Python Basics

Familiarizing yourself with the concepts listed below is in my opinion sufficient for a very reasonable level of mastery in Python.

1. Variables and the importance of choosing good names for them.
2. Basic data types: `int`, `float`, `bool`, `str` and `type` function
3. Basic operations: `+`, `−`, `*`, `/`, `**`
4. Comments and multi-line strings: `#`, `"""`
5. Logical comparisons: `==`, `!=`, `<`, `>`, `<=`, `>=`, `and`, `or`, `not`
6. `if`, `elif`, `else` blocks
7. Nested blocks
8. `list` and `tuple`
9. `sorted` and `reversed` functions
10. List indexing and slicing: `[start]`, `[start:stop]`, `[start:stop:step]`
11. Dictionary {key: value} pairs: `dict`
12. Dictionary indexing: `[key] = value`
13. List unpacking: `*`
14. List zipping: `zip`
15. List comprehensions
16. `for` and `while` loop blocks
17. `range` and `len` functions
18. `def` function blocks
19. Function arguments
20. Default and named function arguments
21. Variable scope
22. Assignment vs. mutation
23. Modules: `import`
24. `class` blocks
25. Class template vs. instance
26. Class `__init__` method and `self` variable
27. Class methods and data
28. Class inheritance

Other more advanced topics:

- Function `args` and `kwargs`
- Generators: `yield`
- Making your own python package

Resources:

- [Nice introductory exercises](#)
- [Interactive python tutorials](#)
- [A large list of python tutorials](#)
- [The python tutorial](#)