

MATH 413 — FALL 2008

Modern Applied Mathematics I

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Office: Science and Technology I, Room 239
Office Hours: TR 5.00–5.55 (or by appointment). There will also (sometimes) be office hours on Fridays but with times changing weekly. Check the webpage for details.
Webpage: <http://math.gmu.edu/~harbir/m413/>

MATLAB links: <http://math.gmu.edu/html/help/matlab.html>
OCTAVE links: <http://www.octave.org>

Textbook: Gilbert Strang, *Introduction to Applied Mathematics*, Wellesley-Cambridge Press, 1986.

The Course: Synthesis of pure mathematics and computational mathematics. Emphasizes interplay between discrete and continuous mathematics. Mathematical structure revealed from equilibrium models in discrete and continuous systems.

The course will be graded on the basis of a midterm exam (October 16th), a (cumulative) final exam (December 11th) and two projects that will be set during the term (dates to be announced). The midterm and the two projects will each be worth 20%. The final exam will be worth 40% of the marks. No outside materials will be allowed during the exams and no collaboration will be allowed on the projects.

In addition there will be homework problems set at the end of each class. These should not be handed in but you are **STRONGLY** advised to study them and write out your solutions properly. You are also encouraged to discuss these problems amongst yourselves and make use of the office hours. I will go through many of the homework problems in the following class and you will not benefit from this if you have not made a serious attempt at them beforehand.