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| **Classroom & Student Machine Setup Guide** | | |
| **Course** | | **TTPS4870 Applied Python for Scientists** |
| **Tools** | | Python, PyCharm |
| **Issue Date** | | 10.3.19 |
|  |  | |
| **Customer** | | **GK Calgary for EnMax** |
| **Class Dates(s)** | | 10.21.19-10.25.19 |
| **Internet Access** | | Internet access for the Instructor and Students is **recommended and useful** to have for this course, but not required. See below for details. |

**Classroom Setup Guide – Please Review ASAP**

**All items in the setup guide are required to be preinstalled and verified for readiness on student machines prior to the course start date. A member of our set up team will reach out to the contact provided closer to the class date to verify this is all in place, to ensure a smooth start to class for the students and instructor.**

**Please review this document in full ASAP to ensure your student machines meet the requirements, and please advise us right away of any concerns.**

**PDF student books and lab code for exercises will be sent separately a few days in advance of the course start date, so they can be placed on machines prior to the trainer arrival.**

**Any questions – please contact us at** [**Support@triveratech.com**](mailto:Support@triveratech.com) **for assistance.**

CLASSROOM ITEMS

Projector

Please supply the following items for the classroom for trainer use and presentation. Please advise asap if these are not available for some reason:

* Please have a modern capability **PC-Ready projector** for the trainer to connect to, and wall screen area, onsite for the Instructor Presentation.
* **NOTE:** If you have a VGA cable only projector please advise asap, as our machines typically support HDMI.

Drawing Area

* Please supply a **whiteboard and dry erase markers** (preferred) **or easel pad and markers** for discussions and diagrams

HARDWARE REQUIREMENT SUMMARY

Hardware

Student machines should have at least 10G free disk space

Internet Connectivity

**Recommended** : Internet connectivity is **recommended but not required** for this course for the Instructor to share demos and information, and for students to review online documentation or other items. However, it is not required to complete the hands-on labs. Please advise if you intend to provide internet access or not so we may advise the instructor. Our set up team will follow up to collect detail on instructor guest network access.

RAM

* 8 GB RAM or more for optimum lab performance.
* If your organization intends to create an image from the required items listed below, please note that virtualization software such as VMWare, VirtualPC, or 64-bit, requires **8GB to 12GB RAM** to ensure proper speed and performance.

O/S

Any OS can be used. Python is open source – see details below.

**SOFTWARE REQUIREMENT SUMMARY**

Please see the table at the end of this document for download links and detailed installation, verification and removal steps for these software requirements:

* **A zip utility such as ZipGenius Compression Software**
* **Web Browsers: Firefox 7.x or Microsoft Internet Explorer 8.x (or higher versions)**
* **Adobe Acrobat Reader 10.x (or higher versions)**
* **Student Lab Exercise Code – will be provided by our technical team**
* **Python and additional modules – Detailed below**

**Python Installation Instructions**

Any operating system can be used. **Python** is open source. Each student needs a computer (or remote account) with Python, some extra modules, an IDE (Integrated Development Environment), and the student files installed.

There is a separate section in this guide for each platform — Windows, Mac, and Linux.

#### NOTE

This setup guide should work in most environments, but is not guaranteed to work in all possible situations. Please call or email your contact with any further questions. Installation instructions begin on next page.

## Steps for installation

Setup for this class requires three separate installation steps:

1. Installing **Python**
2. Installing the lab files specific to this course
3. Installing **PyCharm**, an Integrated Development Environment for **Python**

## Anaconda vs. python.org installation

There are two approaches you can use for the **Python** installation. You can install the **Anaconda** bundle from **anaconda.com** or install basic **Python**, and then add the extra packages individually.

By far the easiest approach is to install the Anaconda bundle. This is a free (community) bundle that installs Python and many extra libraries in a single step. Installation is more or less the same on Windows, Linux, and OS X.

