Template for CBQ units

Unit	**Data Representation and Manipulation for IT & Telecoms 2**
SSC Code	DRM2
SQA Code	H3B9 04
SCQF Level	6
SCQF Credit Value	8
Unit summary	

Learning Outcomes The learner will:	Assessment Criteria
1. Apply matrix methods	1.1 Explain matrices as a method of representing ordered data and their relationship with computer program variable arrays 1.2 Use index notation to reference the cells of a matrix 1.3 Perform add, subtract and scalar multiplication operations on a matrix 1.4 Multiply two matrices 1.5 Find: • the inverse of a matrix by elementary row operations • the transpose of a matrix 1.6 Apply matrix techniques to a range of applications including: • solving simultaneous linear equations • vector transformation and rotation • maps and graphs
2. Apply series, probability and recursions	2.1 Give a functional expression for a series 2.2 Express a series recursively 2.3 Find the sum of a series 2.4 Express probabilities as percentages, fractions and decimals 2.5 Apply series, probability and recursion

	techniques to develop a solution to a range of problems
3. Apply graph theory	3.1 Describe the components of a graph and their properties
	3.2 Explain the characteristics of undirected, directed and mixed graphs
	3.3 Represent a set of connected objects as a graph
	3.4 Describe the type of problem which can be modelled by a weighted graph
Additional information about the unit	
Guidance on approaches to assessment	Further guidance is set out in the CBQ Assessment principles developed by e-skills UK and agreed by the Joint Awarding Body Forum.
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards	This unit is based on the e-skills UK NOS for IT professionals (PROCOM) available from www.e-skills.com/nos
Location of the unit within the subject/sector classification system	IT Professional
Name of the organisation submitting the unit	e-skills UK