

Tentative Schedule (22nd July to 1st August, 2026)

Online FDP on **Advanced Programming in Python**

(Timings: 3:00 PM to 7:00 PM - 4 Hrs /Day)

Quiz 1: 25th July 2026

Quiz 2: 29th July 2026

Quiz 3: 1st Aug 26

Dates	3:00-4:00PM	4:00- 5:00 PM		5:00-6:00 PM	6:00- 7:00 PM
22 July 2026 Wednesday	Inaugural Session Fundamentals of Python Basics: Features of Python, Python basic's, Data Types, Variables programming constructs , writing and Executing Python programs, Input and Output operations: formatted input() and print() function With Demo Lab Session		B R E A K	Python Core: Python Installation and Environment Setup , Implementation Tools, Operators, Operands and Expressions, Examples to build the logic, Regular expression With Demo Lab Session	
23 July 2026 Thursday	Taking Decision Control Structure: Branching and Selection Control Constructs, Implement decision-making constructs. With Demo Lab Session			Making Repetitions: Loop Control Structure: Iterative and Looping control flow constructs, Iterators, Generators and Decorators, Implement Iterative constructs With Demo Lab Session	
24 July 2026 Friday	Data Structures in Python: Lists, Tuples, ,Strings: manipulation operations, Text processing, indexing and slicing, List comprehension With Demo Lab Session			Data Structures in Python: Dictionary and Set: various operations, various related in-built-method: items(), map(), split() With Demo Lab Session	
25 July 2026 Saturday	Functions: Types, Definition and usage, block structure , Function Parameters, Built-in and User-defined functions, nested functions With Demo Lab Session			Functions: Parameter passing, Types of Arguments, , scope, user defined and Recursive function, Lambda functions, recursion With Demo Lab Session	
27 July 2026 Monday	File Management: File Handling and processing, file related operations, Error and Exception Handling: basic & multiple; Debugging With Demo Lab Session			Advanced Concepts: Modules, Package, Library: Introduction and Creation of Modules, Packages & Library, Introduction of Tkinter GUI module With Demo Lab Session	
28 July 2026 Tuesday	Object Oriented Programming (OOP) concepts: Classes and objects: creation and usage, Instance and Class Variables, attributes, methods, Constructors With Demo Lab Session			OOPs Concepts: Encapsulation, Inheritance Exploratory Data Analysis: Arrays, Numpy: for Numerical Computations With Demo Lab Session	
29 July 2026 Wednesday	Exploratory Data Visualization : Matplotlib and Seaborn: visualization and plotting library With Demo Lab Session			Data Visualization: Pandas: For data manipulations, Panel Data and Data frames ; With Demo Lab Session	
30 July 2026 Thursday	Advance Python Framework: Streamlit: building interactive web apps; Pydantic: Data Validation and Parsing library. With Demo Lab Session			Data Visualization: Plotly: interactive data visualization Exploratory Data Analysis-Case Study With Demo Lab Session	
31 July 2026 Friday	Fundamentals of Neural Networks, Machine Learning (ML) & Deep Learning (DL): Fundamentals Implementation and building models in Python With Demo Lab Session			Fundamentals of Tkinter GUI module Prompt Engineering for Programming With Demo Lab Session	
1 Aug. 2026 Saturday	Collaborative Federated Learning (FL): fundamentals and implementations using Python Advanced Python Capstone: Building End-to-End Application With Demo Lab Session			Advanced workflows: ChatGPT basics & Prompt Engineering, Integrating Generative AI (GenAI) with advanced Python, Advanced AI learning tools for Educators and Researchers With Demo Lab Session Valedictory Session	

Resource Persons: Dr. Dinesh Kumar Tyagi, Dr. Mahipal Jadeja, Dr. Satyendra Singh Chouhan , Dr. Santosh Kumar Vipparthi
 Dr. Nikunj Tahilramani , Dr. Ramesh B Battula, Dr. Arka Prokash Majumdar

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