Lesson Plan

Name of the faculty: **Ms. SHALU**

Discipline: **Computer Science**

Semester: **5th**

Subject: **Computer Programming using Python Lesson Plan Duration: 16 weeks**

WORK LOAD (LECTURE/ PRACTICAL) : LECTURES -3 , PRACTICALS -6

Week	Theory		Practical	
	Lecture Day	Topic (including assignment / test)	Practical Day	Topic
1st	1	Brief History of Python Python Versions	1-3	Getting started with Python and IDLE in interactive and batch modes
	2	Installing Python Environment Variables Executing Python from the Command Line IDLE	1-3	Implementation of string methods Lower Count Replace
	3	Editing Python Files Python Documentation		
2nd	1	Getting Help Dynamic Types Python Reserved Words	1-3	Create a string containing at least five words and store it in a variable. Print out the string. Convert the string to a list of words using the string split method.
	2	Naming Conventions Basic Syntax Comments String Value	1-3	Sort the list into reverse alphabetical order using some of the list methods (you might need to use dir(list) or help(list) to find appropriate methods).
	3	String Methods The format Method String Operators Numeric Data Types		
3rd	1	Conversion Functions Simple Output Simple Input The % Method	1-3	Print out the sorted, reversed list of words.

	2	The % Method The print Function Indenting Requirements The if Statement	1-3	Write a program that determines whether the number is prime.
	3	Relational and Logical Operators Bit Wise Operators		
4th	1	The while Loop Break and continue	1-3	Find all numbers which are multiple of 17, but not the multiple of 5, between 2000 and 2500?

	2	The for Loop Introduction Lists Tuples	1-3	Swap two integer numbers using a temporary variable. Repeat the exercise using the code format: a, b = b, a. Verify your results in both the cases.
	3	Sets Dictionaries Sorting Dictionaries Copying Collections Summary		
5th	1	Introduction Defining Your Own Functions Parameters	1-3	Programming exercises on formatting input/output using printf and scanf and their return type values
	2	Function Documentation Keyword and Optional Parameters	1-3	Programming exercises on formatting input/output using printf and scanf and their return type values
	3	Passing Collections to a Function Variable Number of Arguments Scope Functions - "First Class Citizens"		
6th	1	Passing Functions to a Function map filter	1-3	Find the largest of n numbers, using a user defined function largest().
	2	Mapping Functions in a Dictionary Lambda Inner Functions Closures	1-3	Write a function myReverse() which receives a string as an input and returns the reverse of the string.
	3	Modules Standard Modules - sys Standard Modules - math		
7th	1	Standard Modules - time The dir Function Exceptions Errors Runtime Errors	1-3	. Check if a given string is palindrome or not.

	2		1-3	WAP to convert Celsius to Fahrenheit .
	3	Copying Collections		
8th	1	Summary	1-3	Find the ASCII value of charades
	2	Functions Introduction	1-3	WAP for simple calculator
	3	Variable Number of Arguments Scope Functions - "First Class Citizens" Passing Functions to a Function		
9th	1	Function Documentation Keyword and Optional Parameters	1-3	WAP to convert Celsius to Fahrenheit
	2	Passing Collections to a Function	1-3	Implementation of string methods Lower Count Replace
	3			
10th	1	Filter Mapping Functions in a Dictionary	1-3	Sort the list into reverse alphabetical order using some of the list methods (you might need to use dir(list) or help(list) to find appropriate methods).

	2	Modules Standard Modules - sys	1-3	Write a program that determines whether the number is prime.
	3	Standard Modules - math Standard Modules - time The dir Function		
11th	1	Exceptions Errors	1-3	Write a program that determines whether the number is prime.
	2	Runtime Errors The Exception Model Exception Hierarchy	1-3	Find all numbers which are multiple of 17, but not the multiple of 5, between 2000 and 2500?
	3	Handling Multiple Exceptions Raise Assert		
12th	1	Input and Output Introduction Data Streams Creating Your Own Data Streams	1-3	Swap two integer numbers using a temporary variable. Repeat the exercise using the code format: a, b = b, a. Verify your results in both the cases.
	2	Access Modes Writing Data to a File Reading Data From a File	1-3	Find the largest of n numbers, using a user defined function largest().
	3	Additional File Methods Using Pipes as Data Streams Handling IO Exceptions		
13th	1	Classes in Python Principles of Object Orientation Creating Classes	1-3	Write a function myReverse() which receives a string as an input and returns the reverse of the string.
	2	Instance Methods File Organization Special Methods	1-3	Check if a given string is palindrome or not.
	3	Inheritance Polymorphism		

14th	1	Regular Expressions Introduction	1-3	Check if a given string is palindrome or not.
	2	Simple Character Matches Special Characters Character Classes	1-3	Check if a given string is palindrome or not.
	3	Quantifiers The Dot Character Greedy Matches		
15th	1	Grouping Matching at Beginning or End Match Objects	1-3	WAP to convert Celsius to Fahrenheit
	2	Substituting Splitting a String Compiling Regular Expressions Flags	1-3	WAP to convert Celsius to Fahrenheit
	3	Revision of Unit		
16th	1	Students doubt session and class test	1-3	Revision
	2	Revision of syllabus	1-3	Revision
	3	Revision of syllabus		