COMP 210, Spring 2002
Lecture 1: Administrivia & Introduction

This course is titled "Introduction to Principles of Scientific Computing."
All kinds of administrative information in the overheads. See the web site, too.

Philosophy

This is a course intended to teach you to design and implement small programs. It is not a course focused on programming–-per se–-but, instead, a course focused on teaching you a specific way of thinking about problems. COMP 210 teaches a bottom-up, data-driven, design methodology for programming. The entire course is driven by this methodology.

This contrasts directly with most programming courses, which are syntax-directed–-that is, they teach you a collection of syntactic constructs in some programming language (C, C++, Java, Ada, Fortran, Python, …). In COMP 210, you will learn to program in Scheme–-a high-level language that provides a great deal of power and very little syntax.

You are here to learn the methodology. I am here to teach the methodology. You may already have experience programming computers. I know that I do. In this class, you must put aside your experience and focus on developing programs with the methodology. Because the course focuses on methodology, some answers that will work are not acceptable in COMP 210–-the course is about design methodology, not hacking together a solution that sort of works. To succeed in this course, ask yourself (at every step) "What does the methodology say that I should do?"

We'll defer the question of "why use Scheme?" for next lecture.

Instructors: Keith D. Cooper, 2065 DH, keith@rice.edu
John Greiner, 3118 DH, greiner@cs.rice.edu

Teaching Assistants: Tim Harvey, Cheryl McCosh, Anshu Das Gupta
Plus an army of undergraduate laboratory assistants.
(Check the web site for details.)

The Web Site

http://www.owlnet.rice.edu/~comp210

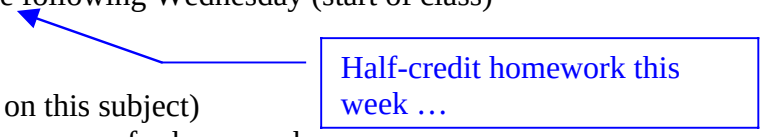
is a critical resource for the course. All assignments and announcements will be posted there, as will copies of the lecture notes. I will post the notes after class; I will strive to do this in a timely fashion.

The Book:

How to Design Programs, by Felleisen, Flatt, Findler, & Krishnamurthi
Available at the bookstore

Requirements:

- Attend class
- Attend lab section
  - Wednesday afternoon & Thursday afternoon
  - Taught by Dr. Greiner, Tim, Jamie, and the labbies
  - Covers some topics skipped in class, reinforces others
  - Homework returned in lab section
  - First labs are next week, sign up quickly (on the web site)
- Weekly homework
  - Handed out Wednesday due following Wednesday (start of class)
  - Some programming
  - Some paper exercises
  - Done in teams (more later on this subject)
  - Lab section should help prepare you for homework
  - Homework should prepare you for the tests
- May be a final project –- a larger program
- Three exams
  - Roughly five week intervals
  - First one is in-class, others may be at night



Homework Teams

We encourage you to work with a partner on your homework. You pick the partner; if you're having trouble finding one, we'll find you one. Rules are simple: work on all aspects of the homework—ideally, solve them all yourself.

Compare them with your partner. Hand in the best solution.

Hand in exactly one solution, with both your names on it. You should not be in two different teams. You should not hand in two copies of the same homework.

If you **NEED** to work alone, come talk to either John or me.

If you don't get your work back in a timely fashion (1 to 2 weeks), come tell me!

Programming

All programming will be done in Scheme, using the Dr. Scheme programming environment. It is installed on OwlNet; when you run the registration software, it will set up your UNIX PATH so that Dr. Scheme is on it.

If you want a copy of Dr. Scheme for your personal computer (or your work computer), you can retrieve it from the World-Wide Web. Follow the pointers on the COMP 210 web page. It runs on most common computers.

Dealing with the Graders

This may be the first class where you deal with undergraduate graders. Here a few pointers.

- Remember that it is a friendly relationship, but an adversarial relationship. Your grader wants to get his or her work done. Your grader is taking too many classes, just as you are.
- Your grader is a 19 to 22 year old (except Tim). The graders have received no formal training in how to deal with your questions or problems, so they are feeling their way along and learning as they go.
- Use the anonymous evaluation method (on the web site, of course) to submit a complaint, if necessary. Those forms go to Dr. Greiner and me.
- My goal is to pass all of you. You have to help.

Notice

Any student with a documented disability needing academic adjustments or accommodations should speak with me during the first two weeks of class. All discussions will remain confidential. Students with disabilities will need to also contact Disability Support Services in the Ley Student Center