Lesson Plan

Subject	Programming Essentials (66631)	Time
class-1	Basics of Programming 1.1. State Computer Program and Programming 1.2. Explain Programming Language and its classification. 1.3. State Generation of Programming Languages.	45 min.
class-2	1.4. Describe Translator Program. 1.5. Uses of Computer Programs 1.6. Describe Algorithm and Flowchart.	45 min.
class-3	1.7. Prepare Algorithm and Flowchart for simple problems. 1.8. Explain the Process of Program Planning.	45 min.
class-4	BASICS OF PYTHON 2.1. Describe the History of Python. 2.2. Explain the features of Python.	45 min.
class-5	2.3. Describe the Structure of Python Program 2.4. State Identifiers and Keywords	45 min.
class-6	2.5. State Lines , Indentation, Multi-Line Statements and Multiple Statements on a Single Line	45 min.
class-7	2.6. State Quotation and Comments in Python 2.7. State Command Line Arguments	45 min.

class-8	VARIABLE AND DATA TYPES 3.1. Assigning Values to Variables 3.2. State Multiple Assignment	45 min.
class-9	3.3. Describe StandardData Types 3.4. Explain Data Type Conversion	45 min.
class-10	STRINGS 4.1. State Accessing Values in Strings and Updating Strings 4.2. Uses of Escape Characters	90 min.
class-11	4.3. Explain String Special Operators and String Formatting Operator	90 min.
class-12	4.4. Describe Triple Quotes and Unicode String 4.5. Write Simple programs using strings.	90 min.
class-13	PYTHON OPERATORS 5.1. State Operators and their types. 5.2. Describe Arithmetic Operators, Comparison Operators and Logical Operators	90 min.
Day-14	5.3. State Assignment Operators, Bitwise Operators and Membership Operators Identity Operators 5.4. Explain Operators Precedence	90 min.
class-15	DECISION MAKING 6.1. Describe the conditional and unconditional branching flow. 6.2.Explain If Statement and If…else Statement	45 min.
class-16	6.3. State the nested if Statement 6.4. Write simple program using if, if…else and nested if.	45 min.

class-17	LOOPS 7.1. Describe the conditional and unconditional Looping flow. 7.2. State For Loop 7.3. State While Loop	45 min.
class-18	7.4. Explain The Infinite Loop and Nested Loops 7.5. State Break ,Continue and pass Statement	45 min.
class-19	7.6. Write simple program using for and while loop	90 min.
class-20	LISTS 8.1. Define Lists and its type. 8.2. Assigning Values in Lists 8.3. Explain Updating and Deleting List Elements	90 min.
class-21	8.4. State Basic List Operations 8.5. Explain Built-in List Functions and Methods	90 min.
class-22	8.6. Write simple program using Lists.	90 min.
class-23	**class test**	90 min.
class-24	TUPLES 9.1. Assigning Values in Tuples 9.2. Explain Updating and Deleting Tuple Elements 9.3. Describe Basic Tuples Operations	45 min.
class-25	9.4. State No Enclosing Delimiters:	45 min.

class-26	9.5. Explain Built-in Tuple Functions 9.6. Write simple program using Tuples.	90 min.
class-27	FUNCTIONS 10.1. Defining a Function 10.2. State Calling a Function	90 min.
class-27	10.3. Explain Passing by Reference Versus Passing by Value 10.4. Describe Function Arguments	**90 mins**
class-27	10.5. Uses of Date and Time Functions. 10.6. Write simple program using functions.	**90 mins**
class-27	FILES I/O 11.1. Printing to the Screen 11.2. Reading Keyboard Input	**90 mins**
class-27	11.3. Uses of input Function 11.4. Describe Opening and Closing Files	**90 mins**
class-27	11.5. Explain Reading and Writing Files	**90 mins**
Class -28	class test	90 min.
Class -29	**Perform skill to create, compile, debug & execute programs to solve specific problems.** **1. Simple programs using basic structure of a programming Language (Python).** 1.1. A program for printing a message. 1.2. A program for adding two integer numbers.	90 min.

Class -30	**1. Simple programs using variables** 2.1. A program to calculate the average of a set of N numbers. 2.2. A program to convert the given temperature in Fahrenheit to Celsius andvice versa. 2.3. A program to calculate the area of a circle. 2.4. Write similar programs using variables.	90 min
Class -31	**1. programs using operators** 3.1. A program to convert days to months and days. 3.2. A program to calculate the area of a triangle. **3.3.** A program to compare two integer numbers. 3.4.Write similar programs using operators.	90 min
Class -32	**1. Programs using Branching Statements.** 4.1. A program to select and print the largest of the three numbers. 4.2. A program to compute the roots of a quadratic equation. 4.3.Write similar programs using Branching Statements.	90 min
Class -33	**1. Programs using Looping Statements** 5.1. A program to print odd or even numbers from 1 to 100.	90 min
Class -34	5.2. A program to find the maximum or minimum number from a set of numbers	90 min
Class -35	5.3. A program for searching prime numbers.	90 min
Class -36	5.4.Write similar programs using Loop Statements.	90 min
Class -37	**1. Programs using Lists.** 6.1. A program to sort numbers in ascending or descending order using onedimensional array.	90 min
Class -38	6.2. A program to print numbers in two dimensional forms. 6.3.Write similar programs using Lists.	90 min

Class -39	**1. Programs using functions.** 7.1.A program to calculate the area of a triangle using function.	90 min
Class -40	7.2.A program that uses a function to sort an array of integers.	90 min
Class -41	7.3.A program to calculate factorial of any integer using recursive function.	90 min
Class -42	7.4.Write similar programs using functions.	90 min
Class -43	**1.Programs using files.** 8.1. A program to store information to or to read information from file.	90 min
Class -44	8.2. Write similar programs using files.	90 min
Class -45	Model Test	90 min

Reference books:

1. Learning Python – Mark Lutz

2. Website List:

http:// python.howtocode.com.bd

http:// www.learnpython.org

http://pythontutor.com

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