For each platform, follow *either* **Step1-A** or **Step 1-B**, but not both.

## Student files

The student files contain examples, data, answers to labs, and setup data. They will be provided to you separately.

## IDE/Editor

We recommend **PyCharm** as a Python IDE (Integrated Development Environment) and it is part of the installation specifications below. However, some programmers already have a favorite IDE or editor. We do not *require* students to use **PyCharm**. If students are already using Spyder, Visual Studio Code, Eclipse, Notebook\++, emacs or other tool, that will not cause a problem.

# Installing Python on Windows

## (Win) Step 1-A: Installing Python from Anaconda

1. Download the latest Anaconda installer from <https://www.anaconda.com/download/>. Install, using default responses as needed.

**IMPORTANT** Download and install Python 3, not Python 2.

## (Win) Step 1-B: Installing Python from python.org

1. Download the latest Python 3 installer from <http://www.python.org/download/> . Be sure to download the 64-bit Windows installer.
2. Once downloaded, double-click the .exe file to start installing.

Choose “Install Python 3.*x* for all users”, and select the “Add python .exe to Path” option in the installer.

#### NOTE

If the installation seems to be hanging, check to see if there’s a Windows dialog asking for permission to proceed.

Setup continued on next page.

## (Win) Step 2: Installing the student (lab) files

The lab file archives contain setup, example, data, and answer files for use in the labs. The file name is **py3forsci.zip**

The zip file should be extracted to the user’s desktop. It will create a folder named **py3forsci**. When extracting, be sure the target folder is

C:\users\USERNAME\desktop

NOT

C:\users\USERNAME\desktop\ py3forsci

The extractor defaults to the second form, which adds a confusing extra **py3forsci** folder.

## (Win) Step 3: Installing PyCharm Community Edition

Install the latest version of PyCharm Community Edition from

<http://www.jetbrains.com/pycharm/download>

**NOTE** Do not install the Professional Edition!

# Installing on OS X (Mac)

## (Mac) Step 1-A: Installing the Anaconda Bundle

1. Download the latest Anaconda installer from <https://www.anaconda.com/download/>. Install, using default responses as needed.

*Install the Python 3 version, not the Python 2 version.*

## (Mac) Step 1-B: Installing Python from python.org

### The Python language

Install Python for OS X from <http://www.python.org/download/>. Choose the latest version.

## (Mac) Step 2: Installing the student (lab) files

The file name is **py3forsci.tgz**

Download or copy **py3forsci.tgz** to the user’s desktop. Extract to the user’s desktop or home folder. It will create a directory named **py3forsci**. Sample tar extraction command (execute as the user, not as root):

cd

tar xzvf py3forsci.tgz

## (Mac) Step 3: Installing PyCharm Community Edition

Install the latest version of PyCharm Community Edition for Mac from

<http://www.jetbrains.com/pycharm/download>

**NOTE** Do not install the Professional Edition!

# Installing on Linux

## (Linux) Step 1-A: Installing the Anaconda Bundle

1. Download the latest Anaconda installer from <https://www.anaconda.com/download>. Use all installation defaults.
2. Once the Anaconda package has been installed, open a new terminal window (shell prompt).

## (Linux) Step 1-B: Installing Python

### The Python language

Python may already be installed. If not, install Python 3.4 or later from [http://www.python.org/](http://www.python.org/download/) [download/](http://www.python.org/download/).

## (Linux) Step 2: Installing the student (lab) files

The file name is **py3forsci.tgz**

Download or copy **py3forsci.tgz** to the user’s desktop. Extract to the user’s desktop or home folder. It will create a directory named **py3forsci**. Sample tar extraction command (execute as the user, not as root):

cd

tar xzvf py3forsci.tgz

## (Linux) Step 3: Installing PyCharm Community Edition

Install the latest version of PyCharm Community Edition for Linux from

<http://www.jetbrains.com/pycharm/download>

**NOTE** Do not install the Professional Edition!