Math 340 Section 01 Spring 2008

Numerical Analysis

Class Time: MWF 11-11:50 A.M. *Class Room*: MH 655

Instructor: Angel R. Pineda, Ph.D. *Office*: MH 182L *Phone*: 714-278-8478
Email: apineda@fullerton.edu *Homepage*: http://math.fullerton.edu/apineda/

Office Hours: Monday 12-12:50 pm, 6-6:50 pm, Wednesday 6-6:50 pm, Friday 10-10:50 am or by appointment.

Required Textbook: Timothy Sauer, *Numerical Analysis*, Pearson, 2006.

Highly Recommended Software: MATLAB Student version, The MathWorks, Inc.
Math computer lab (MH 452) hours can be found at: http://math.fullerton.edu/framesets/Simlab/simlab_set.htm

Recommended Text: Cleve Moler, *Numerical Computing with MATLAB*, SIAM, 2004.

Course Description:
This course is an introduction to numerical analysis using MATLAB as the scientific computing platform. The objective of this course is to understand how to use computers to solve mathematical problems and to implement the algorithms. The following topics will be covered: solutions of nonlinear equations in one variable, solutions to linear systems of equations in several variables, polynomial interpolation, approximate solutions to problems using linear least squares and numerical differentiation and integration.

Course Homepage (Blackboard):
After login into http://my.fullerton.edu/ choose the Blackboard tab. Select Math 340 01.

- *Email:* make sure that your email on Blackboard is one that you check regularly. Homework assignments, announcements and other class related information will be sent via email.
- *Course Documents:* solution keys and HW problems not in the text will be posted here.
- *Discussion Board (under communication tool):* this online forum allows for students and faculty to communicate about the course (anonymously if desired). This tool can be particularly helpful for students whose schedule does not permit them to meet in study groups.
- *Grades (under course tools):* students will be able to keep track of their grades online.

Grading:
Homework and Quizzes (25%)

Midterm Exams: (15 % each)

Exam I	Exam II
Monday February 25	Wednesday March 26

Course Project (15 %), Monday May 5
The student will write a paper on a topic of their choice with the instructor's approval. The projects will have both an analytical and a computational component. Details for the final project will be given after Exam II.

Comprehensive Final Exam (30 %), Wednesday May 14, 12-1:50 pm

Tentative Grading Scale

Percent	97-100	93-96	90-92	87-89	83-86	80-82	77-79	70-76	67-69	63-66	60-62	0-59
Grade	A+	A	A-	B+	B	B-	C+	C	D+	D	D-	F

The exact grading scale will be determined after the final exam. The numerical scores in the tentative grading scale guarantee the associated letter grade but the instructor may change the scale to the student's benefit.

Withdrawal Dates and Holidays

February 4: Last day to withdraw from course without a "w".
February 18: President's Day Holiday.
February 29: Math department deadline to withdraw without compelling reason and documentation.
March 31 – April 4: Spring Break
April 18: CSUF deadline to withdraw with a truly compelling reason and documentation.

Class Policies

- Late homework will not be accepted after solutions are distributed. Failure to attend class on a day of a quiz will result in a zero grade for that quiz. The lowest two HW or quiz grades will be dropped.
- No make-up exams will be given, unless you have a medical or family emergency. These emergencies require valid documentation. The grade for a missed exam is zero.
- All exams will be closed book and closed notes, but you will be allowed to bring one sheet of 8" x 11" paper written on one side.

Suggestions

- The course requires a time commitment of about 6-9 hours outside of class time. The material builds on itself, so it is very important not to fall behind.
- I suggest you work in groups on your homework but hand in individual solutions, not copied from each other. Doing the homework is when most of the learning occurs.
- I encourage you to come to office hours regularly. I will do my best to help you.

Academic Integrity

Students who violate university standards of academic integrity are subject to disciplinary sanctions, including failure in the course and suspension from the university. Since dishonesty in any form harms the individual, other students and the university, policies on academic integrity are strictly enforced. I expect that you will familiarize yourself with the academic integrity guidelines found in the current student handbook:
http://www.fullerton.edu/deanofstudents/judicial/policies.htm

Examples of actions that constitute academic dishonesty include, but are not limited to:

- Unacceptable examination behavior – communicating with fellow students, copying material from another student's exam or allowing another student to copy from an exam, possessing or using unauthorized materials, or any behavior that defeats the intent of an exam.
- Plagiarism – taking the work of another and offering it as one's own without giving credit to that source, whether that material is paraphrased or copied in verbatim or near-verbatim form.
- Unauthorized collaboration on a project, homework or other assignment where an instructor expressly forbids such collaboration.

Emergency Evacuation

In the event of an emergency such as an earthquake or a fire:

- Take all your personal belongings and leave the classroom. Use the stairways located at the east, west or center of the building.
- Do not use the elevator. They may not be working once the alarm sounds.
- Go to the lawn area towards Nutwood Avenue. This provides a safe distance from falling debris from buildings. Stay with class members.
- For additional information on exits, fire alarms and telephones, building evacuation maps are located near each elevator.
- Anyone who may have difficulty evacuating the building, please see instructor.

The material in this syllabus may be changed at the instructor's discretion. Any changes will be communicated to the students.