



Indraprastha College for Women

University of Delhi

Work Plan for ODD SEMESTER – 2026

Course Name:	B.Sc. (H) CS
Paper Title:	Object Oriented Programming Using Python
Unique Paper Code:	2342011104
Semester:	I
Faculty(s):	Mr. Swayam Prakash
Year:	2026-2027

Work Plan			
Unit No.	Learning Objective	Lecture No.	Topics to be Covered
I	Learn about python, problem solving strategies and structure of a python program	1-2	Introduction to Programming- Problem Solving strategies, Structure of a Python program,
I	To learn syntax and semantics and execution of simple programs in python	3-4	Syntax and semantics, Executing simple programs in Python.
II	Learn identifier ,keyword, literals, numbers, strings, operators, expressions, I/O Statements, Defining Functions , Control Structures and default arguments	5-15	Creating Python Programs: Identifiers and keywords, Literals, numbers, and strings, Operators, Expressions, Input/output statements, Defining functions, Control structures (conditional statements, loop control statements, break, continue and pass, exit function), default arguments.

	Paper Components		
Credits	Lecture (L)	Tutorial (T)	Practical (P)

4	3	0	1
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Unit	Contents/Syllabus
I	Introduction to Programming- Problem Solving strategies, Structure of a Python program, Syntax and semantics, Executing simple programs in Python.
II	Creating Python Programs: Identifiers and keywords, Literals, numbers, and strings, Operators, Expressions, Input/output statements, Defining functions, Control structures (conditional statements, loop control statements, break, continue and pass, exit function), default arguments.
III	Built-in data structures- Mutable and immutable objects, Strings, built-in functions for string, string traversal, string operators and operations, Lists creation, traversal, slicing and splitting operations, passing list to a function, Tuples, sets, dictionaries and their operations.
IV	Object Oriented Programming- abstraction, encapsulation, objects, classes, methods, constructors, inheritance, polymorphism, static and dynamic binding, overloading, abstract classes, interfaces and packages.
V	File and exception handling-File handling through libraries; Errors and exception handling.
S. No.	Name of Authors/Books/Publishers
1.	Sheetal Taneja and Naveen Kumar , Python Programming a modular approach with graphics,database,mobile and web application, 2 nd Edition, Pearson, 2018
2.	Allen B. Downey,Think Python: How to Think Like a Computer Scientist, O'Reilly Media, 2024
3.	J.V. Guttag, Introduction to Computation and Programming Using Python: With Application to Understanding Data, MIT Press, 2016.
4.	Tony Gaddis, Starting Out with Python, Pearson, 2021.

Assessment Scheme			
S.No.	Component	Marking Scheme	Total Marks

1	Internal Assessment		30
		• Assignment/Quiz/Project/ Presentation	
		• Class Test	
		• Attendance	
2.	Continuous Assessment (Tutorial)	NA	NA
		• Activity 1	
		• Activity 2	
3.	Practical		40
		• Continuous Assessment	
		• End Term Written/Practical Exam	
		• Viva	
4.	End Semester Examination		70