BCSE101E	Computer Programming: Python	L	Т	Р	С
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Pre-requisite	NIL S	Syllab		ersi	on
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Course Objecti					
	posure to basic problem-solving techniques using compute				
	he art of logical thinking abilities and propose novel solution	s for r	eal v	vorlo	1
problems through	h programming language constructs.				
Course Outcon					
•	ous algorithmic approaches, categorize the appropriate da	ta repr	eser	ntatio	on
	trate various control constructs.	_1_		c:ı	
	propriate programming paradigms, interpret and handle d				
•	ution through reusable modules; idealize the importance	of mo	odule	es a	ınc
packages.					
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	oduction to Problem Solving			1 hc	
	g: Definition and Steps, Problem Analysis Chart, Develop	ing an	Aig	oritn	ım
Flowchart and F				<b>b</b> a :	
	hon Programming Fundamentals  bython – Interactive and Script Mode – Indentation – Comr			hou	ırs
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## Text Book(s)

1. Eric Matthes, Python Crash Course: A Hands-On, Project-Based Introduction to Programming, 2nd Edition, No starch Press, 2019

## Reference Books

- 1. Martic C Brown, Python: The Complete Reference, 4th Edition, McGraw Hill Publishers, 2018.
- 2. John V. Guttag, Introduction to computation and programming using python: with applications to understanding data. 2nd Edition, MIT Press, 2016.

Mo	Mode of Evaluation: Written assignments and Quiz.								
Indicative Experiments									
1.	Problem Analysis Chart, Flowchart and Pseudocode Practices.								
2.	Sequential Constructs using Python Operators, Expressions.								
3.	Branching (if, if-else, nested if, multi-way if-elif statements) and Looping (for, while,								
	nested								
	looping, break, continue, else in loops).								
4.	List, Tuples, Dictionaries & Sets.								
5.	Strings, Regular Expressions.								
6.	Functions, Lambda, Recursive Functions and Files.								
7.	7. Modules and Packages (NumPy and Pandas)								
	Total Laboratory Hours 60 hours								
Text Book(s)									
1.	1. Mariano Anaya, Clean Code in Python: Develop maintainable and efficient code, 2 <sup>nd</sup>								
	Edition, Packt Publishing Limited, 2021.								
Reference Books									
1.	<u>, , , , , , , , , , , , , , , , , , , </u>								
	Mode of assessment: Continuous assessments and FAT								
	Recommended by Board of Studies 03.07.2021								
App	proved by Academic Council	No. 63	Date	23.09.2	.2021				