



Indraprastha College for Women

University of Delhi

Course Name:	BA/BCom/BSc (SEC)
Paper Title:	Programming using Python
Unique Paper Code:	-
Semester:	I
Faculty(s):	Dr. Manoj Kumar
Year:	2026-2027

Work Plan			
Lecture No.	Unit No.	Learning Objective	Topics to be Covered
1	1	Relationship between computers and programs	Basic principles of computers
2	1	File systems	Download and Install Python(PR. Ex.)
3	1	The Python interpreter	Introduce Python interface (PR. Ex.)
4	1	binary computation	Running instructions in an Interactive interpreter and a Python Script (PR. Ex.)
5	1	Indentation Error	programming to purposefully raise and correct an Indentation Error (Pr. Ex.)
6	1	Inbuilt command	Write a program add.py that takes 2 numbers as command and Comment in Programme(Pr. Ex.)
8	1	Inbuilt command	Input / Output
9	1	Inbuilt command	Operators (unary, arithmetic, etc.)
10	2	Data and Variables	Data types with examples and Variables
11	2	Expression	Variables and expressions
12	2	Statements	Statements, Assignment

			Statements
13	2	Data and Variables	Strings and string operations
14	2	Statements and Loops	Control Structures: loops and decision, If with For, If with Do, If with while

15	3	Module	Module and Package
16	3	Function	Explain Classes, Defining functions, Functions and arguments
17	4	Error	Error processing and detection, Handling Programme file type
18	4	Object Oriented Programming	Object Oriented Programming

Unit	TOPICS
I	Relationship between computers and programs, Basic principles of computers, File systems, Using the Python interpreter, Introduction to binary computation, Input / Output
II	Operators (unary, arithmetic, etc.), Data types, variables, expressions, and statements, Assignment statements, Strings and string operations, Control Structures: loops and decision
III	Standard modules, Packages, Defining Classes, Defining functions, Functions and arguments (signature)
IV	Data Structures (array, List, Dictionary), Error processing, Exception Raising and Handling Programming types, Object Oriented Programming, Object Oriented Design, Inheritance and Polymorphism
S. No.	Name of Authors/Books/Publishers

1.	"Starting Out with Python plus My Programming Lab with Pearson eText --Access Card Package (3rd Edition) Tony Gaddis ISBN-13: 978-0133862256", 2021.
2.	Python Crash Course: A Hands-On, Project-Based Introduction to Programming (2nd Edition), 2019.
3.	Python Programming: An Introduction to Computer Science (3rd Edition) by John M. Zelle, 2013.
4.	Python Cookbook: Recipes for Mastering Python 3 (3rd Edition) by Brian Jones and David Beazley, 2013

	Paper Components		
Credits	Lecture (L)	Tutorial (T)	Practical (P)
2	0	0	2
Assessment Scheme			
S. No.	Component	Marking Scheme	Total Marks
1	Internal Assessment • Assignment/Quiz/Project/ Presentation • Class Test • Attendance		
2.	Continuous Assessment (Tutorial) • Activity 1 • Activity 2 • Attendance	20X4	80
3.	Practical • Continuous Assessment • End Term Written/Practical Exam • Viva		
4.	End Semester Examination		

