



Swarnandhra College of Engineering & Technology

Autonomous and recognized under 2(F) and 12(B) by UGC

Recognized by AICTE, permanently affiliated to JNTUK Kakinada

Accredited by NAAC with 'A' Grade (2nd Cycle)

Seetharamapuram, Narsapur – 530280 (Andhra Pradesh)

DEPARTMENT OF INFORMATION TECHNOLOGY

TEACHING PLAN

Course Code	Course Title	Semester	Branch	Contact Periods/Week	Academic Year	Date of commencement
23IT3S01	Python programming	III	IT-A	3	2025-26	14-07-2025

COURSE OUTCOMES

1	Introduce core programming concepts of python programming language.
2	Demonstrate about python data structures like lists, tuples, sets and dictionaries.
3	Implement functions, modules and regular expressions in python programming and to create practical and contemporary applications using these.

Experiment Number	Experiment	Contact Hours
1	Write a program to find the largest element among three numbers.	3
2	Write a program to display all prime numbers within an interval.	
3	Write a program to swap two numbers without using a temporary variable.	
4	Demonstrate the following operators in python with suitable examples. 1.Arithmetic operators 2.Relational operators 3.Assignment operators 4.Logical operators 5.Bitwise operators 6.Ternary operator 7.membership operator 8.Identity operators.	3
5	Write a program to add and multiply complex numbers.	3



Swarnandhra College of Engineering & Technology

Autonomous and recognized under 2(F) and 12(B) by UGC

Recognized by AICTE, permanently affiliated to JNTUK Kakinada

Accredited by NAAC with 'A' Grade (2nd Cycle)

Seetharamapuram, Narsapur – 530280 (Andhra Pradesh)

6	Write a program to print multiplication table of a given number.	3
7	Write a program to define a function with multiple return values.	
8	Write a program to define a function using default arguments.	
9	Write a program to find the length of the string without using any library functions.	3
10	Write a program to check if the substring is present in a given string or not.	
11	Write a program to perform the given operations on a list: 1.addition 2.insertion 3.slicing	
12	Write a program to perform any 5 built-in functions by taking any list.	
13	Write a program to create tuples (name,age,address,college) for at least two members and concatenate the tuples and print the concatenated tuples.	3
14	Write a program to count the number of vowels in a string (No control flow allowed).	
15	Write a program to check if a given key exists in a dictionary or not.	3
16	write a program to add a new key-value pair to an existing dictionary.	
17	Write a program to sum all the items in a given dictionary.	
18	Write a program to sort words in a file and put them in another file.the output file should have only lower-case words,so any upper-case words from source must be lowered.	
19	Python program to print each line of a file in reverse order.	3



Swarnandhra College of Engineering & Technology

Autonomous and recognized under 2(F) and 12(B) by UGC

Recognized by AICTE, permanently affiliated to JNTUK, Kakina

Accredited by NAAC with 'A' Grade (2nd Cycle)

Seetharamapuram, Narsapur – 530280 (Andhra Pradesh)

20	python program to compute the number of characters, words and lines in a file.	3
21	Write a program to create, display, append, insert and reverse the order of the items in the array.	
22	Write a program to add, transpose and multiply two matrices.	
23	Write a python program to create a class that represents a shape. include methods to calculate its area and perimeter. implement subclasses for different shapes like circle, triangle, square	3
24	Python program to check whether a JSON string contains complex object or not.	
25	Python program to demonstrate Numpy arrays creation using array() function.	
26	Python program to demonstrate use of ndim, shape, size, dtype.	3
27	Python program to demonstrate basic slicing, integer and Boolean indexing.	
28	Python program to find min, max, sum, cumulative sum of array.	3
29	Create a dictionary with at least five keys and each key represent value as a list where this list contains at least ten values and convert this dictionary as a pandas data frame and explore the data through the data frame as follows: A. Apply head() function to the pandas data frame. B. Perform various data selection operations on data frame.	
30	Select any two columns from the above data frame, and observe the change in one attribute with respect to other attribute with scatter and plot operations in matplotlib.	3



Swarnandhra College of Engineering & Technology

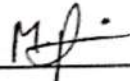
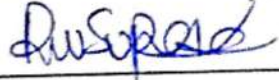
Autonomous and recognized under 2(F) and 12(B) by UGC

Recognized by AICTE, permanently affiliated to JNTUK Kakinada

Accredited by NAAC with 'A' Grade (2nd Cycle)

Seetharamapuram, Narsapur – 530280 (Andhra Pradesh)

	Cumulative Proposed Periods	44
--	-----------------------------	----

		Name	Signature with Date
i	Faculty	Mrs.M Pavani	
ii	Module Coordinator	Mr. ASNV Bhogesh	
iii	Programme Coordinator	Dr.RVVSV Prasad	


Principal