

Installing MATLAB and COMPECON Toolbox

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Software and Computer

In this course every student needs to have a laptop installed with a computing software environment called MATLAB. Bring your laptop to each lecture. This will allow you to work on programming drills in the class. Following are the steps for you to obtain MATLAB for your laptop.

Installing MATLAB R2019a on Mac and Windows

1. Go to <https://www.mathworks.com/>
2. Login if you have a Mathworks account or click Create Account if you do not have one. **Note: use your TTU e-mail address.**
 - You can login by clicking the “person” icon in the upper right corner. If you do not have an account then click on the “person” icon and create one.
3. After login click on your login name in the upper right corner and select My Account.
4. This will generate a list of licenses. Select license 714225.
5. Click Download on the next page and R2019a on the subsequent page.
6. If prompted, select the appropriate operating system and the download will start.
7. Run the installer from the downloaded file and follow the instructions to install MATLAB. This might take some time so plan accordingly to allow the install/download to complete without interruption.

Installing CompEcon Toolbox on Mac and Windows

Many of the examples we study in this class will be taken from Miranda and Fackler’s book Applied Computational Economics and Finance. The model solvers developed by those authors and MATLAB scripts for solving examples in the book can be downloaded as a package “CompEcon Toolbox” from the authors’ website <https://pfackler.wordpress.ncsu.edu/compecon/>.

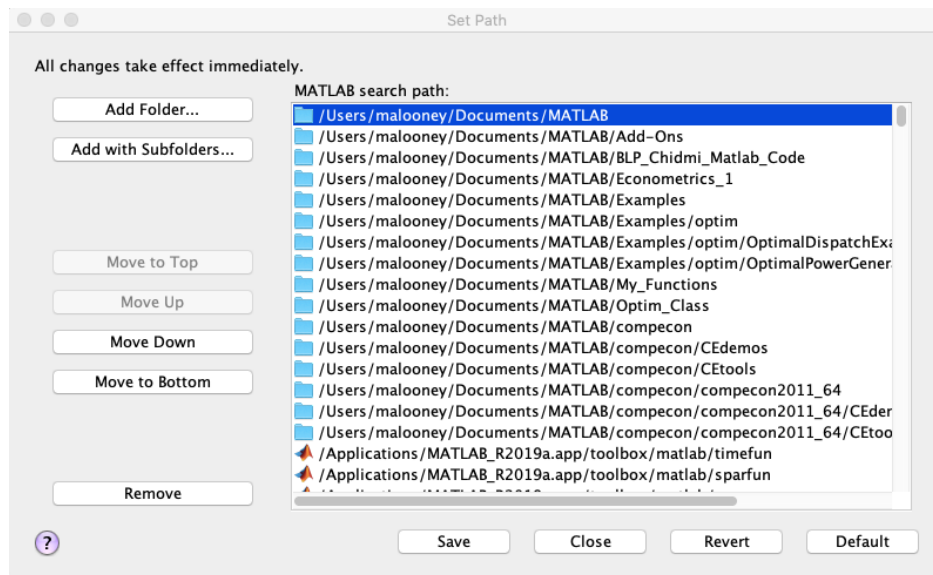
1. Download CompEcon Toolbox from <https://pfackler.wordpress.ncsu.edu/compecon/154-2/>
2. I suggest you install the 64-bit version of the software.
3. After the file downloads, locate the file on your computer. It will be called `compecon2011_64_20110718.zip` (if you downloaded the 64-bit version).
4. When you installed MATLAB a directory was created in your “Documents” folder called “MATLAB”. I suggest you copy the downloaded file called “`compecon2011_64_20110718.zip`” into your MATLAB folder.
5. Unzip the file called “`compecon2011_64_20110718.zip`”. This will create a folder called “`compecon2011_64_20110718`”.
6. At this time I suggest you create a second folder in your MATLAB folder called “`Optim_Class_Fall_2019`”. This is optional but useful. You can place all materials from the class in this folder.

7. CompEcon Toolbox is now installed.

Setting the Path in MATLAB on Mac and Windows

For MATLAB to find the files (CompEcon Toolbox and script files) on your computer you need to tell MATLAB where the files are located. The easiest way to do this is to “Set Path” to your MATLAB folder inside your Documents folder.

1. Open the MATLAB program.
2. Click on the “HOME” tab in the upper left corner.
3. You will see a button called “Set Path”. Click the button.
4. You will see a screen that looks like the following:



5. Click on the “Add with Subfolders” button.
6. Navigate to your Documents folder and select the MATLAB folder. Click “Open” (on Mac) or “Select Folder” (on Windows).
7. Click “Save” and then “Close”.
8. The path is now set. Anything saved inside your MATLAB folder will now be visible to MATLAB.
9. If you created a folder called “Optim_Class_Fall_2019” in your MATLAB folder then simply copying files into this folder will automatically add the files to the MATLAB path. EASY!

Compiling the CompEcon Toolbox

For the CompEcon Toolbox to function properly we need to compile some code. If you have never compiled code before this can sound scary but I assure you the process is not very complicated.

For Mac users

We need to install the “command line tools”.

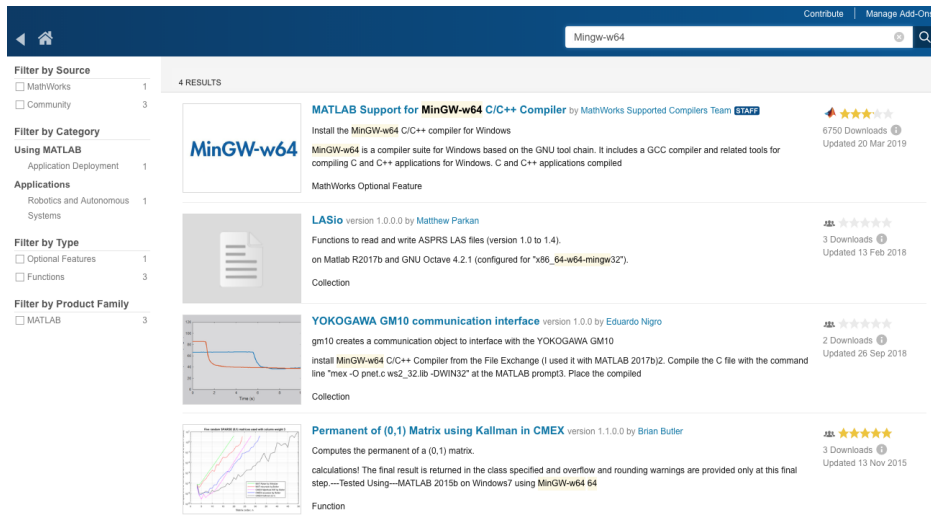
1. Open the “Terminal” application. This is inside the “Utilities” folder inside the main “Applications” folder on your hard drive.

2. At the command prompt, type “Xcode-select –install”.
3. Once the install is complete open the MATLAB application.
4. In the “Command Window” type, “Mexall”.
5. The CompEcon Toolbox code will start to compile. Wait until it is done.
6. Your code is now compiled... EASY!!

For Windows users

We need to download a Windows compatible compiler. The easiest compiler to use is “Mingw-w64 - GCC for Windows 64 & 32 bits”.

1. Open the MATLAB application and click on the “HOME” tab.
2. Click on the “Add-Ons” button in the upper right of the screen.
3. The “Add-On Explorer” will open.
4. In the upper right of the screen there is a search bar. Type “MinGW-w64” and hit enter.
5. The following screen will appear:



6. Click on “MATLAB Support for MinGW-w64 C/C++ Compiler” and click the “Install” button.
7. Once the install is complete