



## Course Description

Python Programming course by RIMDEV, provides best and most relative contents required for making the participants comfortable with Python Programming Language. The main motive of the course will be to help students get started with python programming language and motivate them to gain knowledge on deeper concepts of the language.

## Key Features

### Organized Content

The contents of the course are properly organized and arranged for better understanding of the concepts and help them grasp new things faster and enhance their knowledge.

### Best Illustration

The concepts, codes and tools are well illustrated by our experts through slides and practical performance which will help the concepts to be cleared faster and solve all the doubts.

### Documented Codes

The codes demonstrated to the students will be fully documented, prepared by our team of experts.

### Certificate

Students will be provided with Course Completion Certificate along with all the Course Material.

### Internship Opportunities

After successful completion of the course, students will also receive an opportunity for gaining industry knowledge through internship with our development team.

## Course Syllabus

The contents cover all the fundamental concepts to get the participants motivated and comfortable with programming in Python.

1. Python Installation and Environment
  - a. Installing Python on Windows
  - b. Installing Python on Linux
  - c. Python Shell & IDLE
2. Getting Started
  - a. Python Basics



- b. Algorithms and Programs
    - c. Using the Text Editor
- 3. Variables and Identifiers
  - a. Name Your Identifiers
  - b. Descriptive Identifiers and Comments
  - c. Variable Types
  - d. Get Input from User
- 4. Statements, Assignments, and Expressions
- 5. Operators
  - a. Arithmetic Operators and Precedence
  - b. Relational Operators
  - c. Logical Operators
  - d. Membership Operators
- 6. Conditions
  - a. Condition if else
  - b. Condition if elif else
- 7. Loops
  - a. While Loop
  - b. For Loop
  - c. Continue and Break
  - d. Nested Loops
- 8. Methods and Functions
  - a. Functions & Functions Analogy
  - b. Methods
  - c. Lambda Expressions
  - d. Modules
- 9. Lists
  - a. List Basics
  - b. List Manipulation
  - c. List slicing
- 10. Strings
  - a. Strings Basics
  - b. Character Encoding
  - c. String Methods
- 11. Dictionaries
  - a. Dictionaries Basics
  - b. Dictionary Methods
- 12. File I/O
  - a. File IO
  - b. File Access Modes
  - c. File Position
- 13. Tuples
  - a. Tuples
  - b. Tuples in Function Returns
- 14. Formatting



- a. Formatting
  - b. Formatting Positional
  - c. Formatting Width Precision Type
  - d. Formatting Sign
- 15. More on Functions
  - a. Namespaces
  - b. Scope
  - c. Recursive Functions
- 16. Exception and Error Handling
  - a. Error Handling
  - b. Exception Handling
  - c. Finally Block
- 17. Regular Expressions in Python
  - a. Regex Library
  - b. Search Find All
  - c. Find and Replace
  - d. The Dot Meta
  - e. Carret Dollar Meta
  - f. Star Meta
  - g. Group
- 18. Object Oriented Programming
  - a. Classes, objects and attributes
  - b. Initializes
  - c. Methods and Inheritance
  - d. Special Methods
- 19. Built-in Python Functions
  - a. Map-Reduce
  - b. Filter
  - c. Zip
  - d. Enumerate
  - e. All and Any
  - f. Complex
- 20. Python Decorators
  - a. Introducing Decorators
  - b. Working with Decorators
- 21. Python Generators
  - a. Iteration v/s Generation
  - b. Creating Generators
- 22. Python Graphical User Interface with Tkinter
  - a. Hello World with GUI
  - b. Frames
  - c. Grid Layout
  - d. Auto Adjusting Widgets
  - e. Handling User Input



- f. Drop Downs
      - g. Classes
      - h. Toolbar
      - i. Status Bar
      - j. Message Box
      - k. Drawings
      - l. Building Fully functional GUI App
- 23. Data Analysis with Python
  - a. Introduction to Data Analysis
  - b. Data Analysis tools installation
  - c. Introducing Pandas
  - d. Data Frames
  - e. Manipulating Columns
  - f. Re-Indexing Data Frames
  - g. Arithmetic Operations on Data-Frames
  - h. Sorting Series and Data Frames
  - i. Loading and Analysing File Data
  - j. Advanced Indexing and Slicing
  - k. Broadcasting
  - l. Plotting Data with Matplotlib
- 24. Web Application Development with Python-Django
  - a. Installing Django
  - b. Getting Started with Django
  - c. Creating the First App
  - d. App description in Django
  - e. Creating and Working with Views
  - f. Migrations in Django
  - g. Working with Databases
  - h. Creating database tables with
  - i. Inserting data in database tables
  - j. Filtering
  - k. Django Admin Panel
  - l. Template rendering with Django
  - m. Replacing Hardcoded URL's
  - n. Django Namespaces
  - o. Working with Static Files
  - p. Creating a Navigation Bar
  - q. Base Templates
  - r. Generic Views
  - s. Working with Forms
- 25. Web Application Development with Python-Flask
  - a. Setting up Flask
  - b. Hello World with Flask
  - c. Routing



- d. Dynamic URL's
  - e. Sending data to Server
  - f. Templates
  - g. Working with Forms
  - h. Cookies
26. Web Crawling with Python
- a. Introduction to Web Crawling
  - b. Setting up the tools
  - c. Find the data on web
  - d. Adding and Deleting Links
  - e. Parsing HTML
  - f. Introduction to Spider
  - g. Creating a Spider
  - h. Crawling, Gathering and Queuing Links

## Target Audience

Python Programming course is specifically designed for programmers who want to get started with Python Programming Language.

## Who can Attend?

Attendee can be any person with basic knowledge of computers and programming.

## Duration

50 Hours (Weekend Batches).

## Certificate

Attendees will receive a course completion certificate at the end of course.

## Contact

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