Programme	**Bachelor of Technology in Computer Science and Engineering**		Year of Regulation	**2019-20**
Department	**Computer Science and Engineering**		Semester	**IV**

Course Code	Course Name					Credit Structure				Marks Distribution			
					L	T	P	C	INT	MID	END	Total
CS226	**Python Programming**				**3**	**0**	**0**	**3**	**50**	**50**	**100**	**200**

Course Objectives	To develop the student's ability to understand the principles of python programming	Course Outcomes	CO1	Able to acquire **knowledge** about the data types in Python programming
	To provide the students with fundamental concept of data types, loops, functions, files, object oriented for writing python programing.		CO2	Able to **understand** and **write** python programing using conditions, loops etc.
	To develop the student's ability to design software using Python.		CO3	Able to **understand** and **write** python programing using functions, tuples etc.
	To familiarize the student to write clear and effective python programming.		CO4	Able to **understand** and **write** python programing using modules, packages, strings etc.
			CO5	Able to **understand** and **write** python programing using object oriented concepts and files handling.
			CO6	

No.	COs	Mapping with Program Outcomes (POs)												Mapping with PSOs		
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	CO1	3	2	0	1	0	0	0	0	0	0	0	0	2	0	3
2	CO2	3	2	0	1	0	1	0	0	0	0	0	0	3	3	2
3	CO3	3	3	2	2	2	1	0	0	0	0	0	0	3	3	2
4	CO4	3	3	2	3	2	2	2	0	2	0	0	1	3	2	2
5	CO5	3	3	2	3	2	2	2	0	2	0	0	1	3	3	3
6	CO6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SYLLABUS			
No.	Content	Hours	COs
I	Introduction to Python and Computer Programming, Data Types, Variables, Basic Input-Output Operations, Basic Operators	07	CO1
II	Boolean Values, Conditional Execution, Loops, Lists and List Processing, Logical and Bitwise Operations	08	CO2
III	Functions, Tuples, Dictionaries, and Data Processing	08	CO3
IV	Modules, Packages, String and List Methods, and Exceptions	08	CO4
V	The Object-Oriented Approach: Classes, Methods, Objects, and the Standard Objective Features; Exception Handling, and Working with Files	09	CO5
	Total Hours	40	

Essential Readings

1. Mark Lutz," Programming Python", Prentice Hall India, 7th Edition, 2017

2. Allen Downey, "Think Python", O'Reilly Media, 1st Edition, 2012

3. Marl Pilgrim, "Dive into Python", APress Media LLC, 1st Edition, 2005

Supplementary Readings

1. Mark Lutz, "Learning Python", McGraw-Hill publication, 2nd Edition, 2010

2. Luciano Ramalho, "Fluent Python", O'Reilly Media, 1st Edition, 2015

3. Brett Slatkin , "Effective Python: 59 Specific Ways to Write Better Python", Pearson Education, Inc, 1st Edition 2015