

CS 222 - Introduction to Scientific Computing
COOP II - Summer 2001 (July 6 - August 17)

Instructors:

Carla Martin (Weeks 1-3)
657 Rhodes Hall
255-8272
carlam@cam.cornell.edu

Aaron Diaz (Weeks 4-6)
657 Rhodes Hall
255-8272
aaron@cam.cornell.edu

Course website

<http://www.cs.cornell.edu/Courses/cs222/2001SU>

Office Hours:

On the course web site and announced in class.

Text:

Introduction to Scientific Computing: A Matrix-Vector Approach Based on Matlab (Second Edition) by Charles Van Loan.

Prerequisites:

Math 191-294 or equivalent mathematical background is assumed. This course will use MATLAB extensively. Programming background at the level of CS100 will also be assumed.

Grading:

Course grades are a function of the scores that you receive on the HW assignments and the exams:

HW Assignments	40%
Midterm Exam	25%
Final Exam	25%
Quizzes/Other	10%

There will be six HW assignments, each equally weighted.

Homework Policy:

There will be six HW assignments in the course. All HW will be handed out in lecture on Wednesday and submitted the following Wednesday. The HW assignments will involve design and analysis of algorithms and will sometimes require mathematical analysis. All programming will be done in MATLAB. MATLAB will be taught as part of the course.

You should hand in your on-time HW assignments in lecture on the day that it is due. HW assignments handed in elsewhere (e.g., the instructor's office) will be considered late. Late HW will be accepted up to 5pm the day that it is due. Late HW gets an automatic deduction of 10%. The full late penalty is applied even if you turn in part of the solution on time. No HW assignments will be accepted after 5pm the day it is due.

HW assignments may be done individually or in teams of two. Your name or names must be on the front page to receive credit.

Working with a partner can be very helpful in both getting assignments to work and in clarifying your understanding of the underlying concepts. However, for these benefits to accrue, it is important that both partners contribute equally to the finished product.

Academic Integrity

Students are allowed to work in pairs on the HW. Students working in pairs should hand in one paper with both names. Larger groups may work together to the extent of formulating ideas, but each individual or team of two must hand in his/her/their own paper, and the paper must not represent someone else's ideas entirely.

The penalty for cheating will be an F for the course, following a hearing with the instructor as spelled out in the academic integrity manual. In extreme circumstances the instructor will in addition bring the case before the university's academic integrity board.

It is understood that by enrolling in this course, all students have read the Academic Integrity Policy as described at <http://www.cs.cornell.edu/Courses/cs222/2000SP/AcadInteg.htm>.

Facilities

MATLAB 6 is available on the CIT public labs in Upson, Carpenter, and Dickson. The student edition of MATLAB is available at the Cornell store.

Syllabus

We will cover most of material from Chapters 1-9 of the text. As with most summer courses, the pace is fast and it is extremely important to keep up with material presented in lecture and with the HW assignments. The following syllabus is a guide for material covered. The instructors may change or rearrange material throughout the course. Any significant changes will be announced in class.

July 6, 9-13	Sections 1.1-1.6,2.1-2.3,2.4.4
July 11	HW 1 due in class
July 16-20	Sections 3.1-3.3,4.1-4.4,5.1
July 18	HW 2 due in class
July 23-25	Sections 5.1-5.4
July 25	HW 3 due in class
July 26	Review for Midterm
July 27	Midterm Exam - Chapters 1-5
July 30-August 3	Sections 6.1,6.3,6.4.1-2,7.1
August 1	HW 4 due in class
August 6-10	Sections 7.2-3,8.1
August 8	HW 5 due in class
August 13-17	Sections 8.2.1-3, 8.3, 8.4.1-2, 9.1-2
August 15	HW 6 due in class
August 17	Final Exam - emphasis on Chapters 6-9