

# PNS SCHOOL OF ENGG. & TECH., MARSHAGHAI

## DEPARTMENT OF COMPUTER SCIENCE ENGINEERING LESSON PLAN

<b>BRANCH : CSE</b>	<b>SEMESTER : 5TH</b>	<b>NAME OF THE TEACHING FACULTY : MR. BISWARANJAN SWAIN</b>
<b>SUBJECT : PYTHON PROGRAMMING</b>	<b>NO. OF DAYS PER WEEK CLASS ALLOTTED : 02</b>	<b>SEMESTER FROM DATE: 14.07.2025 TO 15.11.2025</b>
<b>WEEK</b>	<b>CLASS DAY</b>	<b>LAB TOPICS</b>
<b>1<sup>ST</sup></b>	<b>1<sup>st</sup></b>	Introduction Brief History of Python, Python Versions, Installing Python Environment Variables, Executing Python from the
	<b>2<sup>nd</sup></b>	Editing Python Files, Python Documentation, Getting Help Dynamic Types, Python Reserved Words, Naming
<b>2<sup>ND</sup></b>	<b>1<sup>st</sup></b>	Basic Python Syntax Basic Syntax, Comments, String Values, String Methods The format Method
	<b>2<sup>nd</sup></b>	String Operators, Numeric Data Types, Conversion Functions Simple Output, Simple Input, The % Method, The print
<b>3<sup>RD</sup></b>	<b>1<sup>st</sup></b>	Language Components Indenting Requirements, The if Statement, Relational and Logical Operators, Bit Wise Operators, The while Loop
	<b>2<sup>nd</sup></b>	Collections Introduction, Lists, Tuples, Sets, Dictionaries, Sorting, Dictionaries, Copying Collections, Summary
<b>4<sup>TH</sup></b>	<b>1<sup>st</sup></b>	Functions Introduction, Defining Your Own Functions, Parameters Function Documentation, Keyword and Optional Parameters
	<b>2<sup>nd</sup></b>	Functions - "First Class Citizens", Passing Functions to a Function, map, filter, Mapping Functions in a Dictionary
<b>5<sup>TH</sup></b>	<b>1<sup>st</sup></b>	Modules Modules, Standard Modules - sys, Standard Modules - math
	<b>2<sup>nd</sup></b>	Exceptions Errors, Runtime Errors, The Exception Model, Exception Hierarchy, Handling Multiple Exceptions,
<b>6<sup>TH</sup></b>	<b>1<sup>st</sup></b>	Input and Output Introduction, Data Streams, Creating Your Own Data Streams, Access Modes

6 <sup>TH</sup>	2 <sup>nd</sup>	Writing Data to a File, Reading Data From a File, Additional File Methods, Using Pipes as Data Streams, Handling IO Exceptions
7 <sup>TH</sup>	1 <sup>st</sup>	Classes in Python Classes in Python, Principles of Object Orientation Creating Classes, Instance Methods
	2 <sup>nd</sup>	File Organization, Special Methods, Class Variables Inheritance, Polymorphism
8 <sup>TH</sup>	1 <sup>st</sup>	Regular Expressions Introduction, Simple Character Matches, Special Characters
	2 <sup>nd</sup>	Character Classes, Quantifiers, The Dot Character Greedy Matches, Grouping, Matching at Beginning or
9 <sup>TH</sup>	1 <sup>st</sup>	Match Objects, Substituting, Splitting a String, Compiling Regular Expressions, Flags
	2 <sup>nd</sup>	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.
10 <sup>TH</sup>	1 <sup>st</sup>	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). Print out the sorted, reversed list of words.
	2 <sup>nd</sup>	Write a program that determines whether the number is prime. Find all numbers which are multiple of 17, but not the multiple of 5, between 2000 and 2500?
11 <sup>TH</sup>	1 <sup>st</sup>	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 <sup>nd</sup>	Find the largest of n numbers, using a user defined function largest(). Write a function my Reverse() which receives a string as an input and returns the reverse of the string.
12 <sup>TH</sup>	1 <sup>st</sup>	Check if a given string is palindrome or not. WAP to convert Celsius to Fahrenheit
	2 <sup>nd</sup>	Find the ASCII value of characters WAP for simple calculator

*Biswarayan Swain*

**SIGNATURE OF H.O.D**

*Biswarayan Swain*

**SIGNATURE OF LECTURER**



