

# Introduction to Python

GoSkills online course syllabus

Sunday, December 22, 2024

**Skill level**

Beginner

**Lessons**

41

**Accredited by**

CPD

**Pre-requisites**

None

**Video duration**

3h 01m

**Estimated study time**

20h 30m for all materials

**Instructor**

John Elder

## Intro and Setup

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- 1** **Install Sublime and Git Bash Terminal**  
We'll start off by installing the Sublime Text editor and the Git Bash Terminal.
- 2** **Installing Python**  
We'll download and install Python.
- 3** **First Program**  
Let's create our first program.
- 4** **Comments and C9 Transition**  
Learn when and how to use comments in your code.

## Python Basics

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- 5** **Variables**  
What is a variable and how can you name them?
- 6** **Data Types**  
We'll look at data types including numbers, strings, lists, tuples, and dictionaries.
- 7** **Strings**  
What is a string?

## 8 String Manipulation

How to manipulate strings.

## 9 Math Operators

How to do basic math in Python.

## 10 Numbers

What's the difference between a floating point number and an integer?

## 11 Assignment Operators

What are the different assignment operators and how are they used.

## 12 Lists

What are lists and how do we use them?

## 13 Lists of Lists

We'll look at multidimensional lists, or - lists of lists.

## 14 Tuples

What is a tuple and how is it different from a list?

## 15 Dictionaries

What is a dictionary and how do we use them?

# Intermediate Python

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## 16 Data Type Conversion

How to convert one data type into another data type.

## 17 Comparison Operators

How to compare two things.

## 18 Conditionals If/Else/Elif

Using comparison operators to make decisions.

## 19 Multiple Conditionals

What are the logical operators AND/OR/NOT and how do we use them?

**20** Python Formatting  
Formatting in Python is important! Let's look at lines and indentation, and single line If statements.

**21** Membership Operators  
We'll look at the membership operators "In", and "Not In".

**22** Identity Operators  
We'll look at the identity operators "Is", and "Is Not".

**23** While Loops  
Learn to loop using a While loop.

**24** For Loops  
Learn to loop using a For loop.

**25** Loop Control Statements  
Take control of your loops using "break", "continue", and "pass".

**26** FizzBuzz!  
Let's build a FizzBuzz app!

**27** Functions Part 1  
What are functions and how to use them.

**28** Functions Part 2  
More about functions and how to use them.

**29** Program Flow  
Understanding Program Flow in Python, and how functions can change that flow.

**30** Random Numbers  
How to create and use random numbers.

**31** Modules  
Using third party modules in your code, and creating your own.

**32** Getting User Input  
Allow the user to interact with your program with raw\_input and input.

**33** Opening and Closing Files  
How to open and close a file with Python.

**34** Reading and Writing Files  
How to read and write to a file with Python.

**35** Renaming and Deleting Files  
How to rename and delete a file with Python.

## Advanced Python

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**36** Overview of Classes and Object Oriented Programming  
What are classes and what are they used for.

**37** Creating a Class Part 1  
How to create a simple class.

**38** Creating a Class Part 2  
More about creating simple classes.

**39** Creating A Class Part 3  
Finishing up our tutorial on classes.

**40** Built-In Class Attributes  
What are the built-in Python class attributes?

**41** Class Inheritance  
Using other classes inside of your class.

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