

# Python Fundamentals

## Duration

24h (4 days x 6h)

## Description

Python has been, for several years now, the most popular language in use. A short learning curve and its widespread use in the Data Science, Machine Learning, and Artificial Intelligence fields have contributed to its dominant status. Python is the perfect language for anyone looking for a first contact with the programming world and is often a requirement or considered an advantage in job offer descriptions.

## Audience

Everyone is looking to start their journey in programming, specifically Python.

## Prerequisites

Just bring your motivation and joy of learning.

## Objectives

After completing the course, the students should:

- know what python is used for
- know the different tools available to work with python
- know the different parts that make a python program
- know how to write programs in python

## Course Outline

1. Welcome
  - a) Course Overview
  - b) Installation and Setup
2. Datatypes
  - a) strings, integers, lists, tuples, sets, dictionaries
3. Building blocks:
  - a) conditionals, iterators, functions, classes, exceptions, imports, scopes, comprehensions
4. Functional programming

5. Object-oriented programming
6. Virtual environments
7. Working with external data: CSV, JSON, databases
8. Goodbye
  - a) Course Recap
  - b) Course evaluation
  - c) Q&A