# Python 3 Programming

220 Min

Python is a general-purpose interpreted, interactive, object-oriented, and high-level programming language. This course is designed for software programmers who need to learn Python programming language from scratch.

Completed

Revisit Course

TOPICS | PRE-REQUISITES

- Introduction to Python
- Installing Python
- Basic Programming in Python
- Data Types in Python
- Sequence Types in Python
- Collection and Mapping Types in Python
- Loops and Conditionals in Python
- Course Summary in Python
- Final Assessment on Basic Programming with Python 3

## Python 3 Programming - Course Overview

Python is a high-level, interpreted, interactive and object-oriented scripting language which finds its application in many areas like -

- Webscripting
- 3d Modelling (Blender)
- Desktop Applications - Games (Pygame)
- Scientific usage (SciPy/NumPy)

Python source code is available under the *GNU General Public License (GPL)*. There are two major Python versions, Python 2 and Python 3.

# Python 3 - Functions and OOPs

200 Min

This course introduces you to the various building blocks of coding in Python using functions, iterators, list comprehensions etc. You will also be learning about the OOPs implementation in Python along with how to deal with exceptions in the code.

Completed

Revisit Course

TOPICS | PRE-REQUISITES

- Python 3 - Functions and OOPs - Course Introduction
- Functions, Iterators, List Comprehensions and Generators
- Exercises using Functions
- Classes and Objects - Python
- Inheritance in Python
- Polymorphism in Python
- Abstraction and Encapsulation
- Exercises using OOPs in Python
- Handling Exceptions
- Modules and Packages
- Python 3 - Functions and OOPs - Course Summary
- Python 3 - Functions and OOPs - Final Assessment

## Python 3 - Functions and OOPs - Course Overview

Welcome to the world of Pythonista! Let's jump into course now. This course covers:

- Functions
- List Comprehensions
- Iterators and Generators
- Classes and Objects in Python
- Closures and Decorators
- Descriptors and Properties

# NumPy - Python Package for Data

Completed

Revisit Course

280 Min

Python libraries such as NumPy, SciPy, pandas, matplotlib, scikit-learn are extensively used in Data science field. This course covers the various platforms available to work on Python using these libraries. You will also learn how to handle structured data using NumPy.

TOPICS | PRE-REQUISITES

- Python Libraries for Data Science
- Anaconda - Popular Scientific Distribution
- IPython Components
- Introduction to Jupyter Notebooks
- Introduction to NumPy
- Creation of NumPy Arrays
- Array Shape Manipulation
- Basic Operations on NumPy Arrays
- Indexing, Slicing, Iterating NumPy Arrays
- NumPy Course Summary
- Python for Data Science - Final Assessment

## NumPy - Python Package for Data - Course Overview

Python is emerging as one of the favorite tools in the field of data science. With powerful data science libraries like NumPy, SciPy, pandas, matplotlib, scikit-learn and tools like IPython notebook combined with ease of programming, Python is proving to be the preferred language for organizations.

This course will introduce you to some of these libraries useful for data science. You will further take a deep dig on playing with NumPy.

# Python Pandas

Completed

Revisit Course

280 Min

Pandas is a Python library that provides utilities to deal with structured data stored in the form of rows and columns. In this course, you will be exploring the world of Pandas.

TOPICS | PRE-REQUISITES

- Introduction to Pandas
- Accessing Data from Pandas Data Structures
- Knowing Data More
- Reading and Writing Data with Pandas
- Indexing Data Frames
- Data Cleaning
- Data Aggregation
- Data Merging
- Pandas Summary
- Pandas Final Assessment

## Python Pandas - Course Overview

- Pandas is a popular Python data analysis tool.
- It provides easy to use and highly efficient data structures.
- These data structures deal with numeric or labeled data, stored in the form of tables.