

GANPAT UNIVERSITY									
FACULTY OF ENGINEERING & TECHNOLOGY									
Programme		Diploma Engineering				Branch		COMPUTER ENGINEERING	
Semester		V				Version		1.0.0.0	
Effective from Academic Year			2020-21			Effective for the batch Admitted in			JULY-2018
Subject code		1IT2502		Subject Name		Python Programming			
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	0	0	2	0	2	Theory	0	0	0
Hours	0	0	4	0	4	Practical	60	40	100

Pre-requisites:
Basic knowledge of Programming

Course Learning Outcomes:
<p>T1 Describe the core syntax and semantics of Python programming language.</p> <p>T2 Students must be able to understand and write basic python program.</p> <p>T3 Apply a solution clearly and accurately in a program using Python.</p> <p>T4 Apply the best features of mathematics, engineering and natural sciences to program real life problems</p>

Name of UNIT	Unit Content
UNIT – 1 INTRODUCTION TO PYTHON	1.1 Difference between Program and programming 1.3 Difference between Error and Bug. 1.4 Working of Python. 1.5 Python Installation (Anaconda IDE).
UNIT – 2 Basic Python Programming	2.1 Introduction to Data Types <ul style="list-style-type: none"> str, int, list, tuple. 2.2 Declaring Variables. 2.3 Output and Input. 2.4 Arithmetic operations. <ul style="list-style-type: none"> **, //, +=
UNIT – 3 Conditional Statements	3.1 logical operators <ul style="list-style-type: none"> AND, OR, NOT. 3.2 Conditional Statement. 3.3 If Statement, If Else statement. 3.4 Comprehension statement (multiple conditions). 3.5 lambda function
UNIT – 4 Loops	4.1 For Loop variable. 4.2 Range Function. 4.3 While Loop.
UNIT – 5 List and String	5.1 String and List Declaration (Empty, Static) 5.2 Iterating, concatenating String and List <ul style="list-style-type: none"> Multiplying a character

	5.3 Inbuilt Functions and Methods <ul style="list-style-type: none"> ● Inbuilt list Function: len, sum, min max ● Inbuilt list methods: append, count, reverse, pop, remove, insert ● Inbuilt String Methods: len, lower, upper, title, count
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List of Practical	
No.	Name of Practical
1	Python installation.
2	Print Hello World Program.
3	To print datatype of any variable.
4	To use multiple 'print' without going to new line.
5	Getting input form user and display it.
6	To convert Fahrenheit to Celsius and vise-versa
7	To generate a random number between two numbers
8	To build a calculator for basic arithmetic operations
9	Write a program to implement lambda function.
10	To count the number of even odd between two numbers
11	To check whether the password (only numbers) is correct or not and to print the error message.
12	To Print Fibonacci series using loop
13	Addition of 1 to 100 using for loops and with formula
14	To print square of 1 to 100 using while loop
15	To check weather alphabet is vowel or consonant
16	Write a program to Reverse the input string.
17	To print any given pattern. e.g * ** *** ****
18	Write any four programs to implement inbuilt list function.
19	Write any six programs to implement inbuilt list methods.
20	Write any four programs to implement inbuilt string function.

List of Textbooks			
No	Title of TextBooks	Authors	Publication
1	A practical introduction to python programming	Brian Heinold	Department of mathematics and computer science Mt.St. Mary's University
2	Practical Programming 2 nd edition	Paul Gries, Jennifer Campbell	The Pragmatic Bookshelf
3	Programming in Python 3	Mark Summerfield	Addison-Wesley

Link of Learning Web Resource	
1	www.w3schools.com