Math 5335 — Spring 2010
Numerical Analysis II

Prof. Victoria Howle

Office: MA 224
Email: victoria.howle@ttu.edu (*email is by far the easiest way to reach me*)
Phone: 742-2580 ext.264
Office Hours: Mon. 2:00 - 3:30, Thurs. 1:30 - 3:00

Classroom Lecture

MWF 10:00 - 10:50 a.m., Math 115

Textbook

- **Classical and Modern Analysis: Theory, Methods and Practice, by Ackleh, Allen, Kearfott, & Seshaiyer**

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/2010Spring_Math5335/Math5335.html**

Software

This is a theory course, but will involve some coding. Coding will all happen in MATLAB. MATLAB is available on all of the math department computers (labs available in Math 113 and 009, a few computers available in 238).

Student licenses for MATLAB are cheap (relatively) and you get all of the MATLAB packages. If you want it, Student MATLAB is available in the campus bookstore and at Varsity, etc.

Learning Objectives:

Upon completion of this two-semester series (5334-5335), students should become proficient in the theoretical, analytical, and computational study of numerical analysis. Students should master concepts in computer arithmetic, rounding error analysis, numerical solution of nonlinear equations in one variable, interpolation theory, numerical differentiation, numerical quadrature, numerical linear algebra, approximation theory, direct and iterative methods for solution of linear

systems, computational solution of eigenvalues- eigenvectors problems, numerical solution of initial-value differential equation systems, computational solution of systems of nonlinear equations, numerical optimization, and computational solution of boundary-value problems.

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 due dates.	50%
Midterm Exam	Date TBA.	20%
Final Exam	Comprehensive final exam	
	Tuesday, 5/11/2010, 7:30 a.m. – 10:00 a.m.	30%
Total		100%

Late policy for assignments:

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

You have 7 "free" late days for the semester. You may used them as you need them for any reason on homework assignments. Once you run out of your 7 late days, I will penalize homework 20% for each subsequent subsequent late day. I will not accept any individual homework assignment more than seven days late.

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. Similarly, if you use another resource heavily (such as another book or on online solution), you must indicate that on your homework.

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.