

Math 246 Fall 2011
Mathematical Computing and Programming Laboratory

Professor: Dr. Brenton LeMesurier

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Classes meet: Thursday, 1:40-4:10 pm in Maybank 200.

Office hours: Monday, Tuesday and Wednesday, 4-5 pm.

Text: There is no required text, because online resources, handouts, and manuals in the computer classroom will be enough for many students.

If you do want a book about Matlab, one good and relatively inexpensive choice is:

Matlab Guide by Desmond and Nicholas Higham, published by SIAM, ISBN 0-89871-578-4 (paperback).

Math 246, Fall 2011, Dr. LeMesurier

Course Objectives and Expected Student Outcomes

The main expectation of this course is that students learn how to use computational software (such as Matlab, Mathematica, or Python) to implement algorithms for computing numerical solutions to mathematical problems, and to present results appropriately with graphs, tables and such. This will usually be done in conjunction with taking the course MATH245, where algorithms for such problems are learnt.

Computers and Software

We will use the software Matlab in the computer classroom Maybank 200, which provides a powerful interactive system for basic numerical computing and graphing, and also the ability to write programs for larger problems.

Coursework and Assessment

The work for this course will consist of about ten lab. tasks, most intended to be completed in a single session. Grading is based on successful completion after possible revisions, not partial credit for submissions that do not give correct results for all parts of the task.

Thus I will give a lot of feedback and opportunities to repeatedly revise work. Before leaving each lab. session, you should discuss your work with me, get suggestions for changes, and submit a folder of your files on that lab.: I will check whether the task has been successfully completed, or report back describing revisions needed. In most cases, all submission of work will be done electronically, rather than printing anything.

Successful completion of all lab. tasks will earn an A. Lower grades will be given for those who do not finish some tasks, most likely some of the later ones: one letter grade off for each completely missed task, a fractional grade off for any task only partially completed.

As there are less lab tasks than weeks in the semester you should be able to finish your work for this course before the last weeks of class: the remaining lab. time will be available in part for supervised work on programming projects for MATH245.