- Demographics
 - Major
 - Program
 - Turkish/English





Course Objectives

- to understand number systems and data representation in computer.
- to identify and outline the architecture of computers.
- Memory and memory design.
- Architecture of CPU.
- Addressing methods and generic instructions set.
- to describe the principles of interfacing.
- to explain the programming concepts for microprocessors.
- to have a basic knowledge of some popular microprocessors.

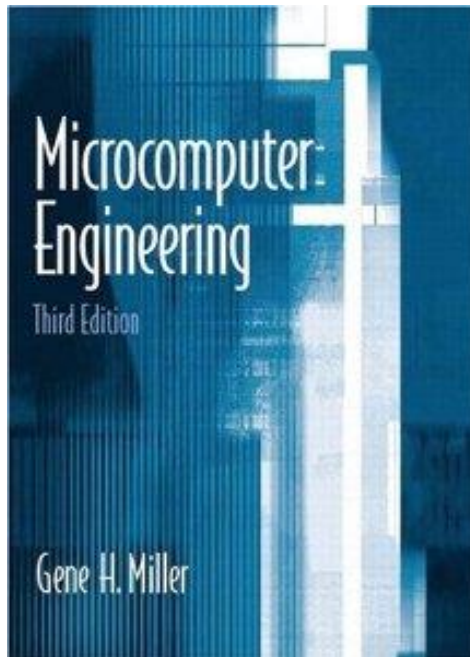


Syllabus

1. Introduction, Number Systems
2. Computer Overview - Memory
3. Memory Design
4. Quiz 1, CPU overview, Instruction format
5. Addressing methods
6. Instruction types
7. Instruction types - cntd
8. Midterm Exam 1
9. Parallel communication interface
10. Serial communication interface
11. Quiz 2, Subroutines, Interrupts, Stack, Coding techniques
12. Coding examples and applications
13. Midterm Exam 2
14. Development of Microprocessor Based Designs

Resources

- Mikroişlemciler Mikrobilgisayarlar, Eşref Adalı, Birsen Yayınevi, 5th Edition.
- Microcomputer Engineering, 3rd Edition, Gene H. Miller





Grading

- exams:

- Midterm 1 : 20%
- Midterm 2 : 25%
- Quizzes : 15%
- Final : 40%

- requirements:

- class attendance $< 70\%$: VF
- weighted average of midterm and quizzes $< 30\%$: VF
- average < 40 : FF