

TMR4222 Heat Transfer Course Supplement Material

Setting up the working environment

These materials are written in Jupyter Notebook, which is based on Python. You should have a minimum knowledge of Python to manipulate it. Don't worry. You will be still see and run the code as it is. But you still need to set up the environment to do that.

Install the right version of Python (≥ 3.8)

First, you need Python installed on your PC. The version should be at least 3.8 or up. The easiest way to check if you have the right version of python is to open a terminal or command prompt and enter the following command.

```
python --version
```

You can also try

```
python3 --version
```

Otherwise, you can easily install Python by going [here](#). Don't change the options for the install if you don't know what you are doing. After installation, check the version as above to make sure that you have got the right python installed.

Create a virtual environment

In order to prevent any conflict with the packages that you already have installed and what will work for these notebooks, I recommend creating a virtual environment. First, you have to install the virtual environment package if you haven't. I will assume that you can enter 'python' in any directory to run Python. First, you need to be in the directory of these materials.

```
cd HeatTransferCourse  
pip install virtualenv
```

Then, create a virtual environment.

```
python -m virtualenv venv
```

This will create your virtual environment in 'venv' directory. Next you can activate the virtual environment. If you are on Windows PC,

```
venv\Script\activate
```

Otherwise,

```
source venv/bin/activate
```

NB! Whenever you restarted the terminal, make sure that you activate the virtual environment using the above command.

Install Packages

Once you have activated your virtual environment, you can now install your packages. You must be connected to internet to do so. "requirements.txt" file should be placed on your folder.

```
pip install -r requirements.txt
```

This will install all the necessary packages to run the notebooks.

Run Jupyter Lab

Launch Jupyter Lab with:

```
jupyter-lab
```