

Higher National Unit specification

General information for centres

Unit title: CAD: Pattern Development

Unit code: F1P7 34

Unit purpose: The purpose of this Unit is to enable the candidate to develop the skills to be competent in the use of a software package to manipulate patterns, grade and lay plan. The patterns will be produced on screen, with the facility to plot out particular patterns if required. This Unit is suitable for those studying fashion or working in a related industry.

On completion of the Unit the candidate should be able to:

- 1 Complete pattern manipulations and create basic shapes using a software package.
- 2 Produce production patterns from specified designs.
- 3 Produce graded patterns for garments.
- 4 Produce lay plans to a specified efficiency.

Credit points and level: 1 HN credit at SCQF level 7: (8 SCQF credit points at SCQF level 7*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Recommended prior knowledge and skills: While access to this Unit is at the discretion of the centre, candidates would benefit from having previously studied NQ/NC in Fashion Technology or have evidence of using a CAD software package to SCQF level 5 or 6 or have relevant industrial experience.

Core Skills: There are opportunities to develop the Core Skill of Problem Solving, IT and Numeracy at SCQF level 5 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes. This Unit should be delivered as an option in the HNC/HND Fashion Technology and Manufacture with Design Group Award.

Assessment: Each of the four Outcomes for this Unit will be assessed by the candidate using a software package. In addition Outcomes 1 and 2 will have an additional open-book integrated assessment in which a production pattern will be produced from a working drawing or sketch.

Higher National Unit specification: statement of standards

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The sections of the Unit stating the Outcomes, Knowledge and/or Skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Complete pattern manipulations and create basic shapes using a software package

Knowledge and/or Skills

- ◆ Digitising techniques
- ◆ Management of files
- ◆ Manipulation techniques

Evidence Requirements

Candidates should provide evidence to demonstrate their Knowledge and Skills by showing that they can complete a minimum of eight pattern manipulations on screen.

- ◆ The manipulations should encompass the following skills:
 - dart manipulation, panelling, button stands, facings, necklines
 - patterns created should be accurate to 0.5 cm
 - candidate performance should be recorded on an observation schedule
- ◆ The candidate should also be able to demonstrate the process of digitising a basic pattern into a computerised system using a digitiser for one pattern.

All files should be saved with logical names and stored in relevant folders.

Assessment Guidelines

See under Outcome 2.

Higher National Unit specification: statement of standards (cont)

Unit title: CAD: Pattern Development

Outcome 2

Produce production patterns from specified designs

Knowledge and/or Skills

- ◆ Design interpretation
- ◆ Manipulation Techniques
- ◆ Production pattern creation
- ◆ Management of files

Evidence Requirements

Candidates should produce evidence to demonstrate their Knowledge and Skills by showing they can produce a minimum of two production patterns on screen.

- ◆ The candidate should be able to interpret a given design, choose relevant manipulation techniques and add appropriate seam and hem allowances. The production pattern produced should be accurate to 0.5 cm. Observation schedules should be used to record candidates progress.

Assessment Guidelines for Outcomes 1 and 2

The assessment for Outcomes 1 and 2 could be combined in a single assessment.

The candidate could be given a sketch for a particular garment. The candidate should interpret this design and produce a production pattern. The production pattern should be accurate to 0.5 cm.

Outcome 3

Produce graded patterns for garments

Knowledge and/or Skills

- ◆ Grading techniques
- ◆ Application of co-ordinates
- ◆ Management of files

Evidence Requirements

Candidates should provide evidence to demonstrate their Knowledge and Skills by showing they can accurately calculate x and y co-ordinates and apply the increments to a minimum of three different production patterns from the following range: skirt, trousers, blouse, dress, casual jacket.

Grading should be applied on screen using appropriate menu commands to produce the size range required. All patterns should be saved with logical names and stored in relevant folders. An observation schedule should be used to record progress.

Higher National Unit specification: statement of standards (cont)

Unit title: CAD: Pattern Development

Assessment Guidelines

The candidate should produce a minimum of three pattern grades on screen, eg skirt, trousers and blouse. A size range will be given for each style and the candidate should calculate and apply, using appropriate menu commands, x and y co-ordinates accurately for each style.

Patterns should be saved in relevant folders.

Outcome 4:

Produce lay plans to a specified efficiency

Knowledge and/or Skills

- ◆ Computerised lay planning
- ◆ Fabric usage
- ◆ Menu commands

Evidence Requirements

Candidates should provide evidence to demonstrate their Knowledge and Skills by completing a minimum of two different lay plans on screen.

