

# Python for Data Science Bootcamp

Learn Python fundamentals and object-oriented programming concepts in this hands-on course.

Throughout this 5-day intensive course, you'll gain a solid understanding of Python programming, and apply your coding skills to data science.

## Course Outline

### Section 1

---

#### Introduction to Programming

- History of Computers
- Understanding Hardware
- Writing First Program ("Hello World")

#### Variables & Data Types

- Strings, Integers, Integers, Floats, Boolean, etc.
- Assigning Variables
- Operators

### Section 2

---

#### Control Flow

- Define motivation behind control flow
- If, If-Else, Elif, Switch Statements

#### Complex Data Types

- Initializing Lists
- Printing Lists
- List functions such as length, append, pop, etc.
- Introduction to Dictionaries & their structures

#### Loops

- Define the motivation behind using a loop
- For, While, Do-While, For Each loops
- Error Handling

#### Functions

- Identify when to use a function
- Syntax & Implementation
- Arguments & Return values

### Section 3

---

## Object Oriented Programming

- Introduction to O.O.P paradigm
- Introduction to Objects, Classes, Instances
- Inheritance, Abstraction, and Sets

## Section 4

---

### Advanced Python

- File Input
- User Input
- List Comprehension
- Packages

## Section 5

---

### Data Science

- Introduction to Data Science
- Review Python Fundamentals
- Understanding the data science discipline
- Pandas
- Data set reading
- Filtering, Cleaning, Manipulating Data
- Excel vs Python

### Data Visualization


- Matplotlib Package
- Understanding motivations between different graphs

### Machine Learning


- Sci-Kit Learn package
- Understand motivation and definition of machine learning

## Contact

---

 212-658-1918

 [contact@nyimtraining.com](mailto:contact@nyimtraining.com)

 [training-nyc.com](http://training-nyc.com)