Bilgisayar Sistemleri Mimarisi

Introduction

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Assesment

• Midterm 1 : 25%
• Midterm 2 : 25%
• Homework : 15%
• Attendance & Participation : 05%
• Final : 30%
• Minimum of 50% attendance required for passing grade
• Attending entire class period only will be counted
• Attendance will be taken and posted biweekly

Course Outline

1. Motivations. Computer Evolution and Performance
2. Data Representation in Computer Systems
3. Boolean Algebra and Digital Logic
4. Introduction to a Simple Computer
5. Cache Memory, Internal Memory Technology, External Memory
6. Computer Arithmetic
7. Instruction Sets
8. Addressing Modes and Formats
9. CPU Structure and Function
10. The Control Unit, Control Unit Operation
11. Microprogrammed Control
12. Reduced Instruction Set Computers
13. Instruction Level Parallelism and Superscalar Processors
14. IA-64 Architecture
15. Parallel Processing

Course Book

Computer Organization and Architecture: Designing for Performance, William Stallings

Other Recommended Texts

• Computer System Architecture, M. Morris Mano, Prentice-Hall, Inc.
• Computer Organization and Design, D.Patterson and J. Hennessy, Morgan Kaufman Publishers
• Logic and Computer Design Fundamentals, M. Mano, Charles Kime, Prentice Hall
• Computer Architecture: A Quantitative Approach, John L. Hennessy, David A. Patterson