

Problem Solving in Computer Science CSCI-1961

Fall 2004

Course: CSCI-1961
Lectures: Mon, Thur 12:00-1:50 VCC South
Home Page: <http://www.cs.rpi.edu/~hollingd/psics>
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Instructor: Dave Hollinger
Office: Amos Eaton 110
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Office Hours: Tue, Fri 10-11:30 (or by appt.)

Texts: *Required:* How To Design Programs
Felleisen, Findler, Flatt & Krishnamurthi
ISBN: 0262062186

Grading: Weekly Quizzes: 60%
Homework: 40%

Course Home Page: The course home page will include homework assignments, lecture notes, references, handouts and announcements. Hardcopy of any class handouts will be provided only on request.

Laptops: Bring your laptop to every class! We will do exercises during class, and the weekly quizzes will require a laptop.

Homework: All homework must be done individually. Once assignments are made, the course home page will contain information on what is expected for homework submission. Some assignments will be submitted electronically.

Homework and Test Grading: Adjustments to homework and quiz grades will take place only during the week after grades have been returned to students. This means that you must bring any problems to our attention within one week of receiving a grade.

Quizzes: Starting the second week of class we will have a quiz every Thursday. Each quiz will require a laptop with DrScheme installed. Quizzes will test your knowledge of topics discussed in class and from the textbook reading. There will be 13 quizzes, only the highest 10 grades will count toward your final grade (you can miss 3 quizzes).

Cheating will not be tolerated. Any duplicate or near duplicate submissions will result in a minimum of a 2 letter grade drop for the final course grade for all students involved and may result in a failure for the entire course. For programming projects, you may *discuss* homework with other students, but sharing of code in any form is not acceptable (this means that looking at another student's code or showing your code to another student is **not** permitted). If you need help with a project - send mail to Dave. Please contact the instructor if there is any part of this policy you do not understand.

Final Exam: There will not be a final exam.

Tentative Lecture Topic and Reading Schedule

Week of	Topics	Readings
August 30	Course Intro, Simple Scheme Programs	Chapters 1-4
September *6	Data Types: symbolic, structures	Chapters 5,6
13	Handling mixed data, Lists	Chapters 7,9,10
20	Natural numbers, function composition, recursion, list abbreviations	Chapters 11,12 Intern. 2
27	Advanced data structures	Chapters 14,15
October 4	Iterative Refinement, Complex data	Chapters 16,17
11	Lexical Scope	Intern. 3
18	Design Issues	Chapters 19,20,21
25	More Design	Chapters 22,23 Intern. 4
November 1	Generative Recursion	Chapters 25-28
8	Cost of computing Accumulators	Intern. 5 Chapters 30-32
15	Variables and state	Chapters 34-37
*22	Advance Scheme	Intern. 7
29	Encapsulation, Mutable structures	Chapters 39,40,41
December 6	Equality, Objects	Chapters 42,43

* is short week (one lecture)