

# PREREQUISITES

## Python 3: Deep Dive (Part 4) - Prerequisites

- assumes you are **not** a beginner programmer
  - solid understanding of basic Computer Science concepts
  - must have **practical experience** programming in Python already
  - **real projects**, not just a bootcamp course and some isolated exercises
- this is not a cookbook course!
  - does not explain how to solve specific problems
  - does explain Python fundamentals
    - how various concepts work and can be used

## Python 3: Deep Dive (Part 4) - Prerequisites

This course assumes that you have **in-depth** knowledge of functional programming in Python:

scopes and namespaces

Boolean truth values      `id`      `==` vs `is`

functions and function arguments      lambdas

packing and unpacking iterables      `my_func(*my_list)`      `f, *__, l = (1, 2, 3, 4, 5)`

closures      nested scopes      free variables

decorators

`zip`    `sorted`    `any`    `all`      → `itertools` module

## Python 3: Deep Dive (Part 4) - Prerequisites

This course assumes that you have **in-depth** knowledge of:

sequences      iterables      iterators      → `yield`    `__iter__`    `__next__`    `__getitem__`

comprehensions      → list, dictionary, set, generator exp      → relation to functions and closures

generators

context managers

mapping types      → dictionaries      sets      `collections` module

object equality and hashing

importing modules and symbols

## Python 3: Deep Dive (Part 4) - Prerequisites

You should have some **basic** exposure to creating and using classes in Python

```
class Person:  
    def __init__(self, name, age):  
        self.name = name  
        self._age = age  
  
    @property  
    def age(self):  
        return self._age  
  
    def __eq__(self, other):  
        return isinstance(other, Person) and self.name == other.name  
  
    def __hash__(self):  
        return hash(self.name)  
  
    def __lt__(self, other):  
        ...
```

## Python 3: Deep Dive (Part 4) - Prerequisites

- know how to work with Python virtual environments
- pip install

Most code examples are provided using Jupyter Notebooks

Freely available <https://jupyter.org/>

GitHub and git

<https://github.com/fbaptiste/python-deepdive>