

MAT 581 (Introduction to Scientific Computing) Course Information

– Fall 2011

1. **Lecture Time and Place:** 12:45 am–2:05 pm, MW, *Carnegie Hall, Room 316*
2. **Instructor:** Lixin Shen. Office: Carnegie Hall, Room 206D
3. **Office Hours:** 10:00–11:00 am, MW, or by appointment
4. **Contact Information:**
 - (a) **Office Telephone Number:** (315)443-2889
 - (b) **E-mail Address:** lshen03@syr.edu
5. **Textbook:** *Introduction to Scientific Computing* by Charles F. Van Loan
6. **Material to be covered:**
 - Floating point numbers and roundoff errors (§1.4)
 - Polynomial interpolation (§2.1, §2.2, §2.3, and part of §2.4)
 - Piecewise polynomial interpolation (Chapter 3)
 - Numerical integration (§4.1, §4.2, §4.3, and §4.4)
 - Linear systems (Chapter 6)
 - Nonlinear equations and optimization (§8.1)
 - The initial value problem (§9.1 and part of §9.2)

Students are responsible for all material in the text and all material presented in class. This includes any material not in the text and all material in the text that was not presented in class.

7. **Homework, Projects and Exams:** Homework assignments will be given regularly. It is important that you attempt all assigned problems as a minimum. The only way to learn this material is to work on problems. Projects will be assigned in the middle of October.
There will be two exams during the semester and a comprehensive final examination. These exams are scheduled on 09/28/2011, 11/2/2011, and 12/12/2010, respectively.
Each examination counts 25% of your course grade, your homework counts 10% of the course grade, and you project counts 15% of the course grade. Your letter grade for the term then will be given by the rule:

$$\begin{array}{llllll} A = 93 - 100 & A- = 90 - 92 & B+ = 87 - 89 & B = 83 - 86 & B- = 80 - 82 \\ C+ = 77 - 79 & C = 73 - 76 & C- = 70 - 72 & D = 60 - 69 & F = \text{less than } 60 \end{array}$$

8. **Academic Integrity:** The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort.

9. **Students with Disabilities:** Students who may need academic accommodations due to a disability are encouraged to discuss their needs with the instructor at the beginning of the semester. In order to obtain authorized accommodations, students should be registered with the Office of Disability Services (ODS), 804 University Avenue, Room 309, 315-443-4498, and have an updated accommodation letter for the instructor. Accommodations and related support services such as exam administration are not provided retroactively and must be requested in advance. For more information about services and policy, see <http://disabilityservices.syr.edu>

Any suggestions and comments from you are **highly appreciated**.