

Math 5110/6830
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Getting started with Matlab

If you are logging in from one of the math department computers, you can use the “how to get started” text from
<http://www.math.utah.edu/~borisyuk/5110/computing.html>

If you are using a Windows computer, you can still run matlab on the math dept machine (like we did in class).

To do that you need: 1. An X-server. If you don't have one, get it off the web. The one we used in class is XWin32 from www.starnet.com. You can download the demo version for free (restricts session to 2 hours), or get the student's license, or (I think) now they have an offer for a 1 month trial for free.

2. An ssh client to connect to the department. The one that we used in class is putty:

<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>

but a nicer version (that also let's you transfer files from your local machine to the math server) is

<http://ftp.ssh.com/pub/ssh/SSHSecureShellClient-3.2.9.exe>

To Start your session: 1. Start X-server (e.g., go to start→ programs→ XWin32, click and watch for X to appear in the lower-right corner of your screen)

2. In your ssh client: Go to Settings or Preferences (e.g. under Edit), find something related to 'tunnels' or 'tunneling' and put the tick mark on 'tunnel x11'

3. In your ssh client login to xserver.math.utah.edu (under 'sessions' in putty, or under 'quick connect' in the SSHSecureShellClient). To find out your login name see “how to get started” text from

<http://www.math.utah.edu/~borisyuk/5110/computing.html>

There is also a way to do this on Mac. Let me know if you can't find out how.

You should have your session now.

Type `firefox&` to get the web browser.

Now type `matlab&` to get matlab to open.

Two useful windows there are: the main command window and the text editor that can be opened by clicking on the empty page icon at the top left of the command window.

The simplest thing to do is to write the code in the text editor, save it as a file (with the extension `.m`) and then type the file name in the command window.

You can try this code:

```
a=1;
```

```
b=2;  
a+b
```

Run it and see what happens.

If you don't know how to use Matlab, you may try to read the Matlab Primer: <http://www.math.utah.edu/~borisyuk/5110/computing.html> or just use the HW0 code as an example for your own work (important to learn the difference between $a*b$ and $a.*b$ where a and b are vectors or matrices).

Additional commands that you may need are:

```
plot  
hold on  
hold off clf  
xlabel  
ylabel  
title  
axis equal  
print  
save  
line
```

Research these by typing something like 'help plot' in the command window or applying the commands to your existing figures and seeing what happens.