

Installation Instructions: Python and Visual Studio Code

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Installing Python

This document walks you through preparing your laptop for the first lecture. During the courses, we will use Python as our programming language, together with the independent development environment (IDE) Visual Studio Code (VS Code). VS Code is an application that allows you to write and manage programming code in all kinds of languages in a user-friendly way. Both Python and VS Code are available for free from their respective websites. You are expected to bring a laptop to class with a working installation of both Python and VS Code. Below you will find instructions on installing Python and VS Code. Please make sure you go through these steps before attending the first class.

During the courses, we will use Python version 3.13.5, the latest stable release at the time of writing. What if you already have another Python version installed? Please also install version 3.13.5. Older versions of Python can behave differently in some cases. You do not have to uninstall the older version; they can live side by side.

For Windows

1. Download Python

- Go to the official Python website: <https://www.python.org/downloads/>
- Click on Download Python 3.xx.x (the latest stable version).

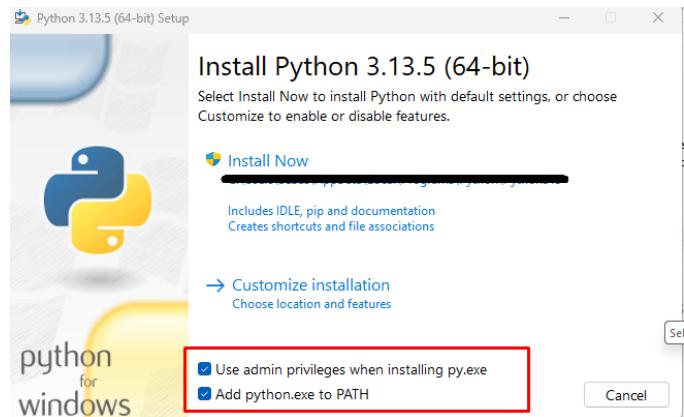


The screenshot shows the Python website's download page for Windows. At the top, there is a large button labeled "Download Python 3.13.5". Below this button, there is a note about looking for Python for different OSes like Linux/Unix, macOS, and other options. There is also a note about Docker images. The background features a cartoon illustration of two boxes with yellow and white striped parachutes falling from the sky. At the bottom of the page, there is a table titled "Active Python Releases" showing maintenance status, first release date, end of support date, and release schedule for Python versions 3.14, 3.13, and 3.12.

Python version	Maintenance status	First released	End of support	Release schedule
3.14	pre-release	2025-10-01 (planned)	2030-10	PEP 745
3.13	bugfix	2024-10-07	2029-10	PEP 719
3.12	security	2023-10-02	2028-10	PEP 693

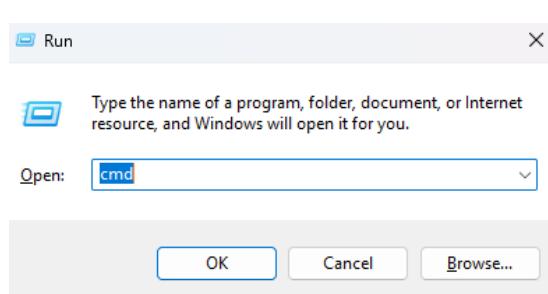
2. Run the Installer

- Open the downloaded .exe file.
- Important! On the first screen of the installer:
 - Check the box "Add Python to PATH".
 - Then click Install Now.



3. Verify the Installation

- Open Command Prompt (Win + R, then type cmd and press Enter).
- Type: python --version
- You should see something like Python 3.xx.x.
- If not, restart your computer and try again.



```
C:\WINDOWS\system32\cmd. + 
Microsoft Windows [Version 10.0.26100.4652]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ >python --version
Python 3.12.2

C:\Users\ >
```

For macOS

1. Check if Python 3 is already installed

- Open Terminal (Cmd + Space, type Terminal, press Enter).
- Run: python3 --version
- If it returns a version number (Python 3.x.x), you're good to go.

2. If Not Installed

- Install [Homebrew](#) (if not already installed) by running in the terminal:
/bin/bash -c "\$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
- Then install Python 3 by opening a new terminal and typing: brew install python

3. Verify

- In the terminal type: python3 --version
- You should see the installed version.

For Linux

On most Linux distributions, Python 3 is pre-installed. You can check by running:

- Type in a terminal (Ctrl + Alt + T): python3 --version
- If it's outdated type in a terminal:
 - sudo apt update
 - sudo apt install python3

