

Course MatLab® scripts:

The MatLab® scripts used in the course (sometimes in the lectures directly, other times as suggested extras) are stored in the 18.04 Athena locker (MatLab® subdirectory). The scripts are (mostly, one hopes) user friendly and come with the MatLab help feature enabled (and plenty more buried in the comments inside the codes).

The scripts are an integral part of the course. The students are expected to use them extensively.

There are two ways to access this software (at least):

- I) Dash menu entries for 18.04 (MatLab® 4 or 5) in Athena Workstations.
- II) From the command line (i.e. athena%) in Athena, by typing:

```
athena% add 18.04  
athena% 18.04matlab5 or 18.04matlab4
```

Once in MatLab®, the command "help 1804" displays a list of the available scripts with a short description of what they do. Individual help is also available for each script. New scripts will be added from time to time and not always announced at the lectures, "help 1804" gives (always) the more up-to-date listing.

It is also possible to cd to the 1804 Athena locker MatLab directory, and copy the scripts into personal accounts, where they can be modified.

Here is a list of some of the places where more help regarding MatLab® can be found (several listings below A, B, ...E):

A) The MatLab® manuals, tutorial and help are quite good. Check them out!

Information as to how to access the on-line MatLab® help shows up on the command window as soon as you start MatLab®.

The two basic commands in MatLab® you should always remember are:

lookfor ... If you want to do something in MatLab®, but had no idea if it can be done and (if so) what is the command to do it:
USE lookfor, as in (for example)

```
>> lookfor plot
```

(here >> is the MatLab® prompt). This will list all the MatLab® commands where the word plot shows up somewhere in their docs

... most of them will be useless to you at any given time ...
but the ones you need will also be there.

help Once you have a command name ">> help command_name" tells you how to use it.

helpdesk In MatLab® 5.x this brings up the html help window, where an enormous amount of easy to access help is available.

B) Check the Matlab® on Athena page at:

<http://web.mit.edu/matlab/www/home.html>

Also, Athena offers Minicourse on Matlab® once in a while. There is a bunch of "frequently answered questions" at:

<http://web.mit.edu:1962/tiserve.mit.edu/9000/35434.html>

C) Matlab® on Athena web pages; tutorial by Dr. Kermit Sigmon at the University of Florida at:

<http://web.mit.edu/matlab/doc/primer.dvi>

This is in DVI format, so you may not be able to read it on your PC and/or Macs unless you have LaTeX/TeX installed, but it should display on Athena workstations.

You have the option of using the "dvips" program to translate the dvi file into a postscript file (download the dvi file into your Athena account and then use: dvips file_name.dvi to get a ps file). To find out how to access dvips in Athena (you'll have to add some locker where the software is), ask an Athena consultant. I don't know where they keep it.

Once you have the file in PostScript, you have the option of using something like "distill" to get a pdf version (i.e. distill file_name.ps should do it) ... again, I don't know where distill is in Athena, but it should be there. By the way: ps2pdf is another program that will do this, but distill is much better.

Once you have the file in ps or pdf, you can transfer it to your personal machine for use. PostScript is text, so do the transfer in text mode; but for pdf use binary transfer (raw data).

D) Introductory notes provided by Indiana University at:

<http://www.indiana.edu/~statmath/math/matlab/>

Ignore the Indiana-specific information.

E) "A Practical Introduction to MATLAB®" is available at

<http://www.math.mtu.edu/~msgocken/intro/intro.html>

It is a good starting. The section on "Simple calculations and graphs" is particularly appropriate for help in getting started.

I hope this is helpful.