

CS 2521 Syllabus

Fall 2015

[CS 2521 Course Description](#)

Course Text and Resources

- David A. Patterson and John L. Hennessey, *Computer Organization and Design: The Hardware/Software Interface*, 5th ed., Morgan Kaufmann, 2014.
- [Assembly Language](#)
- [The MIPS Processor](#)
- [Architecture](#)
- [Operating Systems](#)
- [Networks](#)

Topics and Readings

- Computer Abstractions and Technology, Chapter 1
- Instructions: Language of the Machine, Chapter 2
- Arithmetic for Computers, Chapter 3
- The Processor, Chapter 4
- Large and Fast: Exploiting Memory Hierarchy, Chapter 5
- Parallel Processors from Client to Cloud, Chapter 6
- Storage and System Organization, Web pages
- Assemblers, Linkers and the SPIM Simulator, Appendix B
- The Basics of Logic Design, Appendix C

Course Objectives

In previous computer science courses you learned programming using the high-level programming language C++. High-level languages are designed to specify programs without regard to the machine on which the program runs. Thus programmers need not be concerned with the details of coding and arranging information or specifying operations in a manner that is understood by the machine.

In this course we will take a look behind the scenes. We will see how machines code the various kinds of data and instructions, how they handle input and output, how they implement control structures, how they are organized using logic circuits, and how system software provides an interface to computer systems.

Grading Basis

Item	Points	Percent
Midterm Exam 1	100	20%
Midterm Exam 2	100	20%
Final Exam	150	30%

Programming Assignments (8)	80	16%
Homework (13)	70	14%
Total	500	100%

The final grades will be based on the 500 point total. Generally:

- 90% guarantees an A-
- 80% guarantees an B-
- 70% guarantees a C-
- 60% guarantees a D

These grade cutoffs will never be raised; but they may be lowered.

Exam Dates

Exam	Coverage	Date
Midterm Exam 1	Ch. 1, 2, App. A	Wednesday, October 7
Midterm Exam 2	Ch. 3, 4, App. B	Monday, November 16
Final Exam	Ch. 5-7‡	Friday December 18, 2:00PM — 3:55PM

‡ Approximately 30% of the final exam will be over material covered on the midterm exams.

[CS 2521 Policies](#)