United College of Engineering and Research, Prayagraj
Department of Computer Science and Engineering
Lecture Plan

Name of Course	**PYTHON PROGRAMMING**
AKTU Course Code	**(KNC-302)**
Branch	**Computer Science**
Semester	**3**
Section	**A**
Total Number of Students	**68**
Name of Faculty	**Mr. Abhishek Kesharwani**
Number of Lecture Proposed	**34**

S. No	Unit No	Topic	CO	No of Lectures Required	No of Student present	Actual Date of Completion	T L M	Signature of HOD
1	1	Python IDE Interacting with Python Programs	1	1				
2		Elements of Python Type Conversion		1				
3		Basics: Expressions Assignment Statement		1				
4		Arithmetic Operators		1				
5		Operator Precedence		1				
6		Boolean Expression		1				
No of Lectures Required to complete Unit 1				**6**		**No of Lectures Taken:**		
7	2	Conditional statement in Python if-else statement Nested-if Statement	1	1				
8		Elif statement in Python		1				
9		Expression Evaluation		1				
10		Loops While loop For Loop		1				
11		Break and Continue		1				
No of Lectures Required to complete Unit 2				**5**		**No of Lectures Taken:**		

12		Function						
13		Execution of a Function		1				
14		Keyword and Default Arguments						
15		Scope Rules.		1				
16		Strings : Length of the string						
17	3	Different string function	3	1				
18		Indexing and Slicing of Strings.		1				
19		Python Data Structure: Tuples		1				
20		Unpacking Sequences, Lists		1				
21		Mutable Sequences, List Comprehension		1				
22		Sets, Dictionaries		1				
23		Lambda Expressions		1				
No of Lectures Required to complete Unit 3				**9**	**No of Lectures Taken:**			
24		Sieve of Eratosthenes: generate prime number		2				
25		File I/O: File input and output operations in Python Programming		1				
26	4	Exceptions and Assertions	4	1				
27		Modules: Introduction, Importing Modules		1				
28		Abstract Data Types in Python		1				
29		Classes: Class definition		1				
30		other operations in the classes		1				
31		Class Example, Inheritance and OOP.		1				
No of Lectures Required to complete Unit 4				**9**	**No of Lectures Taken:**			
32		Recursive Fibonacci		1				
33		Tower of Hanoi		1				
34		Search: Linear & Binary Search		1				
35	5	Sorting & Merging: Selection Sort		1				
36		Merge List & Merge Sort		1				
No of Lectures Required to complete Unit 5				**5**	**No of Lectures Taken:**			

Teaching Learning Methods					
TLM1	Chalk and Talk	TLM4	Problem solving	TLM7	GD
TLM2	PPT	TLM5	Programming	TLM8	Case Study
TLM3	Tutorial	TLM6	Lab Demo	TLM9	Seminar

Text Books & References	
1	Allen B. Downey, ``Think Python: How to Think Like a Computer Scientist‘‘, 2nd edition, Updated for Python 3, Shroff/O‘Reilly Publishers, 2016 (http://greenteapress.com/wp/thinkpython/)
2	Guido van Rossum and Fred L. Drake Jr, ―An Introduction to Python – Revised and updated for Python 3.2, Network Theory Ltd., 2011.
3	John V Guttag, ―Introduction to Computation and Programming Using Python‘‘, Revised and expanded Edition, MIT Press , 2013
4	Robert Sedgewick, Kevin Wayne, Robert Dondero, ―Introduction to Programming in Python: An Inter-disciplinary Approach, Pearson India Education Services Pvt. Ltd., 2016.
5	Timothy A. Budd, ―Exploring Python‖, Mc-Graw Hill Education (India) Private Ltd.,, 2015.
6	Kenneth A. Lambert, ―Fundamentals of Python: First Programs‖, CENGAGE Learning, 2012.
7	Charles Dierbach, ―Introduction to Computer Science using Python: A Computational ProblemSolving Focus, Wiley India Edition, 2013.

PYTHON PROGRAMMING		
Course Outcome (CO)		Bloom’s Knowledge Level (KL)
At the end of course , the student will be able to understand		
CO 1	To read and write simple Python programs.	K_1, K_2
CO 2	To develop Python programs with conditionals and loops.	K_2, K_4
CO 3	To define Python functions and to use Python data structures –- lists, tuples, dictionaries	K_3
CO 4	To do input/output with files in Python	K_2
CO 5	To do searching ,sorting and merging in Python	K_2, K_4

Faculty Instructor **Course Coordinator** **Lecture Plan Incharge** **Programme Coordinator** **Head of Department**