

<Hello World> !!



# Python for Data Science

Python is a general-purpose programming language that is becoming ever more popular for data science. Companies worldwide are using Python to harvest insights from their data and gain a competitive edge.

[www.xaltiusacademy.com](http://www.xaltiusacademy.com)

**Start your data science  
journey with us.**

No prerequisites are required to attend this course.

**A short  
course in  
16 hours.**



## **What You'll Learn**

This basics of Python for Data Science is an introductory and beginners' course to learning and understanding the fundamentals of coding in Python, a powerful, modern, industry demanding language. Participants will learn to write programs, perform various operations, manipulate and visualize data. Participants completing this course will be prepared to take up the advanced modules.

**Learn how you can put your  
data to good use.**

# About the Course

These are the key takeaways that participants will gain:

- Understand basic operations on Python
- Understand OOP functionality in Python
- Learn about control structure and looping in Python
- Learning to code using the OOP concepts
- How to access and get data from external sources
- Working with strings and text
- Learn and code complex programs using Python Libraries
- Understand how to plot basic charts and graphs
- Learn how to scrape data from the web and source data using APIs

It's about your goals & your future!

# Course Outline

## Module 1: Python Foundation

The aim of the module is to get the participants familiar with the basics of the Python integrated development environment, the nuances of python scripting, basic operational functionalities and control structure used. This is an integral part of Python since it lays the foundation for participants to be able to code simple and complex programs.

- Basics of Python Scripting
- Data types, Operators & Functions
- Control Structure

## Module 2: Functions, Classes & File Operations

The objective of the module is to get the participants familiar with the OOP concepts within Python, working with files and strings and also with a popular tool – Jupyter. Through this the participants will learn how to work with external data sources, be it files or databases and also to write reusable codes on Jupyter and how it is useful as a presentation tool.

- Classes, Methods, Attributes
- File I/O and Operations on Files
- Regular Expressions

## Module 3: Understanding Python Libraries and Web Scraping

This module will help the participants understand three of the most important libraries in python which are required for most operations: numpy (numerical python), pandas (data manipulation) and matplotlib (data visualization). These libraries will help the participants code more complex programs and visualize data using charts and graphs. It will also cover an important concept which involves use of scrapers to source data from the www and using APIs which are a critical part of any programming language.

- Operations using Numpy and Pandas
- What Data Visualization (Matplotlib)
- Basics of Web Scraping and APIs



# Join us & launch your career in data science.

It's time to upskill for the Industry 4.0

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