



Design and Manufacture: Product Analysis (Advanced Higher) Unit

SCQF: level 7 (8 SCQF credit points)

Unit code: H7XT 77

Unit outline

The general aim of this Unit is for learners to develop their knowledge, understanding and skills in analysing the performance and production of a commercial product. Learners will consider the design in terms of its function, operation and use. Learners will consider the relationships between form and function, and the impact of the design in terms of environment, aesthetics, user interface, and socio-economic factors. Alongside this, learners will explore the materials, manufacturing techniques and assembly procedures.

Learners who complete this Unit will be able to:

- 1 Analyse the performance of a commercial product
- 2 Analyse the production of a commercial product
- 3 Analyse the impact of a product

This Unit is a mandatory Unit of the Advanced Higher Design and Manufacture Course and is also available as a free-standing Unit. The Unit Specification should be read in conjunction with the *Unit Support Notes*, which provide advice and guidance on delivery, assessment approaches and development of skills for learning, skills for life and skills for work. Exemplification of the standards in this Unit is given in *Unit Assessment Support*.

The *Course Assessment Specification* for the Advanced Higher Design and Manufacture gives further mandatory information on Course coverage for learners taking this Unit as part of the Advanced Higher Design and Manufacture Course.

Recommended entry

Entry to this Unit is at the discretion of the centre. However, learners would normally be expected to have attained the skills, knowledge and understanding required by one or more of the following or equivalent qualifications and/or experience:

- ◆ Higher Design and Manufacture Course or relevant component Units

Equality and inclusion

This Unit Specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence. For further information, please refer to the *Unit Support Notes*.

Standards

Outcomes and assessment standards

Outcome 1

The learner will:

1 Analyse the performance of a commercial product by:

- 1.1 Evaluating the performance of a commercial product
- 1.2 Explaining the function of, and the relationships between, the main component parts

Outcome 2

The learner will:

2 Analyse the production of a commercial product by:

- 2.1 Explaining the suitability of the materials, manufacturing processes and production methods used
- 2.2 Explaining the function of specific manufactured features
- 2.3 Explaining the suitability of assembly methods

Outcome 3

The learner will:

3 Analyse the impact of a product by:

- 3.1 Analysing the impact of a commercial product on society, economy and the environment

Evidence requirements for the Unit

Assessors should use their professional judgement, subject knowledge and experience, and understanding of their learners, to determine the most appropriate ways to generate evidence and the conditions and contexts in which they are used.

Evidence is required that the learner has met the Outcomes and Assessment Standards.

Outcomes may be met using a variety of methods and techniques — those which best support the context of the activity — and will therefore be a combination of approaches.

Evidence may be presented for individual Outcomes or it may be gathered for the Unit as a whole through combining assessment holistically in one connected activity. If the latter is used it must be clear how the evidence gathered covers each Outcome.

For this Unit, learners will be required to provide evidence of:

- ◆ analytical skills in relation to the performance and production of commercial products
- ◆ evaluation skills in assessing the impact of product design decisions

Exemplification of assessment is provided in *Unit Assessment Support*. Advice and guidance on possible approaches to assessment is provided in the *Unit Support Notes*.

Development of skills for learning, skills for life and skills for work

It is expected that learners will develop broad, generic skills through this Unit. The skills that learners will be expected to improve on and develop through the Unit are based on SQA's *Skills Framework: Skills for Learning, Skills for Life and Skills for Work* and drawn from the main skills areas listed below. These must be built into the Unit where there are appropriate opportunities.

2 Numeracy

2.3 Information handling

4 Employability, enterprise and citizenship

4.2 Information and communication technology (ICT)

5 Thinking skills

5.4 Analysing and evaluating

5.5 Creating

Amplification of these is given in SQA's *Skills Framework: Skills for Learning, Skills for Life and Skills for Work*. The level of these skills should be at the same SCQF level of the Unit and be consistent with the SCQF level descriptor. Further information on building in skills for learning, skills for life and skills for work is given in the *Unit Support Notes*.

Administrative information

Published: April 2015 (version 2.0)

Superclass: VF

History of changes to National Unit Specification

Version	Description of change	Authorised by	Date
2.0	All Assessment Standards amended for clarity. Outcome 1 — four Assessment Standards subsumed into two. Outcome 3 — minor amendment to wording — 'Critically' removed.	Qualifications Development Manager	April 2015

This specification may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged. Additional copies of this Unit can be downloaded from SQA's website at www.sqa.org.uk.

Note: readers are advised to check SQA's website: www.sqa.org.uk to ensure they are using the most up-to-date version of the Unit Specification.

© Scottish Qualifications Authority 2015