Matlab Computer Modules
ECE 147b

Contents

1 Overview

This booklet contains the four MATLAB teaching modules which accompany ECE 147b. They cover most of the topics taught in the course and are intended to be worked on at the same time the material is being presented in lectures. Each consists of three parts:

- A discussion of the ideas and topics
- One or more worked out examples, complete with the required code. This code can be used as a template for your own work.
- A series of problems for you to work out.

The modules are due to be handed in at approximately two week intervals and will alternate with the in-class homework assignments. You will hand in print-outs of the code, appropriate plots, and where applicable, written answers to questions. It's very easy to generate lots of paper doing this; try to avoid that temptation and submit only that which is necesary. I'm impressed by clear and concise work and hate wading through unnecessary verbiage. Note that it takes a longer time to produce a shorter document covering the same material. The gurus amongst you will probably be able to generate typeset documents which include the graphs and print-outs. Don't waste too much time on this.

Remember that you can use MATLAB and the material in these modules to help you in any other part of the course (except for the fact that you won't have access to computers during the exams). I encourage you to play around with these problems; if there is something that you don't understand or are unsure about, then code it up in MATLAB and try it out.

All references in the modules to the text refer to *"Digital Control of Dynamic Systems,"* 3rd Edition, by G.F. Franklin, J.D. Powell and M.L. Workman (Addison Wesley, 1998).

Any feedback on any aspect of these modules is welcome. The students next year will definitely appreciate it.