

CS 150: COMPUTER ARCHITECTURE

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1. INTRODUCTION

This course is the study of the structure, characteristics, and operations of modern day computer systems. The course gives emphasis on fundamental principles as well as the critical role of performance in driving computer design.

2. GRADING SYSTEM

Requirement	Percentage
Long Exams	30%
Finals	30%
Project	25%
Quizzes	15%

Letter Grade	Numerical Equivalent
A	93%
B+	87%
B	81%
C+	75%
C	69%
D	60%
F	below 60%

3. COURSE COMPOSITION

- (1) Introduction (1-2 Weeks)
 - Fundamentals of Design
 - Performance and Cost
 - Parts of a Computer
- (2) Processing Unit (4-5 Weeks)
 - CPU Organization
 - Instruction Cycle
 - Instruction Sets
 - Performance Considerations
 - Pipelining
 - Other Developments
 - Survey of Different CPUs
- (3) Memory (3-4 Weeks)
 - Basic Memory Concepts
 - Types of Memory
 - Memory Hierarchy
 - Swapping and Paging
 - Cache Memory
 - Performance Considerations
- (4) Input/Output (2-3 Weeks)
 - The I/O Subsystem
 - Interrupts
 - Direct Memory Access

- Bus Organization and Other I/O Hardware
 - Standard I/O Interfaces
- (5) Networking (1-2 Weeks)
- Basic Networking Concepts
 - Networking Devices

4. CONSULTATION HOURS

By Appointment F207
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