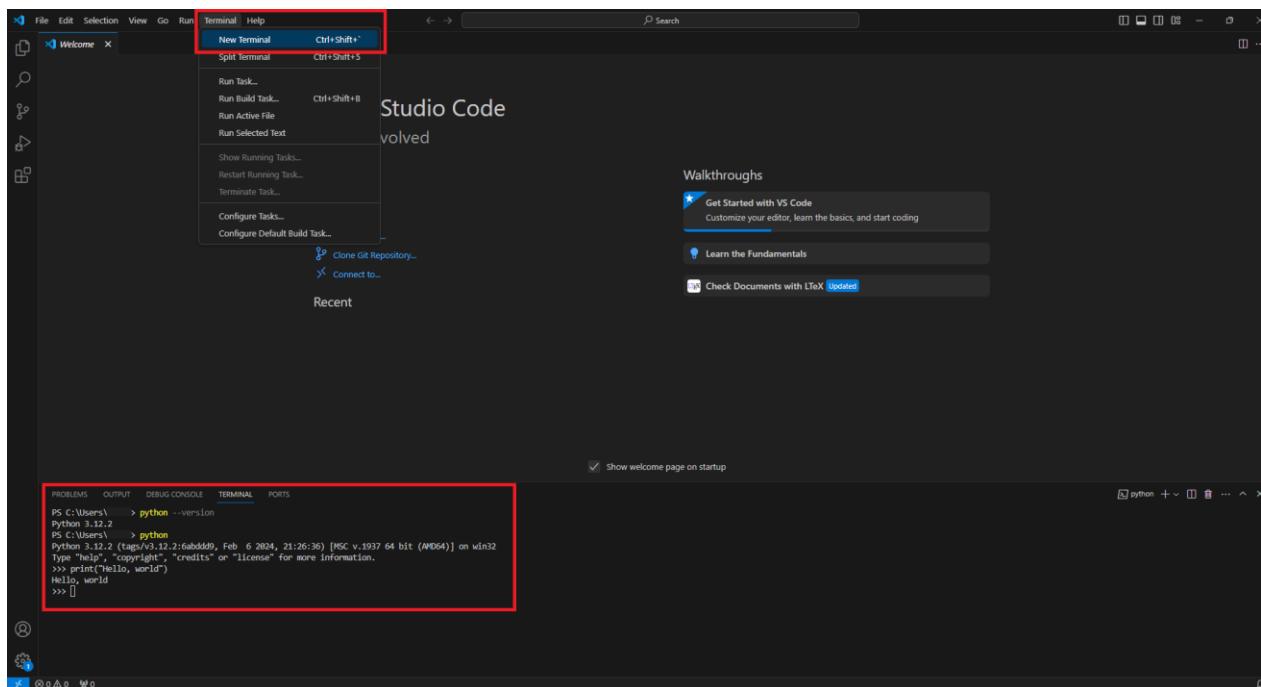
Setting Up VS Code

Once you have Python installed, the next step is to install an editor (IDE) and learn how to work inside a virtual environment, which helps you keep your projects isolated.

1. Download and Install

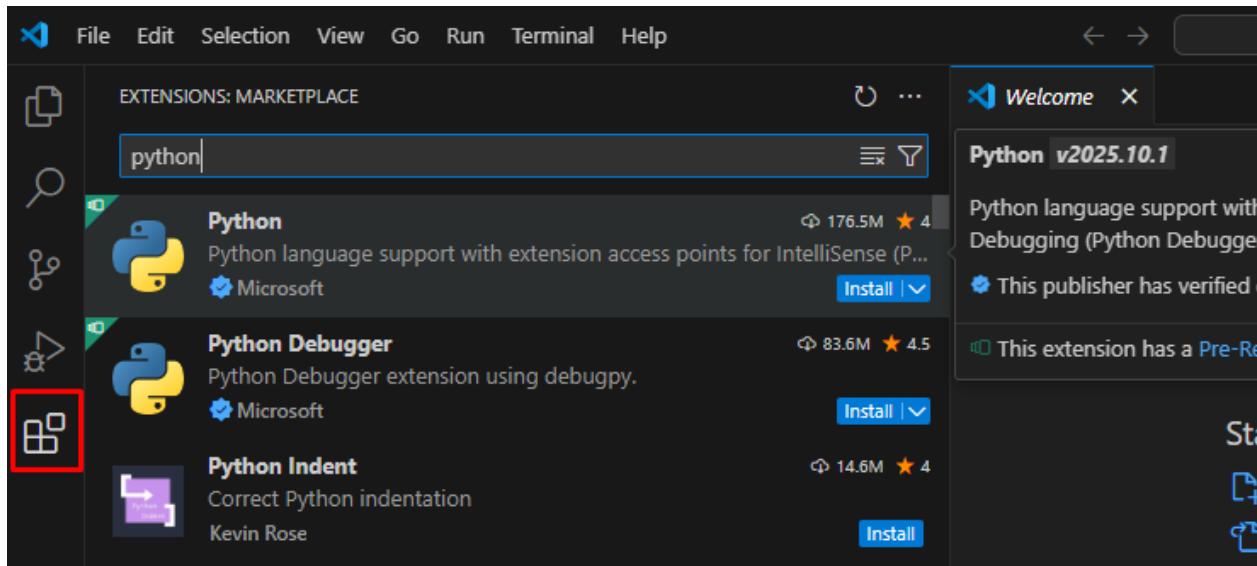
- Go to: <https://code.visualstudio.com/>
- Click Download and select the installer for your operating system.
- Run the installer and follow the prompts (default settings are fine).
- On Windows, during installation you can check the box "Add to PATH" (optional but useful).

When installed, you should get a screen like this. Here you can (again) open a new terminal and check if Python is correctly installed. If so, you can type "python" and afterwards type a "print statement" such as print ("Hello, world"). After pressing enter, you've successfully run your first Python command!



2. Install the Python Extension

- Open Visual Studio (VS) Code.
- Go to the Extensions view, in the top left panel (Ctrl+Shift+X in windows or Cmd+Shift+X on Mac).
- Search for Python.
- Install the “Python” extension
- In this same screen also install the “Jupyter” and “PyLance” extensions



If all is set and working correctly, you are now ready for the first course!

Additional information

VS Code official Python tutorial: <https://code.visualstudio.com/docs/python/python-tutorial>

Quick start for Python in VS Code: <https://code.visualstudio.com/docs/python/python-quick-start>

Official Python venv documentation: <https://docs.python.org/3/library/venv.html>