Each lay plan should demonstrate the following skills:

- ◆ use of menu commands to complete lay plans to a predetermined efficiency
- ◆ ensure minimum wastage
- ◆ lay planning appropriate to the type of fabric used

Assessment guidelines

The candidate should produce a minimum of two different lay plans on screen, patterns could be selected from the range in learning Outcome 3. The candidate should consider fabric type, pattern placement, type of lay and quantities to ensure minimum wastage and work towards a pre-determined efficiency.

Administrative Information

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Unit title: CAD: Pattern Development
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Higher National Unit specification: support notes

Unit title: CAD: Pattern Development

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

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This is a mandatory Unit which is part of HND Fashion Technology and should be taught on a computerised system which is widely used within the clothing industry. Some systems currently used in the clothing industry, apply grading at the digitising stage using menu commands and codes and allowing alterations to graded patterns on screen while others do not. Centres are expected to use current industry standard software in this Unit.

The Unit provides an insight into all areas of pattern development therefore providing a good grounding for employment within the industry. Although not essential, it would be beneficial for the candidate to have completed a CAD Unit on a relevant software package at SCQF level 5 or 6 before progressing onto this level.

Basic block patterns are input into this system via a digitiser. Block patterns are then manipulated to produce various styles incorporating dart manipulation, panelling etc. Final production patterns will be produced from sketches/working drawings provided.

The candidate will also develop a basic knowledge of grading with the use of x and y co-ordinates and should be able to produce basic graded patterns for given styles.

Access to a printer would be beneficial and the candidate could print out a nested grade to check sizing or print out individual sizes.

Finally the candidate will be introduced to elementary lay planning. Creation of models/orders, fabric constraints, size ratios, and fabric usage/efficiencies will be completed

File management will be discussed and used on a daily basis, this will be assessed with the use of checklists. Centres may want to encourage candidates to produce a folio of printouts of graded patterns, manipulations and any tables/planning information as a useful candidate reference.

Guidance on the delivery and assessment of this Unit

This is an introductory Unit to provide the candidate with the basic knowledge and skills to use the software package competently. The candidate will produce production patterns from the basic block patterns in the system, initially completing exercises on varied pattern manipulations and finally producing patterns from working drawings/sketches. Exemplar template patterns could be available on screen to ensure the candidates work meets the 0.5 cm criteria. These patterns would only be accessible to the lecturer.

Higher National Unit specification: support notes (cont)

Unit title: CAD: Pattern Development

The candidate will produce pattern grades from a range of styles and guidance should be given to calculate the x and y co-ordinates required. These co-ordinates will then be applied on screen to the relevant patterns to produce the required size range. The principles of grading will not be taught in this Unit only the application of grading to the software package.

Finally Lay Planning will be discussed in general terms, taking into consideration any fabric constraints, fabric widths etc. The candidate will then complete a task from creation of the order through to the final lay plan. Pre determined efficiencies will be given to the candidate and they should work to meet this constraint.

The use of candidate checklists and/or schedules should be used throughout the Unit to record the candidate's performance. The candidate could also be issued with a work book which will eventually become their personal manual, this booklet is for the candidates own use and will not be assessed as part of the Unit.

Opportunities for developing Core Skills

Problem solving could be developed by encouraging the candidate to analyse the sketch given to them, interpret manipulation techniques and then apply them to produce a production pattern. Candidates should be encouraged to evaluate their work.

Numeracy skills will also be developed by the candidate through using x and y co-ordinates and applying these accurately to given styles.

IT skills would also be developed by using the software package provided, learning appropriate menu commands, accessing files and storing them in relevant folders with logical names.

Open learning

The work content for this Unit consists of hands-on practice on the software package. Continual demonstration and dialogue with the lecturer is essential, therefore making this Unit unsuitable for distance learning.

The practical nature of the assessment/class work would also have to be completed within the centre under the supervision of a relevant staff member.

Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (www.sqa.org.uk).

General information for candidates

Unit title: CAD: Pattern Development

In this Unit you will learn how to use a software package for pattern development. This means you will be shown how to manipulate different block patterns to produce different styles. You will do this through course work and also be able to interpret sketches/working drawings to produce production patterns on screen.

You will then be given a set of patterns to grade. You will calculate grading increments and apply them to the given styles, creating a size range for a set of patterns.

You will have access to a printer therefore patterns or grades could be plotted out for you to keep although most of your work will be stored electronically.

Finally you will learn about lay planning, creating the order for a particular style, considering fabric constraints and finally arranging the pattern pieces on a given width of fabric to a specified efficiency.

Your assessment for learning Outcome 1 and 2 will be the completion of specific pattern related tasks. You will also have an open-book assessment in which you will produce a production pattern on screen from a working drawing/sketch.

The grading assessment will be completed on screen in class in which you will have to produce the required number of styles.

Lay Planning will also be completed on screen in class working to pre-determined efficiencies.

During this Unit you will develop your Core Skills in IT, Problem Solving and Numeracy.