COURSE SYLLABUS

# Python for Finance Immersive

In this advanced course, you will cover the major Python financial libraries to gather and manipulate financial data. You will start by working with financial APIs to fetch financial, company, and economic data. We will analyze financial statements from the SEC website, including financial ratios derived from the income statement and balance sheet. You will build risk management models using Python libraries to create VaR models and Monte Carlo simulation. We will learn how to apply statistical measures such as linear regression to financial uses such as stock prices.

Group classes (NYC) and onsite training are available for this course. For more information, email corporate@nobledesktop.com or visit: https://programwithus.com/classes/python-finance-immersive-nyc



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## Course Outline

### Introduction to Python

- Variables
- Numeric Data Types: Int & Float
- Sequential Types: Str & List
- Definite Loops: For loops
- If-Elif-Else Statements
- Data Types: Tuples
- Build Mortgage Calculator with Python

### Advanced Python

- Creating Custom Functions
- Indefinite Loops: while loops
- Data Types, Dictionary and Set
- Slicing Data Types
- Reading txt files with Python
- Analyze data from text and csv file

### Numerical Python & Pandas

- NumPy Array
- Broadcasting and U-Functions
- Introduction to Pandas
- Series, DataFrame, Panel

- Manipulate live S&P data from https://www.sectorspdr.com/sectorspdr/

### Data Manipulation

- 5 ways to create a DataFrame
- Slicing and Filtering DataFrame
- Lambda
- Run If and Else scenarios
- Gather and Manipulate Data with Pandas
- Analyze business data from csv files

### Data Extraction & Analysis

- Get live data from APIs
- Plot data with Matplotlib
- Merge and Concat Data
- Groupby in Pandas
- What if logic in Finance with Pandas