Template for CBQ units

Unit	**Object oriented computer programming 3**
SSC Code	OOP3
SQA Code	H3AC 04
SCQF Level	8
SCQF Credit Value	20
Guided Learning Hours	
Unit summary	

Learning Outcomes The learner will:	Assessment Criteria
1. Design object oriented programs to address loosely-defined problems	1.1 Identify a set of classes and their interrelationships to address the problem 1.2 Make effective use of encapsulation, inheritance and polymorphism 1.3 Select and reuse pre-existing objects and templates specialising as required 1.4 Structure the design so that objects communicate efficiently 1.5 Specify the properties and behaviour of classes to allow efficient implementation, selecting appropriate data types, data and file structures and algorithms 1.6 Record the design in an agreed format
2. Implement a software design using object oriented programming	2.1 Use an agreed standard for naming, comments and code layout 2.2 Define the objects and file structures required to implement the design 2.3 Select, declare and initialise variable and data structure types and sizes to implement the design 2.4 Implement message passing between objects to meet the design

	2.5 Implement object behaviours using control structures to meet the design algorithms
	2.6 Develop input/output routines to implement design requirements
	2.7 Make effective use of operators and predefined functions
	2.8 Make effective use of encapsulation, polymorphism and inheritance
	2.9 Make effective use of an Integrated Development Environment (IDE) including use and development of code and screen templates
3. Develop object oriented programs to improve usability	3.1 Seek feedback on the usability of the program
	3.2 Analyse feedback to identify improvements in usability
	3.3 Design and implement data validation and error handling techniques which improve the usability of the program
	3.4 Create on-screen help to assist program users
4. Develop test strategies and apply these to object oriented programs	4.1 Develop and apply a test strategy consistent with the design identifying appropriate test data
	4.2 Apply regression testing consistent with the test strategy
	4.3 Analyse actual test results to identify discrepancies
	4.4 Use appropriate tools to estimate the performance of the program
	4.5 Critically review the program functionality and usability against design requirements
5. Document an object oriented computer program	5.1 Create documentation to assist the users of a computer program
	5.2 Create documentation for the support and maintenance of a computer program
	5.3 Review program documentation against user and support needs

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