Course code	Principles of Programming	L	T	P	J	C
xxxx		3	0	0	0	3
Pre-requisite		Syllabus version				
		v. xx.xx				

Course Objectives:

- To help the students understand the fundamental concepts of programming Languages.
- To help the students understand the fundamental concepts of python programming basics.
- To learn string handling function in python programming.
- To learn different list operations in python programming.

Expected Course Outcome:

- Understand the programming constructs of various languages.
- Know and work with fundamental python programming.
- Improve the problem-solving skill using python programming.

Student Learning Outcomes (SLO):	2,5,7,9

Module:1	FUNDAMENTAL PROGRAMMING CONSTRUCTS	9 hours	SLO: 2

Basic syntax and semantics of a higher-level language, Variables, types, expressions, and assignment, Simple I/O, Conditional and iterative control structures, Functions and parameter passing

Module:2	ALGORITHMS AND PROBLEM-SOLVING	9 hours	SLO: 7, 9

Problem-solving strategies, Role of algorithms in the problem-solving process, Implementation strategies for algorithms

Module:3	INTRODUCTION TO PYTHON PROGRAMMING	9 hours	SLO: 7, 9

The concept of data types; variables, assignments; immutable variables; numerical types; arithmetic operators and expressions; comments in the program; understanding error messages; Conditions, boolean logic, logical operators; ranges; Control statements: if-else, loops (for, while);

Module:4	STRING HANDLING FUNCTION IN PYTHON PROGRAMMING	9 hours	SLO: 7, 9

Strings and text files; manipulating files and directories, os and sys modules; text files: reading/writing text and numbers from/to a file;. String manipulations: subscript operator, indexing, slicing a string; strings and number system: converting strings to numbers and vice versa.

Module:5	LIST OPERATIONS IN PYTHON PROGRAMMING	9 hours	SLO: 5

Lists, tuples, and dictionaries; basic list operators, replacing, inserting, removing an element; searching and sorting lists; dictionary literals, adding and removing keys

	Total Lecture hours:	45 hours	

Text Book(s)

1. Kenneth A. Lambert, The Fundamentals of Python: First Programs, 2011, Cengage Learning,

	ISBN: 978-1111822705.		
Reference Books			
1.	R.W. Sebasta , Concepts of Programming Languages, Fifth Edition Addison Wesley, 2002.		
2.	Jeri R. HanlyElliot B. Koffman, Problem Solving and Program Design in C, Addison-Wesley5/E.		
Mode of Evaluation:			
Recommended by Board of Studies	DD-MM-YYYY		
Approved by Academic Council	No. xx	Date	DD-MM-YYYY