NATIONAL INSTITUTE FOR TECHNICAL TRAINING AND SKILL DEVELOPMENT

राष्ट्रीय तांत्रिक प्रशिक्षण आणि कौशल्य विकास संस्थान

# Python Developer

## Course Syllabus

## Winter Internship Program

**We gurantee you that you can develop projects by your own after this internship program**

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# Python Developer

## Course Syllabus

## Module 1 - Introduction

- 1.1 Introduction to Python Language
- 1.2 Industrial Importance of Python Language
- 1.3 Features of Python Language

## Module 2 - Environment Setup

- 2.1 Getting Started with Python
- 2.2 Installing Python
- 2.3 Unix and Linux Installation in Python
- 2.4 Setting up PATH
- 2.5 Setting path at Unix / Linux.
- 2.6 Setting path at Windows

# Module 3 - Starting With Python Programs

- 3.1 Script Programming
- 3.2 Python Identifiers
- 3.3 Python Keywords
- 3.4 Python Lines and Indentation
- 3.5 Python Multi-Line Statements
- 3.6 Quotation in Python
- 3.7 Comments in Python
- 3.8 Using Blank Lines
- 3.9 Multiple Statements on a Single Line
- 3.10 Variables and Data Types in Python
- 3.11 Multiple Assignment in Python Programming
- 3.12 Standard Data Types in Python
- 3.13 Data Type Conversion in Python
- 3.14 Python Input and Output

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## Module 4 - Python Operators

- 4.1 Types of Different Operators in Python
- 4.2 Changing the Order of Evaluation

## Module 5- Conditional statements in Python Program

- 5.1 if statements
- 5.2 if...else statements
- 5.3 The elif Statement
- 5.4 Nested if statements

## Module 6 - LOOPS in Python Programming

- 6.1 While loop
- 6.2 The Infinite Loop
- 6.3 Using else Statement with Loops
- 6.4 For loop

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## Module 7 - Python Data Types

- 7.1 Standard Data Types in Pythonl
- 7.2 Data Type Conversion in Python
- 7.3 Python Input and Output
- 7.4 Types of Different Operators in Python
- 7.5 Changing the Order of Evaluation

## Module 8 - Jumping Statements in Python Programming

- 8.1 Break Keyword
- 8.2 Continue Keyword
- 8.3 Pass Keyword

## Module 9 - SETs in Python Programming

- 9.1 Introduction of SETs in Python
- 9.2 Facts about the SETs
- 9.3 Operations on the SETs

- 9.4 Inbuilt Functions in the SETs
- 9.5 Methods in the SETs

## Module 10 - LOOPS in Python Programming

- 10.1 While loop
- 10.2 The Infinite Loop
- 10.3 Using else Statement with Loops
- 10.4 For loop
- 10.5 Break , Continue , Pass

## Module 11 - Lists in Python Programming

- 11.1 Python Lists
- 11.2 Accessing Values in Lists
- 11.3 Updating Lists
- 11.4 Delete List Elements
- 11.5 Basic List Operations

- 11.6 Indexing, Slicing, and Matrixes
- 11.7 Built-in List Functions & Methods

## Module 12 -Tuples in Python Programming

- 12.1 Python Tuples
- 12.2 Accessing Values in Tuples
- 12.3 Updating Tuples
- 12.4 Delete Tuple Elements
- 12.5 Basic Tuples Operations
- 12.6 Indexing, Slicing, and Matrixes
- 12.7 No Enclosing Delimiters
- 12.8 Built-in Tuple Functions

## Module 13 -Functions in Python Programming

- 13.1 Calling a Function
- 13.2. Pass by reference Vs. value

- 13.3 Function Arguments
- 13.4 Required arguments
- 13.5 Keyword arguments
- 13.6 Default arguments
- 13.7 Variable-length arguments

## Live Projects : School Mathematics & Programmin

- 1 Design a mathematics calculator
- 2 Find the area and perimeter of a circle whose radius is ' r '
- 3 Find largest number among 3 given numbers
- 4 Find odd & Even Numbers
- 5 Find Divisible Numbers
- 6 Exam Result Design & Calculate Grades using Programming
- 7 Celsius (°C) to Fahrenheit (°F) Conversion using Maths & Programming
- 8 Game Design - Guess a number

- 9 Design Mathematical table such as 2's table , 3's table etc using Programming
- 10 Find Out GCD or HCF of 2 Numbers
- 11 Find Out LCM of 2 Numbers
- 12 Email Id Slicer
- 13 Exam Result Analyzer
- 14 Count Down Timer Application
- 15 Dice Rolling Game Design
- 16 Home Grocery Calculator Design
- 17 To find the factorial of a number
- 18 To take multiple inputs from the user, by split function method
- 19 To take multiple inputs from the user, by map function method
- 20 To take multiple inputs from the user, by multiple input function method
- 21 To implement continue statement

- 22 To implement break statement
- 23 To implement pass statement
- 24 To count the number of odd and even numbers in the list