

# Python Programming & Data Science

## Course in Python Programming & Data Science

**4 Weeks. (2 Hrs. per day)****4 Weeks Online Course****Timing: - 03:00 PM to 05:00 PM**

### Objective

Through this training, student will gain knowledge in Data Analysis, Machine Learning and Data Visualization. After the course, student will master the essential tools of Data Science with Python.

B.E / B. Tech. / BCA / MCA / BSc (completed or pursuing) with Basic Knowledge of Computer Programming Language.

### Eligibility

### Prerequisite

- ✓ Candidate must have latest computer/laptop with preferably 4 GB RAM or higher and Graphics Card (2 GB)
- ✓ Software: Python (can be downloaded from respective websites)
- ✓ Internet connection with good speed (preferably 2Mbps or higher)

### Course Fees

Rs. 1800/- incl. GST& all other charges.

### Certificate

Certificate will be provided to the participants, based on minimum 75% attendance and on performance (minimum 50% marks) in the online test, conducted at the end of the course.

### Methodology

- ✓ Instructor-led live classes.
- ✓ Instructor-led hands-on lab sessions.
- ✓ Content Access through e-Learning portal.
- ✓ Assessment and Certification

### How to Apply?

- ✓ **Step-1:** Read the course structure & course requirements carefully.
- ✓ **Step-2:** Visit the Registration portal and click on apply button.
- ✓ **Step-3:** Create your login credentials and fill up all the details, see the preview and submit the form.
- ✓ **Step-4:** Login with your credentials to verify the mobile number, email ID and then upload the documents, Lock the profile and Pay the Fees online, using ATM-Debit Card / Credit Card / Internet Banking / UPI etc

### Course Content

Day	Topic	Day	Topic	Day	Topic
Day #01	Introduction to Python, Installation of Python & setting Environment Variable, Basic Types	Day #02	Introduction to Literals & Constants, Types of Literals	Day #03	Python Operators
Day #04	Python Membership Operators, Python Identity Operators, Introduction to Control Structure	Day #05	Branching Control Structure - if, else, elif statements, Looping Control Structure-while Using Else, Break & Continue with While Statement	Day #06	Looping Control Structure – for loop, Using Else, Break & Continue with for Statement, Using the range() function
Day #07	Nested Loops in Python, Manipulating String and its related function	Day #08	Python Sequence- List, Tuple, Set and its related function	Day #09	Dictionaries and its related function, Built-in Function, User Defined Function
Day #10	Function Argument Types, Required argument Keyword, Default, Arbitrary	Day #11	Python Modules, Python Packages	Day #12	NumPy Library basics, Array Type & Slicing, Aggregations Functions
Day #13	N-Dimensional Arrays, Searching, Sorting, Filtering&Fancy Indexing, Array Joing & Splitting	Day #14	Data analysis tools – Pandas, Pandas Installation, Using Pandas, Series – Creating and Accessing, Dataframe – Creating and Accessing	Day #15	Pandas–Handling Missing Values, Working with Missing Data, Iterating over Row and Items in DataFrame, Working with Text Data
Day #16	Matplotlib Installation, Its Using, Formatting the style, Plotting the graph with keyword & category	Day #17	Tkinter Introduction, Using Tkinter , Placing Widgets or Components	Day #18	Widgets in Tkinter, Tkinter Events, Binding, Complete Program using Tkinter Graphs Handling
Day #19	Data Science Concepts, Framing the problem, Data analysis and Visualizing results	Day #20	Machine Learning Basics, Types of machine learning, Training the data, Application of Machine Learning		

### Course Coordinator

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