

AUGUSTA STATE UNIVERSITY
CSCI 2060 – PROGRAMMING FOR SCIENCE AND ENGINEERING- FALL 2009

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Text:	MATLAB® Programming for Engineers, 4 th Edition
	<i>file:///Spots/chmcjp/WEBPAGE_DOCS/courses_fall2009.html</i>

Office hours: By appointment, or just come find me...

Course Objectives: An introduction to computer programming using a high-level language supporting mathematical programming. Emphasis will be on methods for solving numerical problems. Programming assignments will be based on typical mathematical problems.

Programming Language: We will be using the MATLAB computing environment. Although not a “true” programming language (no compilation required!!!), MATLAB is low-level enough to retain flexibility while shielding the user from programming headaches such as formatting, memory allocation, etc.

Prerequisites: MATH 2011. This course assumes that you’ve never programmed before (making web pages is NOT programming, nor is making fancy EXCEL spreadsheets).

Course outline:

This is a four-hour course: it consists of two 70-minute classes and one 100-minute lab every week (except for 8 Sept, which is a “furlough” day: the university will be closed). You will have homework assignments as well as a weekly lab assignment. Additionally, you will have two midterm exams and one final. The dates of all this are to be determined.

The topics that I plan to cover are:

- Introduction to MATLAB: variables, assignments, and arrays.
- Multidimensional and sub-arrays, scalar and array operations.
- Built-in mathematical functions, introduction to plots
- Program design and debugging, data types, relational and logical operations
- Loops: ‘while’, ‘for’, ‘if’, etc.
- Functions
- Additional data types
- Multidimensional arrays, single and integer data types, multidimensional plots
- Input/output functions, importing files, format conversion
- Graphics
- GUIs

Grades:

The grades will be calculated based on the three parts of the class: exams, homework assignments, and lab assignments:

2 midterms exams:	10% each
1 final exam:	13.3 %
Homework assignments:	33.3% total
Lab assignments:	33.3% total

The numerical scale for grades is the usual:

$A \geq 90\%$ $B \geq 80\%$ $C \geq 70\%$ $D \geq 60\%$ $F < 60\%$