ECE 257 SYLLABUS - INTRODUCTION TO MATLAB

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OFFICE HOURS	Announced in class

COURSE DESCRIPTION

The main objective of ECE 257 is to learn how to write MATLAB programs for electrical and computer engineering applications that include calculations and graphing. There is a strong emphasis on the documenting of programs. **PREREQUISITES:** ECE 109, ECE 114.

TEXT/REFERENCES

MATLAB Programming for Engineer's, 3rd Edition by Stephen Chapman
MATLAB - An Introduction With Applications, 2nd Edition by Amos Gilat

THE CLASS RULE

The only program that is to be open during class time is MATLAB. In particular there is to be no emailing, surfing or printing. All printing is to be completed before class begins.

HELPING EACH OTHER

I highly encourage students to help each other when they get stuck. But you need to write and troubleshoot your own programs. Those who write their own programs invariably do better on the exams.

TOPICS COVERED

1. Vectorized calculations
2. Matrix calculations
3. Two-dimensional graphing
4. Functions
5. Branches and loops
6. Basic applications like iteration and the solving of equations
7. Introduction to simulink

COURSE ORGANIZATION

1. **WAKEUP QUESTIONS** - Each class period will begin with a wakeup question - a question that is designed to be straightforward if you've done the day's homework.

2. **LECTURES** - After the Wakeup Question we will go over the homework and then introduce the day's topic in a workshop format

4. **NOTEBOOKS** - Keep all class handouts and returned worked in an accopress binder (Senior Project Binder). These notebooks will be graded on organization, neatness, completeness and your correcting of returned work in red ink. These notebooks must contain the following items

in the following order with dividers as indicated

- Title Page with your name
- Syllabus - divider
- Matlab functions and their syntax - divider
- Class notes - divider
- Class handouts - divider
- Homework - each one followed by the day's Wakeup Question - divider
- Exams

5. **FINAL ESSAY** - Everyone is required to write a one page essay at the end of the quarter in the form of a letter to a friend that summarizes the main results of the class, what prerequisites are really important, what key ideas and concepts should be learned cold and how to do well in the class.

GRADING

My goal is to make grading as non-invasive as possible but points will be given as follows:

- Wakeup Questions - 2 points each based on effort
- Homework - 3 to 5 points each
- Three Quizzes - 15, 20, 25 points
- Notebooks - 30 points
- Final Essay - 10 points
- Midterm and Final - 100 points each

IF YOU WANT A GOOD GRADE . . .

- Make use of your resources - get help from fellow students, library books, internet and the instructor. Make use of e-mail to ask questions.
- Come to class prepared and on time.
- Do "good" homework writeups.
- Actively participate. Genuinely work with others.
- Correct and complete all work in red pen as soon as it's returned.
- Come to office hours when you have questions.

DROPPING

Note that Engineering students cannot drop classes after the third week unless there are documented extenuating circumstances. See the College of Engineering policy.