

MAT 581 - Introduction to Scientific Computing

Fall 2014

Instructor:

Dr. Qi Ye
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Course Time: TTH 12:30-1:50PM
Course Room: Carnegie 306
Office Hour: TTH 2:00-3:30PM

Grade:

Two In-Class Exams (20% each)
Homework (20%)
Final Project (40%)

Course Information:

Material to be covered:

- Floating point numbers and roundoff errors (*Sec 1.4*)
- Polynomial interpolation (*Sec 2.1, Sec 2.2, Sec 2.3, and part of Sec 2.4*)
- Piecewise polynomial interpolation (*Sec 3.1, Sec 3.2, and part of Sec 3.3*)
- Numerical integration (*Sec 4.1, Sec 4.3, and Sec 4.4*)
- Linear systems (*Sec 6.1, Sec 6.2, Sec 6.3, and part of Sec 6.4*)
- Nonlinear equations and optimization (*Sec 8.1*)
- The initial value problem (*Sec 9.1 and part of Sec 9.2*)

Textbook:

Introduction to Scientific Computing by Charles F. Van Loan

Homework/Quiz Policy:

Homework will be assigned in class (see pages 2, 3). A policy for quizzes and homework collection for grading will be announced during the first class meeting. A policy for make-ups for exams, quizzes, and late homework will also be announced.

Students with Disabilities:

If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), <http://disabilityservices.syr.edu>, located in Room 303 of 804 University Avenue, or call 315-443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible coordinating disability-related accommodations and will issue students with documented disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS

as soon as possible. You are also welcome to contact me privately to discuss your academic needs although I cannot arrange for disability-related accommodations.

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. For more information and the complete policy, see <http://academicintegrity.syr.edu>.

Religious observances policy:

SU religious observances policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to are religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice (Student Services -> Enrollment -> My Religious Observances) from the first day of class until the end of the second week of class.