

Course Contents:

The course will start with reviews of sequential logic in Appendix A, and of the instructions of the SRC computer and their binary representation and RTN descriptions as presented in chapter 2 of the text. This material will be used to design the data path and hard-wired control unit as discussed in chapter 4. This will be contrasted with the microprogrammed design that is discussed in chapter 5. Pipelined design will then be considered. Topics in chapter 6 that were omitted in CS240 will be presented. Memory organization as presented in chapter 7 will be discussed. We will discuss the hardware and software aspects of I/O in chapter 8 and I/O devices in chapter 9. If time permits we will discuss aspects of communications and networking in chapter 10.

Prerequisites:

You must have been exposed to assembly language programming and to the binary/hexadecimal representation of machine instructions at a level equivalent to that contained in either CS 141 or CS 240.

It will not be possible for you to understand the material in this course unless you know combinational logic and both algebraic and Kmap minimization techniques.

Textbook:

The primary text for the course is "Computer Systems Design and Architecture" by Vincent Heuring and Harry Jordan, ISBN: 0-8053-4330-X, Prentice Hall, 1997. Unfortunately, a new edition of the book will be published late in October and I have been unable to order copies of the new edition for this semester.

Lecture Notes:

In order to facilitate your taking notes in the course, you can download all of the slides that I will show from my Web site. They are available as a self-extracting ".exe" files. When executed they will give individual files that contain the slides for each chapter in ".pdf" format. In order to view or print the slides you will need the Adobe Acrobat reader. You will find a link to it on my Web site.

Examinations and Term Grade:

I will give a midterm and final that each account for 50% of your grade. **Please note that neither makeup examinations nor incompletes will be given in this course.**

Questions:

You can ask me questions at any time by e-mail (Goodman@Computer.Org). I will try to respond within a few hours except for the period from Friday afternoon to Saturday night. I will also send material to the class by e-mail. It is therefore important that you check your e-mail frequently and that you inform me of your e-mail address. **Before the next class, please send me an e-mail message that gives your full name.** Please note that my e-mail program uses automatic filtering. **It is therefore necessary for you to include your course number, CS343, in the Subject line of your message.**

I will be happy to meet with you before class. If you would like to meet with me, please send me e-mail at least 24 hours in advance.

Missed Classes:

I may have to miss one class. Since there is only one "Reading Day", I will make up the missed time by extending each class by 5 minutes.