
Math 340 – Numerical Analysis

Spring 2009 - Section 1, MH 438, MWF 11:00-11:50 a.m.

Instructor: Mortaza (Mori) Jamshidian, Professor

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Office Hours: M F 1:00-2:00 p.m., W 8:00-9:00 a.m., or by appointment

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Your e-mail address wanted: You are **required** to fill out the “Student Information Form” ([click here](#)) and submit it to mori@fullerton.edu no later than **tomorrow**, 5:00 p.m. **Do not** save the PDF file and attach to an e-mail. You need to **use the submit button** on the form and follow the instructions. **If you’re unable to submit the form**, send me an e-mail with all the required information on the form. Make sure to include your name and your course “Math 340” in your e-mail. Also, **make sure** to provide an e-mail address that you check frequently. I will send **quizzes**, various communiqué, and last minute announcements about our class through e-mail. I will send a “test e-mail” to everyone who submits the form. Please check your e-mail before the class on **Friday January 30th**. If you do not receive this test e-mail, please see me on **Friday** to resolve any problems there may be. **Note:** Any credits that you lose due to not establishing your e-mail connection with me on time will be your responsibility.

Text: *Numerical Analysis*, by Burden and Faires, 8th Edition, Brooks/Cole, 2005.

Calculator: A scientific calculator is required.

Software: You are required to use MATLAB or R for your projects and homework assignments. MATLAB is available during business hours in the Math Department's computer lab MH 452 (except when classes are held there). It is also available in the NSM lab in MH 553. It is recommended that you purchase a student version of the MATLAB, if you will be using it. This software can be purchased from the computer/tech center of the bookstore. To help students start using MATLAB and Simulink in less than two hours, The MathWorks offers free, self-paced online video tutorials. Go to the [Student Center](#) for the complete list.

R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of UNIX platforms, Windows and MacOS. To download R, go to [CRAN mirror](#). R is also available in the Mathematics Department Computing Laboratory in MH 452.

Course Description: The course will begin by a review of mathematical preliminaries, and an introduction to computational error analysis. Then the following major topics will be covered: solving nonlinear equations in one variable, methods of function approximation including polynomial interpolation and discrete and continuous least squares, numerical integration and differentiation, solving systems of linear equations, and time permitting, numerical solution to ordinary differential equations.

Course requirements: Homework will be assigned and collected occasionally on the due date, without a previous announcement. About 24 hours before the homework due date, a **quiz, in pdf format, will be e-mailed to you** that will be closely related to the assigned homework problems. You are to **print out the quiz** and answer the questions and **turn the quiz in at the beginning of the next class**. You **must work** on the quiz **individually**. Your weekly homework is usually due on Wednesday of each week (except for the exam weeks). You should attempt to solve all the assigned problems by the Monday prior to the due date, and ask any questions that you may have in class or during my office hours. Projects that require more substantial computing will also be assigned.

Grading Policy: The Homework/quizzes/projects will account for **20%** of your grade. Three midterm exams (**50%**) and a final exam (**30%**) will be given, portions of which may be take home. You will be allowed to bring in one page of crib-sheet during each midterm exam and two pages of crib-sheet during the final exam. Letter grades will be assigned according to the distribution of the overall grades. Plus-minus grading will be used.

The following is a tentative exam schedule:

<i>Exam I</i>	<i>Exam II</i>	<i>Exam III</i>	<i>Final Exam</i>
Wed., February 18	Wed., March 18	Wed. April 22	Wed., May 20, 12:00-1:50

Make-up exams will be given only in extreme instances and only with advance permission of the instructor. Any student who does not take an exam at the scheduled time without prior consent of the instructor will receive a grade of zero on that exam. If any student feels that a sudden illness is sufficiently extreme to warrant a make-up exam, the instructor must be provided with documentation prepared by an appropriate authority.

CNSM Study 25-35: I am an advocate of the **CNSM Study 25-35** campaign. **CNSM Study 25-35** represents the need for a full-time student (12 to 15 units) to spend *25 to 35 hours per week* studying to succeed in her/his classes.

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 (see <http://www.fullerton.edu/deanofstudents/judicial/policies.htm>).

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

1. 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.
2. 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.
3. Unauthorized collaboration on a project, homework or other assignment.
4. Documentary falsification including forgery, altering of campus documents or records, tampering with grading procedures, fabricating lab assignments, or altering medical excuses.

Emergency Evacuation: In the event of an emergency such as earthquake or 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. Stay with class members for further instruction.
- 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 the instructor.

Important Dates to Remember:

February 9 (Monday): Last day for students to ADD with a permit. All permits expire at midnight on February 9.

February 9 (Monday): Last day for students to DROP **without** a grade of "W". Students drop using New Titan Online.

March 6 (Friday): Last day the Math Department will be flexible on the approval of late withdrawal requests. Beginning Monday, March 9, students must have a serious and compelling reason for withdrawing (e.g. medical reason) and must provide supporting documentation for their reason. **Please encourage students who are considering withdrawing to do so BY March 6.**

April 24 (Friday): Last day to withdraw with a truly serious and compelling reason that is clearly beyond the student's control. Students must document their reason.