

Math 5334 — Spring 2009
Numerical Analysis for Scientists & Engineers

January 7, 2009

Prof. Victoria Howle

Office: MA 217

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Phone: 742-2580 ext.264

Office Hours: TBD (by appointment for now)

You should always feel free to stop by if I am in my office. But if it is not during office hours and I am in the middle of something, I may have to ask you to come back at another time.

Classroom Lecture

MWF 10:00 - 10:50 a.m., Math 114

Some classes will be held in the computer lab (Math 009 or 113 - TBD).

Textbooks

- Numerical Computing with Matlab, Cleve Moler
- Numerical Analysis, 8th edition, Burden & Faires

Course Webpage

The course web page will have syllabus, important dates, assignments, projects, etc. Please check the course page frequently.

- www.math.ttu.edu/~vhowle/Courses/2009SpringMath5334/2009SpringMath5334.html

Software

Software that goes with the Moler book (as well as a web edition of the text book itself) is available at: <http://www.mathworks.com/moler>.

We will have Matlab available on the computer lab machines (Math 009 and 113). If you wish to have your own copy, there is a student version of Matlab (or your department may also have licenses).

Learning Objectives:

Students will master theoretical and practical concepts in the solution of systems of linear equations, error analysis, interpolation techniques, optimization, least squares methods, numerical differentiation and quadrature, numerical solution of ordinary and partial differential equations, eigenvalues and singular values.

Methods of Assessment of Learning Outcomes:

Assessment will be achieved through one or more activities, non-graded and graded, such as: class attendance, class discussion, board work, short quizzes, homework, examinations, course projects and other optional activities deemed appropriate by the instructor. Class grades will be assigned as follows:

Grading Criteria

| | | |
|-----------------------|---|------|
| Homework | See course web page for assignments and dates. | 50% |
| Examinations | 2 take-home examinations | 20% |
| Course Project | A more in-depth assignment over the course of the semester. | 30% |
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| Total | | 100% |

Grading Scale:

A = 100%–85%, B = 84%–70%, C = 69%–55%, D = 54%–45%, F = 44%–0%

Late policy for assignments:

Assignments are due by 4:00 p.m. on their due date. After 4:00 p.m., the assignment is consider 1 day late, with another late day added each subsequent day at 4:00 (including weekends).

You have 5 “free” late days for the semester. You may used them as you need them on homework assignments. However, once you run out of your 5 days, you will lose 10% of the points for that assignment for each subsequent late day. (Note that you cannot use late days on take-home exams.)

Important Dates:

- Monday, 1/19: Martin Luther King Jr. Day (no class)
- 3/14 to 3/22: Spring Break (no classes)
- Tuesday, 4/28: last day of classes
- Saturday, 5/2: final exam period (project talks), 10:30 – 1:00
- See course web page for other important dates.

Notices:

Academic Integrity (extracted from OP 34.12)

It is the aim of the faculty of Texas Tech University to foster a spirit of complete honesty and high standard of integrity. The attempt of students to present as their own any work not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offenders liable to serious consequences, possibly suspension.

Scholastic dishonesty includes, but it not limited to, cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, and any act designed to give unfair academic advantage to the student (such as, but not limited to, submission of essentially the same written assignment for two courses without the prior permission of the instructor) or the attempt to commit such an act.

It is OK (and encouraged) for you to work with each other and discuss homework assignments. However, the write up that you turn in, including any code, must be your own. If you work very closely with another student on an assignment or a particular problem, please indicate who you worked with on your homework.

Civility in the Classroom

Please be considerate to others.

- Be respectful to me and to your fellow students.
- Turn off cellphones, pagers, ipods, etc. (anything that makes noise).
- Don't hold side conversations during class.
- If you must come in late or leave early, do so as quietly as possible. Note that if you arrive late or leave early you may miss critical information or graded quizzes.

Observance of Religious Holiday (Extracted from OP 34.19)

A student who intends to observe a religious holy day should make that intention known to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.

Accommodation for Students with Disabilities (Extracted from OP 34.22)

Any student who, because of a disability, may require some special arrangements in order to meet course requirements should contact the instructor (in MA 217) as soon as possible to make the necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructors office hours. Please note instructors are not allowed to provide

classroom accommodations to a student until the appropriate verification from Student Disability Services has been provided. For additional information, you may contact the Student Disability Services office at 335 West Hall or 806-742-2405.