Part 2: Training Programme Details (PP)

Section A: Course Details

1	Course Title	Python Programming
2	Type	Technical
3	Training Methodology	Classroom (physical; with virtual as option)
4	Skill Area	To leverage on the features of Python programming To use variables in Python To write Python programs using flow control To use Collections in Python To use Python libraries, and understand program structure.
5	Duration	2.0 days / 14 hours
6	Certification	Certificate of Completion
7	Certification Body	N/A
8	Course Overview	Participants to understand the features of Python programming, understand the concept of variables, write Python programs using flow control, understand the concept of collections, use some Python libraries, and understand program structure.
9	Prerequisites	Diploma / Degree or Equivalent
10	Course Objective	Upon completion of this course, participants will be able to understand the features of Python programming, understand the concept of variables, write Python programs using flow control, understand the concept of collections, use some Python libraries, and understand program structure.
11	Learning Outcome	By the end of the training, participants will be able to understand the features of Python programming, understand the concept of variables, write Python programs using flow control, understand the concept of collections, use some Python libraries, and understand program structure.

12	Course Content	Day 1
		• Introduction to Python
		  ○ Overview of Python
		  ○ Features of Python of Programming
		• Variable and Types
		  ○ Types of Variables
		  ○ Using Variables in Python
		  ○ Boolean Variables and Operators in Python

		• Flow Control in Python
		  ○ What is Flow Control in Programming
		  ○ Indentation in Python
		  ○ Loop
		  ○ If-else Statement
		  ○ Elif Statement
		• Working with Python Collections
		  ○ Python Collection Data Types
		  ○ List in Python Programming
		  ○ Dictionaries in Python
		
		Day 2
		• Working with Python Libraries for Data Analytics
		  ○ What are Libraries
		  ○ Working in Libraries in Python
		• Regular Expressions (re or regex)
		  ○ Using Regular Expressions (Meta Characters and Literals)
		  ○ Modules in the RE package
		  ○ Using RE Pattern Operators
		• Numpy
		  ○ What is Numpy
		  ○ Working with Array
		  ○ Generating Arrays
		  ○ Shuffle numbers in an Array
		  ○ Check Equality between Arrays
		  ○ Finding Most Frequent Values in an Array
		• Matplotlib for Visualization
		  ○ What is Matplotlib
		  ○ Capabilities of Matplotlib
		  ○ Plotting a Simple Wave
		  ○ Display Data in a Pie Chart
		  ○ Combining Different Types of Plots in one Figure
		• Python Program Structure
		• For a Better Python Program
		• Style Guide Dos and Don'ts

13	Learning Activities	Lecture, Practical Exercise, Case Studies, Learning Activities, Video Presentation, Training
14	Target Group	This course is suitable for individuals with little or no experience in Python programming, who want to learn its basic principles for data analytics.

Content / Hours)

No.	Content/Activity	Objectives	Outcome	Hours
1	Day1 [9am-11am] - Introduction to Python	This section covers Overview and Features of Python Programming	After this section, participants are able to understand Features of Python Programming	2.0
2	Day1 [11.15am-12.45pm] - Variable and Types	This section covers Variable and Types	After this section, participants are able to understand Variable and Types	1.5
3	Day1 [1.45pm-3.45pm] - Flow Control in Python	This section covers Indentation in Python, Loop, If-else Statement, Elif Statement	After this section, participants are able to do Indentation in Python, Loop, If-else Statement, Elif Statement	2.0
4	Day1 [4pm-5.30pm] - Working with Python Collections	This section covers Python Collection Data Types, List in Python Programming, Dictionaries in Python	After this section, participants are able to know Python Collection Data Types, List in Python Programming, Dictionaries in Python	1.5
5	Day2 [9am-11am] - Python Libraries for Data Analytics	This section covers Python Libraries for Data Analytics	After this section, participants are able to utilize Python Libraries for Data Analytics	2.0
6	Day2 [11.15am-12.45pm] - Regular Expressions (re or regex)	This section covers Regular Expressions (re or regex)	After this section, participants are able to use Regular Expressions (Meta Characters and Literals), Modules in the RE package and RE Pattern Operators	1.5
7	Day2 [1.45pm-3.45pm] - Numpy	This section covers Numpy	After this section, participants are able to what is Numpyl Working with and Generating Array	2.0
8	Day2 [4pm-5.30pm]	This section covers Matplotlib for	After this section, participants are able to	1.5

	- Matplotlib for Visualization	Visualization; Best Practices	use Matplotlib for Visualization; and understand Best Practices	