

MATH 151 Mathematical Algorithms with *Matlab* Fall 2013

- **Instructor:** Liz Lane-Harvard
- **My Office:** Weber 18C
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- **When and where:** 08/26-09/27 M W 5:00 - 7:50 Weber 205
- **Texts:** None required.

Objectives:

This course is an introduction to Mathematical Algorithms using Matlab. The topics are chosen mainly from the broad area of Numerical Computation, which involves, for example, a numerical solver for ODEs, numerical integration, and solving nonlinear equations. However, we allow for variability in curriculum topics and everything will be self-contained. This course is a programming course. We will learn how to write simple programs in the Matlab language, and we will answer the question of how to choose the right data types for storage of data. Restated, the primary goal is to learn basic algorithmic principles and data types.

Prerequisites:

There are no formal requirements. Some mathematical proficiency is assumed.

Grading Rules:

There will be lab assignments. The final grade is determined by your performance on these lab problems. There will be no formal final exam (remember this is a one credit mini-course). Labs should be doable in class, but if more time is needed, the lab can be submitted before the start of the next class session with no penalty. This goes for all labs except for the last one. The last lab must be completed in class, kind of like a final exam. Each lab is worth 10 points, and you **must** attend the last class in order to receive an A. You may complete the labs with a partner, except for the last lab, which must be done on your own. If you choose to work with a partner, you only need to submit one assignment.

Lab Submission:

Create a Matlab script with filename *LastnameLabNumber.m*. For example, if I want to complete lab 3 with Jane Smith, I would save the file as *LaneHarvardSmithLab3.m*. Once you are ready to have the lab graded, email your .m file to lane@math.colostate.edu.