

#Learn_from_Home

Python For Developers

Course Code : LFH/PY/01 & 02

Duration: 50 hrs

Course Syllabus

INTRODUCTION

This industry oriented course is developed by both the Software development division & Training division of **ipsr solutions limited**. IPSR is a **public limited IT company** with 20 years of expertise in [Software product development](#), [Training services](#), [Placement services](#) & [Digital Marketing services](#). During the past 2 decades, IPSR has trained candidates from **50+ countries** and helped **40000+ candidates** to build their IT career. Our IT services division is a pioneer in development of **Academic solution products**, incorporating cutting edge technologies like Artificial Intelligence, Data Analytics and Machine learning. Live industry experts from this IT division contribute a major role in delivering this course. Our placement division is having **1500+ placement tie-up companies** and we are conducting [recruitment on all days](#).

The Course curriculum is designed and developed by a team of expertise panel lead by following academicians

- ❑ **Dr. Mendus Jacob, M.Sc., M.Phil., Ph.D., MloD**
 - ❑ M.D & C.E.O - IPSR & Valin Technologies, U.K.
 - ❑ Director - MCA, Marian College, Kuttikkanam (Autonomous)
 - ❑ Former Director of School of Applicable Mathematics, M.G. University.
 - ❑ Academician and Entrepreneur with 30+ years experience
- ❑ **Dr. Sunil Job K.A, M.Sc, M.Ed, M.Phil, Ph.D., RHCE**
 - ❑ Chief of Academic Solutions - IPSR
 - ❑ Former college Principal and a Specialist in Data Analytics & Machine Learning
 - ❑ Blogger and a Resource person for National conferences
 - ❑ Academician with 25+ years experience



What you'll learn

- ✓ Download and Install Python, Python Program Structure, Conditional and Loop Constructs in Python, Sequences - List, Tuple, String, Set, Dictionary
- ✓ Functions, File Handling, OOPS, RegEx, Functional Programming
- ✓ Desktop application development using Tkinter and MySQL

Description

This course is designed for Python programmers

Course Outcome (CO)

While successfully completing this course, the learner will be able to:

- Do basic Python programming.
- Explain various sequences in Python using unique features and uses.
- Create and use different kinds of functions and modules.
- Create and manipulate files and directories
- Understand and implement OOPS concepts
- Use Regular Expressions for pattern matching
- Create and manipulate databases and tables using Sqlite and MySQL
- Develop GUI based desktop applications using Tkinter and MySQL.



What does this course give you?

Skill required to become a Python programmer.

Prerequisites : No Prerequisites Defined

Introduction to Python

- What is Python
- The application areas of Python
- Download and install Python
- Execute Python program from command prompt and using IDLE
- Save programs with .py extension and execute it from prompt

Python Basics

- Data types and variables
- Operators and operator precedence
- Data type conversions
- Data input
- Comments

Python Flow Control

- If statement
- If.. elif.. else statement
- While loop
- For loop



- Break & continue
- Else clause

Python Sequences

- String
- List
- Tuple
- Dictionary
- Set

Shallow and deep copy

Functions and modules

- What is function
- Define a function
- Pass arguments
- Arguments with default values
- Arbitrary arguments
- Local and global variables
- Return a value from function
- Mathematical functions
- Random number functions
- Mathematical constants
- Recursive functions



File Handling

- Reading & Writing
- File manipulations
- Directories

Python classes and objects

- Class definition
- Creating objects
- Constructors & Destructors
- Accessing attributes
- Build-in class attributes
- Inheritance
- Overriding
- Overloading
- Data hiding

Regular Expressions

- Match()
- Search()
- Findall()
- Modifiers
- Patterns
- Character classes



- Repetitions

Database programming

- With SQLite
 - Installing SQLite browser
 - Creating database
 - CRUD operations
 - With MySQL
 - MySql datatypes
 - CRUD operations
 - Subquery
 - Join
 - Aggregate functions
 - Procedures

Python GUI Programming with Tkinter

- Widgets
- Geometry managers / layout managers
- Variable classes
- Events and binding

Functional Programming

- Iterators
- Generators



- The lambda construct
- Comprehensions
- Map, reduce and filter

Recommended Learning Path

1. Python for Developers -----> Python Web Development using Django

Contact Us

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We have branches at Kochi, Thiruvananthapuram, Calicut and Bengaluru.