# Scientific Computing course: Software Requirements

The course on Scientific Computing will be mainly delivered using CLI tools within a Unix-like enviroment. Below you can find the list of operating systems supported and a list of software packages that should be installed. Some very basci information how to install them are also provided.

Materials of the course will be distributed using a private github repository: all participants should have a github account to access materials.

For more information on github and how to create an account see:

- https://github.com/
- https://help.github.com/en/github/getting-started-with-github/signing-up-for-a-new-github-account

## Operating system requirement:

- Any Linux distribution
- MacOSX
- Windows 10

## Software requirements

- GNU Compiler Collection https://gcc.gnu.org/
- GNU Make https://www.gnu.org/software/make/
- Python 3 https://www.python.org/downloads/
- Matplotlib python package
- Git https://git-scm.com/downloads
- Doxygen http://www.doxygen.nl/download.html

### Installing on Linux

On a linux distribution you can install all the above software using your package manager. For example, on ubuntu/debian:

```
sudo apt update
sudo apt install gcc
sudo apt install gdb
sudo apt install make
sudo apt install python3
sudo apt install python3-pip
sudo pip3 install matplotlib
sudo apt install git
sudo apt install doxygen
```

### Installing MacOSX

We suggest (among many other choices) to use [brew](https://brew.sh/

```
brew install gcc
brew install gdb
brew install make
brew install python3
pip3 install matplotlib
brew install git
brew install doxygen
```

### Installing on Windows

On windows, you can use the linux subsystem. Follow thai direction https://itsfoss.com/install-bash-on-windows/ Once done, you can install all the above packages using apt

```
sudo apt update
sudo apt install gcc
sudo apt install gdb
sudo apt install make
sudo apt install python3
sudo apt install python3-pip
sudo pip3 install matplotlib
sudo apt install git
sudo apt install doxygen
```