

# PRASAD V. POTLURI SIDDHARTHA INSTITUTE OF TECHNOLOGY

(Autonomous)

KANURU, VIJAYAWADA-520007

## I B.Tech – II Sem CSE (AI&ML) PYTHON PROGRAMMING LAB

<b>Course Code</b>	20ES1255	<b>Year</b>	I	<b>Semester</b>	II
<b>Course Category</b>	Engineering Sciences Lab	<b>Branch</b>	CSE (AI&ML)	<b>Course Type</b>	Practical
<b>Credits</b>	1.5	<b>L-T-P</b>	0-0-3	<b>Prerequisites</b>	-
<b>Continuous Internal Evaluation :</b>	15	<b>Semester End Evaluation:</b>	35	<b>Total Marks:</b>	50

Course Outcomes		
Upon successful completion of the course, the student will be able to		
<b>CO1</b>	Apply knowledge of Python constructs for developing programs/applications.	<b>L3</b>
<b>CO2</b>	Conduct experiments as an individual or team member by using different IDEs/ online platforms of Python programming.	<b>L3</b>
<b>CO3</b>	Develop an effective report based on various programs implemented.	<b>L3</b>
<b>CO4</b>	Apply technical knowledge for a given problem and express it with effective oral communication.	<b>L3</b>
<b>CO5</b>	Analyze outputs using given constraints/test cases.	<b>L4</b>

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:High, 2: Medium, 1:Low)														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
<b>CO1</b>	3													
<b>CO2</b>					2				1					
<b>CO3</b>										2				
<b>CO4</b>	2									1				
<b>CO5</b>		2										1		

<b>Syllabus</b>		
<b>Expt. No.</b>	<b>Contents</b>	<b>Mapped CO's</b>
1	Explore Python IDE.	<b>CO1,CO2,CO3,CO4,CO5</b>
2	Apply Python programming basic constructs for developing the programs.	<b>CO1,CO2,CO3,CO4,CO5</b>
3	Python Programs to demonstrate decision-making and branching (Selection)	<b>CO1,CO2,CO3,CO4,CO5</b>
4	Python programs to demonstrate iterative statements.	<b>CO1,CO2,CO3,CO4,CO5</b>
5	Python programs to demonstrate functions	<b>CO1,CO2,CO3,CO4,CO5</b>
6	Python programs to perform operations on strings with built-in functions.	<b>CO1,CO2,CO3,CO4,CO5</b>
7	Python programs to perform operations on regular expressions with built-in functions.	<b>CO1,CO2,CO3,CO4,CO5</b>
8	Python programs to apply various structures (Lists, Tuple and Dictionaries) for developing the programs.	<b>CO1,CO2,CO3,CO4,CO5</b>
9	Installation of different packages.	<b>CO1,CO2,CO3,CO4,CO5</b>
10	Explore the NumPy package	<b>CO1,CO2,CO3,CO4,CO5</b>
11	Explore the Pandas package	<b>CO1,CO2,CO3,CO4,CO5</b>
12	Use Case-1	<b>CO1,CO2,CO3,CO4,CO5</b>
13	Use Case-2	<b>CO1,CO2,CO3,CO4,CO5</b>
14	Use Case-3	<b>CO1,CO2,CO3,CO4,CO5</b>

<b>Learning Resources</b>
<b>Text Books</b>
1. Python Programming: Using Problem Solving Approach, ReemaThareja, 2017, Oxford University Press.
<b>References</b>
1. Core Python Programming, R. NageswaraRao, 2018, Dreamtech press.
2. Programming with python, T R Padmanabhan, 2017, Springer.
<b>e-Resources &amp; other digital material</b>
1. <a href="https://nptel.ac.in/courses/106106182">https://nptel.ac.in/courses/106106182</a>
2. <a href="https://www.w3schools.com/python/default.asp">https://www.w3schools.com/python/default.asp</a>