Unit	Data Analysis: Data Science SQA Unit Code – HD51 04	
Code	DADS	*QCF:*
Level	SCQF: 8	*QCF: 4/5*
Credit Value	SCQF: 24	*QCF: tbc*
Unit summary	Data Science is an interdisciplinary field about processes and systems to extract knowledge or insights from large volumes of data (often referred to as 'Big Data') in various forms, either structured or unstructured.	

Learning Outcomes The learner will:	Assessment Criteria
1. Understand the background to Data Science	1. 1 Evaluate the importance of large and dynamic data sets for business insight and decision making 1.2 Evaluate the business value of large and dynamic data sets 1.3 Describe the interdisciplinary, social and industrial contexts of Data Science
2. Understand the characteristics of large data sets	2.1 Describe the characteristics of different types of data 2.2 Compare and contrast how structured and unstructured data is stored and accessed 2.3 Evaluate the importance of real-time data access in exploiting large data sets 2.4 Explain the CAP (Brewer's) Theorem and how it applies to large data sets 2.5 Describe the properties Atomicity, Consistency, Isolation, and Durability (ACID) as applied to database transactions
3. Understand data analysis techniques	3.1 Compare and contrast descriptive and predictive analysis and the types of purpose for which they can be used 3.2 Explain how predictive analysis can be applied to past, current and future events 3.3 Evaluate the importance of data visualisation to

	understanding data and highlighting patterns or trends
4. Understand different types of data analysis tools	4.1 Describe the capabilities and identify examples of software applications for analysing large data sets which provide: • data summarisation and querying • data serialisation • data mining • machine learning • parallel processing • data visualisation 4.2 Describe the features provided by the MapReduce software 4.3 Describe the features and application of programming languages commonly used in the analysis of large data sets 4.4 Evaluate the data analysis facilities provided by spreadsheet software packages
Additional information about the unit	
Guidance on approaches to assessment	*This unit may be assessed by any means which provides evidence that the candidate understands the content. Every effort should be made to relate the content to the candidate's organisation wherever possible.*
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards	This unit is based on the NOS for Data analytics.
Location of the unit within the subject/sector classification system	IT Professional
Name of the organisation submitting the unit	The Tech Partnership