

# Installing Python

Python is the programming language that we will be using in most tutorials. Here are the steps to get a working distribution of python installed on your PC/Mac:

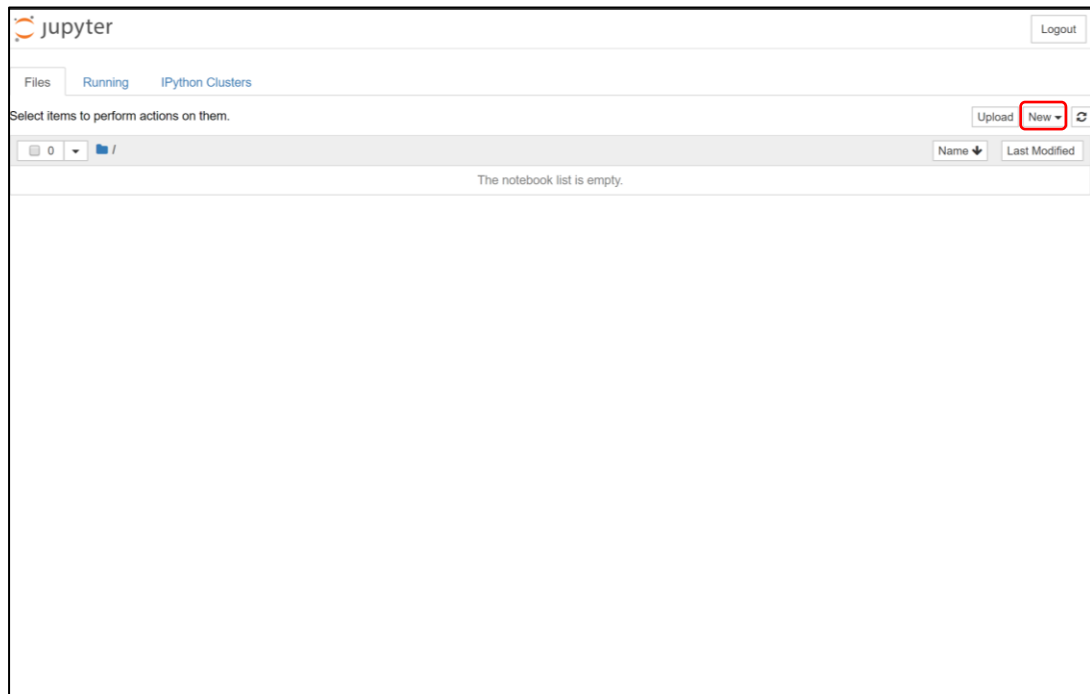
## Steps to install Python:

1. Go to [www.anaconda.com/download/](http://www.anaconda.com/download/) and download the appropriate Python 3.6 version for your operating system.
2. Install anaconda with all the default options in a directory of your choice.

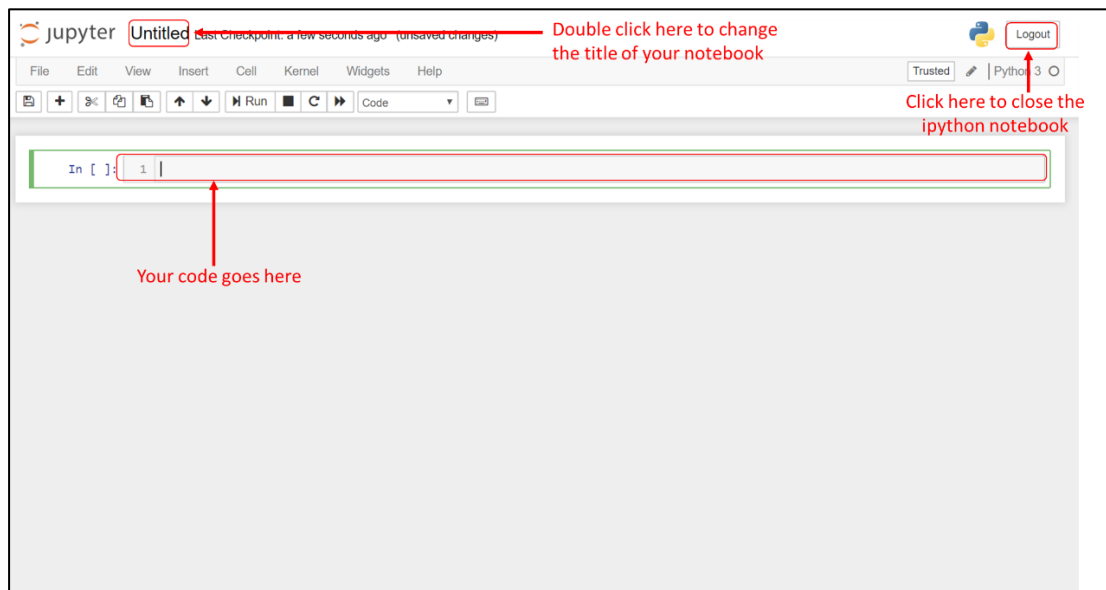
In this class, we will use ipython notebooks to execute code and display the results.

## Steps to get started with ipython notebooks:

1. Create a folder on your computer where you would like to store all code for CHE1125.
2. Open your command-line interface (Command Prompt on PC and Terminal on Mac), and navigate to the folder you created in the previous step using the “cd” command.  
Eg.: If the directory you wish to change to is “C:/users/abcd/CHE1125”, the command will be “cd C:/users/abcd/CHE1125”
3. When in the directory of your choice, type the command “jupyter notebook” on the command line and hit enter.
4. A new web browser window with the jupyter notebook that looks as follows will be opened.



- Click on the 'New' button shown in a red box in the above picture, and click on 'Python 3' to open a new ipython notebook. The following window should appear.



- Ipython notebooks are saved automatically when you make changes to them. Saved ipython notebooks will appear on the 'home' screen of the jupyter notebook.
- To execute a block of code, click on that block and hit 'shift + enter'.
- To close a jupyter session, close all the jupyter browser windows and close the terminal window.

The anaconda distribution of python comes with many packages that engineers and scientists typically require. To install additional packages required for this course (specifically, cobra and cameo), use the 'pip' command. COBRA and cameo are additional python packages that we will use to study metabolic networks.

#### Steps to install cobra/cameo:

- Open the command-line interface (command prompt on PC and Terminal on Mac).
- Type 'pip install cobra' and hit enter. This will install the cobra package on your computer.
- Type 'pip install cameo' and hit enter. This will install the cameo package on your computer.
- You can import these packages in your ipython notebook using the 'import' command as follows: 'import cameo' or 'import cobra'