**What is the end goal:**

To have a python install in your computer with an IDE (I suggest Spyder) with the necessary packages for the course:

Pyphi (<https://github.com/salvadorgarciamunoz/pyphi>)

Pyeiot (<https://github.com/salvadorgarciamunoz/eiot>)

Pyomo (<https://pyomo.readthedocs.io/en/stable/installation.html>)

To have optimization solvers available for Pyomo to use (one of the packages we will use).

* I suggest having a local installation of IPOPT and either BONMIN or COUENNE or BARON.

**or**

* To install GAMS (I have license file for the course and have attached it to the same email that had the document you are reading) and add it to the system PATH

Or

* You can rely on the NEOS server to solve the optimization problems. I cannot guarantee the server will be up 100% of the time during the course.

If the above makes sense to you and you know what to do, then you can stop reading. Otherwise below I provide further information.

**What I think is the easiest:**

I tested this on two computers: A Microsoft Surface PC with Windows 11 and a Mac-Mini (M1) with MacOS Ventura and I succeeded in both cases.

1. Download and install Anaconda (<https://www.anaconda.com/download/>)
2. AFTER the installation is complete, restart your computer.
3. Open an Anaconda Prompt (Windows) or a Terminal in a Mac
4. Install Pyomo typing:

conda install -c conda-forge pyomo

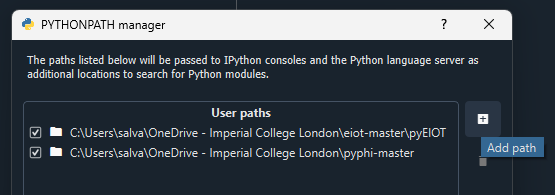
(respond “yes” to all prompts)

1. Install xlrd typing:

conda install xlrd

(respond “yes” to all prompts)

1. Click this link <https://github.com/salvadorgarciamunoz/pyphi> and download by clicking “Code” and choose “Download ZIP”
2. Click this link <https://github.com/salvadorgarciamunoz/eiot> and do the same
3. Extract the contents of each of the zip files somewhere in your computer (keep the contents separate in their respective folders)
4. Start Spyder by opening the anaconda prompt (windows) or a Terminal in Mac and typing “spyder”
5. Once spyder starts click the PYTHONPATH manager in the icon bar: 
6. Click “Add Path” and add the location of the extracted files from the two zip files your downloaded



**THIS IS THE BARE MINUMIUM YOU NEED, instead of having a local optimization solver or a GAMS Install you can rely on the NEOS server to send the optimization problems to be solved. Caveat, the server is sometimes down, it is not 100% dependable.**

I suggest you install GAMS, it is available for Mac (intel and M1/M2) and Windows

1. Locate the file **gamslice.txt** I provided; you will need it at the end of the installation (it was attached to this email).
2. Go to [www.gams.com](http://www.gams.com)
3. Download the GAMS version for your laptop and install **adding GAMS to the PATH environment variable see below**

**WINDOWS USERS: Double click installers and check the box “Use advanced installation mode” hit “Next” through the dialogs and check the box “Add GAMS directory to PATH environment variable”**

**MAC USERS Double click the package and follow the instructions. By clicking on Customise in the tab Installation Type you can add GAMS to the PATH by checking the box when prompted.**

1. In the final dialog of the installation process, you will need to point the installer to the gamslice.txt file mentioned above.
2. You will know you succeeded by opening a cmd window or anaconda prompt in Windows (a Terminal in Mac) and typing “gams” [Enter] you should see something like this. In Windows it took a system reboot after the installation for the changes to take effect.

Text, letter

Description automatically generated

1. **If the above process failed** or you already have a GAMS install in Windows and you need to add GAMS to the PATH, see the slides “How to add GAMS to your PATH in Windows.pptx”

Same thing for Mac, it is a bit more involved, you need to edit a hidden file called .zprofile (in MacOS Ventura) and add these two lines:

**PATH="/Library/Frameworks/GAMS.framework/****Resources:${PATH}"**

**export PATH**

Follow these steps carefully, the “” indicates the text to type do not include the “” itself.

* copy the two lines in bold text above (select them right click “Copy” or select them and use command+c in your keyboard
* Open a Terminal
* Type “vi .zprofile”
* Type “i” [nothing will happen, you will not see the letter “i” this is the command to insert text]
* Type Command+v in your keyboard (this will paste the two lines you copied from above)
* Hit the key [esc]
* Type “:wq [Enter]”
* Close that terminal window, open a new one and type “gams” you should see the response from the previous page