Course Policy


Instructor: Dr. Tao Lin (tlin@math.vt.edu)

Course Web Page is hosted by Scholar at VT. It is required to check our course web page daily. All course related materials such as homework assignments, projects, lecture slides, etc., will be posted through our course web page.

Text:

- *Scientific Computing with Matlab and Octave* by Alfio Quarteroni, Fausto Saleri, and Paola Gervasio
- Lecture notes written by myself

Schedule and Class Rooms: 12:20 pm – 1:10 pm, MWF, Hutcheson 204

Office Hours: 2:45 - 3:45 pm, on Monday and Wednesday

My office is in McB 520
You are welcomed to make appointments to see me at other times
You can use E-mail to ask questions at any time
You can also call me at 231-2766

Prerequisites:

Math 2214, 3214, basic knowledge in matrix and vector, sufficient experience in programming (CS2114 or Math 3054 or the equivalent).

Course Objectives:

This course consists of two major parts. The first part covers basic topic/techniques in scientific computing such as errors in computing and Matlab fundamentals, function and data approximation, linear equations, nonlinear equations, optimization, numerical calculus. In the second part, these basic
computational techniques are applied to projects centered around solving popular differential equations in applications.

Course Work:

Course work of Math 4414 consists of reading, regular homework for practicing basic computing techniques and related theories, two computational projects, a midterm test and a final exam.

A written report is required for each project. An oral presentation of the second project is required for those students who register this course as a CS Capstone course.

The date of the test is arranged according to the progress of class, but it will be announced at least one week in advance. The location and time for the final exam are determined by the university. Unless otherwise changed, the final exam will be given in our classroom at 10:05 am on Thursday, Dec. 17, 2015.

Late assignments will not be accepted. Make-up test will not be given in general. A missed test score due to a documented reason or an extreme situation may be replaced by corresponding part of the final exam or a make-up test given by the instructor after evaluating the reasons.

The Course Home Page should be visited daily for assignments, hints, announcements, and other things.

Grading Policy:

The final grade will be determined as follows

Homework: 30%
Test: 20%
Projects and Final Exam: 50%

A final score of 90% will be graded as A-, 80% as B-, 70% as C-, and 60% as D-, respectively.

Honor Code: Students work on homework assignments, quizzes, tests, and the final exam alone. You may discuss homework assignments with others; however, in writing up solutions to problems in any assignment to be handed in, every student should work alone and certify that what is written accurately represents the student's own understanding of the material. The Virginia Tech Honor Code will be applied in all the course work.