

National Unit Specification: general information

UNIT	Technical Graphics (Advanced Higher)
NUMBER	D33P 13
COURSE	Graphic Communication (Advanced Higher)

SUMMARY

The purpose of the unit is to further develop manual skills in 2-point measured perspective and geometric constructions used in the generation of orthographic drawings.

OUTCOMES

- 1 Apply manual techniques of geometric constructions to produce orthographic drawings.
- 2 Apply manual techniques of 2-point measured perspective to architectural settings.

RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates would normally be expected to have attained Higher Graphic Communication at grade A or B, or relevant experience in manual or computer-aided draughting.

CREDIT VALUE

0.5 credit at Advanced Higher.

Administrative Information

Superclass:	VF
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National Unit Specification: general information (cont)

UNIT Technical Graphics (Advanced Higher)

CORE SKILLS

Core skills for Advanced Higher remain subject to confirmation and details will be available at a later date.

Additional information about core skills is published in *Automatic Certification of Core Skills in National Qualifications* (SQA, 1999).

National Unit Specification: statement of standards

UNIT Technical Graphics (Advanced Higher)

Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to the Scottish Qualifications Authority.

OUTCOME 1

Apply manual techniques of geometric constructions to produce the orthographic drawings.

Performance criteria

- (a) Constructions are used effectively to produce drawings of curves of intersection and transition.
- (b) Constructions are used effectively to produce drawings of conical curves of intersection.
- (c) Constructions are used effectively to produce drawings of true shapes and developments of oblique cones.

Evidence requirements

Graphical evidence that the candidate can apply manual techniques of geometric construction in the generation of orthographic drawings, as detailed in PCs (a) to (c).

OUTCOME 2

Apply manual techniques of 2-point measured perspective to architectural settings.

Performance criteria

- (a) The application of the 'measured-plan' method of 2-point measured perspective of room interiors is correct and accurate.
- (b) The application of the 'measured-plan' method of 2-point measured perspective of exterior buildings is correct and accurate.

Evidence requirements

Graphical evidence that the candidate can apply manual techniques of 2-point measured perspective as detailed in PCs (a) and (b).

National Unit Specification: support notes

UNIT Technical Graphics (Advanced Higher)

This part of the unit specification is offered as guidance. The support notes are not mandatory.

While the time allocated to this unit is at the discretion of the centre, the notional design length is 20 hours.

GUIDANCE ON CONTENT AND CONTEXT FOR THIS UNIT

The candidate should achieve a level of competence and skill in a range of graphic communication techniques that could be applied in an industrial or commercial context.

This unit will build on Higher Graphic Communication skills in 2-point measured perspective and geometric constructions used in the generation of orthographic drawings. The use of dimensions, tolerances and conventions should be in accordance with the latest British Standards.

‘2-Point Measured Perspective’ should be taught in the context of real examples from within the construction industry. To distinguish the Advanced Higher from the Higher level, 2-point measured perspective will contain examples from: circles, point circles, ellipses, part ellipses and curves.

Geometry should be taught in the context of real examples and should not be limited to single plane configurations. Geometric forms should be confined to: right prisms (triangular and square), cylinders, conic sections (circle, ellipse, hyperbola and parabola) and oblique cones.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

Work should be integrated to cover more than one topic, to create natural progression through the unit.

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

National Assessment Bank materials have been created specifically to assess knowledge and understanding for each outcome. Assessments can take place either at the completion of an outcome or as an end test.

Examples of instruments of assessment which could be used are as follows:

A series of drawing exercises could be used to gather evidence of geometric constructions, mainly by production of manual orthographic drawing examples from real situations where possible.

A series of drawing exercises could be used to gather evidence of interior and/or exterior 2-point measured perspective examples.

SPECIAL NEEDS

This unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative outcomes for units. For information on these, please refer to the SQA document *Guidance on Special Assessment and Certification Arrangements for Candidates with Special Needs/Candidates whose First Language is not English* (SQA, 1998).