Course Name: **Advanced python 3 programming**
Course Duration: **60 hours**

Session	Title
Day 01	An Introduction to Python
	A Brief History of Python Python Versions
	Installing Python
Day 02	Environment Variables
	Executing Python from the Command Line, IDLE, Editing Python Files
Day 03	Python Documentation, Getting Help,
	Dynamic Types, Naming Conventions
Day 04	Basic Python Syntax, Basic Syntax Comments, String Values,
	String Methods, The format Method, String Operators, Numeric Data Types
	Conversion Functions, Simple Input and Output The % Method
	The print Function
Day 05	Language Components, Indenting Requirements
	The if Statement
	Relational Operators
Day 06	Logical Operators
	Bit Wise Operators
Day 07	The while Loop
	break and continue, The for Loop
Day 08	Collections Lists, Tuples Sets Dictionaries, Sorting Dictionaries
	Copying Collections
Day 09	Functions, Defining Your Own Functions, Parameters, Function Documentation,
	Keyword and Optional, Parameters, Passing Collections to a Function
	Variable Number of Arguments Scope,
Day 10	Functions - "First Class Citizens", Passing Functions to a Function
Day 11	Mapping Functions in a Dictionary, Lambda
	Inner Functions
	Closures

Day 12	Modules, Standard Modules – sys, Standard Modules - math
	Standard Modules – time, The dir Function
Day 13	Exceptions, Errors, Run Time Errors, The Exception Model
	Exception Hierarchy, Handling Multiple Exceptions raise assert
	Writing Your Own Exception Classes
Day 14	Input and Output, Data Streams, Creating Your Own Data Streams, Access Modes
	Writing Data to a File, Reading Data From a File
Day 15	Additional File Methods, Using Pipes as Data Streams, Handling IO Exceptions
Day 16	Working with Directories Metadata, The pickle Module
Day 17	Implementing Classes and Objects, Declaring and modifying objects
	Encapsulating attributes and methods in classes, Initializing objects with constructors
Day 18	Accessing and modifying attributes with methods, Overloading operators
	Inheritance and polymorphism, Reusing functionality through inheritance
	Extending methods from base classes, Overriding methods for dynamic behavior
Day 19	Tracing the scope in the namespace, Enhancing functionality with class decorators
Day 20	Writing GUIs in Python, Introduction, Components and Events
	The tk Widget, Button Widgets, Entry Widgets, Text Widgets,
	Checkbutton Widgets, Radiobutton Widgets, Listbox Widgets, Frame Widgets,
	Menu Widgets, Toplevel Widgets, Dialogs
Day 21	Python and CGI Scripts, What is CGI, HTML, HTML Forms, A Guestbook Application
	What Can Go Wrong!, HTML Tables, The CGI Script, Rendering of the Script
Day 22	The os Module , The Environment, Creating a Process, Listing Files,
	Other Process Methods, File Information (Metadata), Working with Directories
Day 23	Network Programming, Networking Fundamentals, The Client/Server Module
	The socket Module, The Client Program, The Server Program
	An Evaluation Client and Server, A Threaded Server
Day 24	What You Might Not Already Know, What is an Iterable?
	Creating Your Own Iterators, Generators, The Functions any and all

	Thread Fundamentals, Synchronization, Signals, The Python Debugger
	The with Statement, Data Compression
Day 25	Python and Databases,
	Introduction
Day 26	DBM Operations, Pickling, Pickling with Complex Objects
Day 27	Shelves, Using sqlite3
	Executing Queries
Day 28	Table Descriptions, Writing Database Scripts, Participants will learn
	Rapidly develop feature-rich applications from Python's built-in statements, functions, and collection types
	Structure code with classes, modules, and packages that leverage OO features
Day 29	Create multiple data accessory to manage various data storage formats
Day 30	Develop dynamic, platform-independent GUIs and data-driven web applications
	Project