LESSON PLAN

**NAME OF THE FACULTY:** Asha Kumari **DISCIPLINE :** CSE

**SEMESTER :** 5TH

**SUBJECT** **:**- Computer Programming Using Python **Lesson Plan Duration**: - 15 weeks

\*\*Work Load (Lecture/Practical) per week (In hours): Lecture 03, Practical -06

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| **Week** | **Theory** | **Practical** |
| **Lecture Day** | **Topic (including assignment/test)**  | **Practical W eek** | **Topic** |
| 1st | 1st | Unit 1: Introduction: Brief History of Python, Python Versions, Installing Python, EnvironmentVariables | 1st | 1. Getting started with Python and IDLE in interactive and batch modes
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| 2nd | Executing Python from the CommandLine, IDLE, Editing Python, Files, Python Documentation |
| 3rd | Getting Help, Dynamic, Types, Python Reserved Words, Naming Conventions |
| 2nd | 4th | Unit 2: Basic Python Syntax:Syntax, Comments, String Values, String Methods  | 2nd |  2. What do the following string methods do?* + lower
	+ count
	+ replace
 |
| 5th | The format Method, String operators, Numeric Data Types, Conversion Functions |
| 6th | Simple Output, Simple Input, The % Method, The print Function |
| 3rd | 7th | Unit 3: Language Components: Indenting Requirements, The if Statement | 3rd | 3. Write instructions to perform each of the steps below1. Create a string containing at least five words and store it in a variable.
2. Print out the string.
3. Convert the string to a list of words using the string split method.
4. 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).
5. Print out the sorted, reversed list of words
 |
| 8th | Relational and Logical Operators, Bit Wise Operators |
| 9th | The while Loop |
| 4th | 10th | Break and continue | 4th | 1. Write a program that determines whether the number is prime? What is your favorite number? 24

24 is not prime |
| 11th | For Loop |
| 12th | Introduction |
| 5th | 13th | Unit 4: Collections: Introduction, Lists | 5th | 5. Find all numbers which are multiple of 17, but not the multiple of 5, between 2000 and 2500. |
| 14th | Tuples |
| 15th | Sets |
| 6th | 16th | Dictionaries | 6th | 6.Swap two integer numbers using a temporary variable.Repeat the exercise using the code format:a,b=b.a.Verify your results in both cases  |
| 17th | Sorting Dictionaries |
| 18th | Copying Collections, Summary |
| 7th | 19th | Unit 5: Functions: Introduction, Defining Your Own Functions, Parameters | 7th | 7.Find the largest of n numbers, using a user defined function largest(). |
| 20th | Function Documentation, Keyword and Optional Parameters |
| 21st | Passing Collections to a Function |
| 8th | 22nd | Variable Number of Arguments, Scope | 8th | 8.Write a function myReverse()which receives a string as an input and returns the reverse of the string. |
| 23rd | Functions - "First Class citizens", Passing Functions to a Function, map |
| 24th | Filter, Mapping Functions in a Dictionary |
| 9th | 25th | Lambda, Inner Functions, Closures | 9th | 9.Check if a given string ispalindrome or not |
| 26th | Unit 6: Modules: Modules, Standard Modules – sys, Standard Modules - math |
| 27th | Standard Modules – time, The dir Function |
| 10th | 28th | Unit 7: Exceptions: Errors, Runtime Errors | 10th | 10. Check if a given string is palindrome or not. |
| 29th | The Exception Model, Exception Hierarchy |
| 30th | Handling Multiple Exceptions, Raise, Assert |
| 11th | 31st | Unit 8: Input and Output: Introduction, Data Streams | 11th | 11.WAP to convert Celsius to Fahrenheit |
| 32nd | Creating Your Own DataStreams, Access Modes, Writing Data to a File |
| 33rd | Reading Data from a File, AdditionalFile Methods, Using Pipes as Data Streams, Handling IO Exceptions |
| 12th | 34th | Unit 9: Classes in Python: Classes in Python, Principles of Object Orientation | 12th | 12. Find the ASCII value ofcharades |
| 35th | Creating Classes |
| 36th | Instance Methods |
| 13th | 37th | File Organization | 13th | 13.WAP for simple calculator |
| 38th | Special Methods |
| 39th | Class Variables |
| 14th | 40th | Inheritance | 14th | Revision of Practicals |
| 41st | Polymorphism |
| 42nd | Unit 10: Regular Expressions: Introduction, Simple CharacterMatches, Special characters, Character Classes |
| 15th | 43rd | Quantifiers, The Dot Character, Greedy Matches | 15th | VIVA-VOCE |
| 44th | Grouping, Matching at Beginning or End, Match Objects, Substituting |
|  | 45th | Splitting a String, Compiling Regular, Expressions, Flags |  |  |