Title:		Understand libraries used for Python Programming	
Unit reference number:		K/650/0759	
Level:		3	
Credit value:		4	
Guided learning hours:		37	
Learning outcomes The learner will:		Assessment criteria The learner can:	
1.	Understand Anaconda library for python programming.	1.1	Describe what "Anaconda" is used for.
		1.2	Outline the difference between "Anaconda" and "Miniconda"
		1.3	Describe how to install, remove and update packages once Anaconda is installed.
		1.4	Explain how to manage environments in Anaconda.
		1.5	Explain how to enter and deactivate an environment in Anaconda
2.	Understand Jupyter Notebooks library for python programming.	2.1	Outline what a "Jupyter Notebook" is.
		2.2	Describe code cells and markdown cells in Jupyter notebooks.
		2.3	Outline the purpose of magic keywords in Jupyter notebooks
		2.4	Give examples of formats to which Jupyter notebooks can be converted.
3.	Understand the use of NumPy and ndarrays for python programming.	3.1	Outline the use of "NumPy".
		3.2	Describe the benefits of using NumPy.
		3.3	Explain how to create and save NumPy ndarrays.
		3.4	Describe ways to manipulate ndarrays.
4.	Understand Pandas library for python programming.	4.1	Describe what "Pandas" is used for.
		4.2	Describe the difference between Pandas and NumPy ndarrays.
		4.3	Outline how to create, access, and delete elements in • Pandas series.

			• Pandas data frames.
5.	Understand Matplotlib and Seaborn.	5.1	Outline the purpose of Matplotlib and Seaborn.
		5.2	Describe features of Matplotlib and Seaborn.
		5.3	Describe the features of a good visualisation.

Assessment requirements:

1.4- Learners must cover:

- Entering an environment.
- Deactivate an environment.

3.3- Learners must cover at least two benefits.

Assessment guidance:

1.4- Learners could cover:

- Creating an environment.
- Saving and loading environments.
- Sharing environments.
- Removing an environment.

3.2- Benefits could be:

- Speed
- Multidimensional data structures
- Built-in mathematical functions

3.3- Learners could cover built-in functions within the explanation of creating ndarrays.

Useful websites: N/A