

Higher National Unit specification

General information for centres

Unit title: Textile Fibres, Yarns and Fabrics

Unit code: F1R0 34

Unit purpose: This Unit is designed to enable the candidate to apply selection criteria for fibres, yarns and fabrics to help the candidate make recommendations for textile products. It is designed for those studying or working in the fashion or clothing industry.

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

- 1 Describe fibre and fibre blends.
- 2 Describe yarn types and spinning processes.
- 3 Describe fabric types and fabric finishing processes.
- 4 Evaluate fibres, yarns, fabrics and finishing processes for a specific textile product.

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 is at the discretion of the centre candidates would benefit from having Core Skills in IT and Numeracy at SCQF level 4.

Core Skills: There are opportunities to develop the Core Skills of Communications, and IT 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.

Assessment: This Unit could be assessed holistically by the production of a textile portfolio of information on fibres, yarns and fabrics with samples at all stages. Candidates will also be required to respond to a case study and recommend fibre, yarn and fabric selection for an apparel or textile product.

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

Describe fibre and fibre blends

Knowledge and/or Skills

- ◆ Physical properties of natural and man made fibres
- ◆ Aesthetic properties of natural and man made fibres
- ◆ Physical properties of fabrics determined by fibres
- ◆ Aesthetic properties of fabrics determined by fibre

Outcome 2

Describe yarn types and spinning processes

Knowledge and/or Skills

- ◆ Key features of the woollen spinning system
- ◆ Key features of the worsted spinning system
- ◆ Key features of the cotton spinning system
- ◆ Key features of the open end spinning system
- ◆ Yarn count systems and their applications
- ◆ Fancy yarn production and typical types

Higher National Unit specification: statement of standards (cont)

Unit title: Textile Fibres, Yarns and Fabrics

Outcome 3

Describe fabric types and fabric finishing processes

Knowledge and/or Skills

- ◆ Weft knitted fabric manufacture
- ◆ Warp knitted fabric manufacture
- ◆ Integrated knitted garment production
- ◆ Woven fabric manufacture
- ◆ Dyeing techniques
- ◆ Finishing techniques
- ◆ Fabric scale assessment
- ◆ Fabric care labelling

Evidence Requirements for Outcomes 1, 2 and 3

Candidates will need to provide evidence to demonstrate their Knowledge and Skills by showing that they can: produce a portfolio that comprises:

- 1 A collection of four natural fibre and four man made fibre sections. Examples of fibres should include cotton, wool, linen, silk, nylon, polyester, acrylic and viscose rayon. Each section should contain an example of the fibre, the physical properties of the fibre, including typical strength, elasticity, elastic recovery, cross section and longitudinal illustrations, moisture regain and burning characteristics.
- 2 Descriptions of the identified spinning systems, with examples of woollen spun, worsted spun and cotton spun yarns. Examples of yarns with physical, colour and lustre properties should also be collected. These should include one each of: Melange, Mixture, Marl, Nep, Boucle, Slub, Crepe and High Lustre.
- 3 Descriptions of fabric production systems including warp knitting, weft knitting and weaving. A collection of fabrics should be collated to show: plain, rib and cable knit, plain, twill and satin weave. A minimum of 12 fabrics should be collated showing fibre, yarn and fabric type, Fabric Scale assessment, finishing type, recommended care instructions and suggested end uses.

This Textile Resource Portfolio should be collected in the candidates own time and be available for reference in class for the assessment for Outcome 4:

Assessment Guidelines for Outcomes 1, 2 and 3

The technical information in the portfolio could include the source of the information and could be word processed and collated in an organised, easy to reference way. Candidates should be encouraged to add to this portfolio throughout their studies and to use it as a source of reference.

To encourage candidates to work in a sequential manner, candidates could be given a detailed specification to meet the requirements of each Outcome.

Higher National Unit specification: statement of standards (cont)

Unit title: Textile Fibres, Yarns and Fabrics

Outcome 4

Evaluate fibres, yarns, fabrics and finishing processes for a specific textile product

Knowledge and/or Skills

- ◆ Types of fibres, yarns, fabrics and finishes
- ◆ Performance of fibres, yarns, fabrics and finishes
- ◆ Fabric care instructions of fibres, yarns, fabrics and finishes
- ◆ Features of fibres, yarns, fabrics and finishes

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and Skills by showing that they can accurately evaluate fibres, yarns, fabrics and finishing processes for a specific textile product.

The evidence should include:

- ◆ an accurate description of the product
- ◆ detailed performance considerations to be taken into account
- ◆ recommended fibre or fibre blend solution with an explanation of the selection process
- ◆ recommended yarn types with an explanation of the selection process
- ◆ recommended fabric types with an explanation of the selection process
- ◆ single figure predictions of anticipated fabric scale
- ◆ diagrammatic, and other additional evidence with care label information, including wash, iron, dry clean, bleaching and drying instructions

If re-assessment of Outcome 4 is required an alternative product type should be tested.

This Outcome should be tested under controlled open-book conditions.

Assessment guidelines

Outcome 4 could be assessed using a pro forma document which could be completed by candidates.

Administrative Information

Unit code: F1R0 34
Unit title: Textile Fibres, Yarns and Fabrics
Superclass category: WH
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Higher National Unit specification: support notes

Unit title: Textile Fibres, Yarns and Fabrics

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

Tutors should discuss the Textile Portfolio and the final product specification and suggest a variety of sources for collecting their information.

Candidates should have access to the internet, using web sites such as www.e4s.com and www.fashionuniversity.com as starting points and specialist textile production books to help inform their portfolio. Fibre, yarn and fabric swatches relating to the portfolio should be available or candidates can supply their own using commercial sources. Fabric Scale assessment, including (lateral) shear, stretch, thickness, drape and weight.

Textile reference books available to staff and candidates could include:

Winifred Aldrich, *Fabric, Form and Flat Pattern Cutting* Blackwell Science
Eberle Hannelore, *Clothing Technology* Europa Lehrmittel
Jay Diamond, *The World of Fashion* Fairchild Publications, Inc, New York

Candidates should be encouraged to look at clothing and textile labels to identify fibre types currently in use for a variety of products.

Guidance on the delivery and assessment of this Unit

As this is a portfolio based Unit, it is recommended that each Outcome is assessed at appropriate points throughout this Unit to encourage the candidate to achieve each Outcome. Checklists related to each Outcome should be drawn up by the tutor, to monitor candidate progress and to ensure candidates understand what they have to produce at each stage.

Candidate packs should be issued to each candidate containing all relevant information required to complete each Outcome and the Unit as a whole. Included in this pack will be specifications required for each Outcome:

- General fibre properties and their relationships to fabric properties.
- Yarn production methods
- Fancy yarn production and types
- Fabric production methods
- Dyeing and finishing summary
- Fabric Scale procedures
- Fabric Care standards

Outcome 4 will be tested under controlled conditions although candidates will have access to their Textile Portfolio.

Higher National Unit specification: support notes (cont)

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Opportunities for developing Core Skills

Candidates will develop their IT skills when undertaking this Unit. They will use the Internet for research purposes and will be expected to word process their technical information and use IT skills to compile a well-organised portfolio of information.

Candidates will also develop their Core Skills in communications. They will be expected to extract relevant information and summarise that information and then use it for reference purposes. Candidates could also be asked to present the information orally or written format. Questioning should be part of the portfolio assessment to ensure authenticity.

Open learning

Candidates could undertake this Unit through Open Learning although arrangements for authenticating evidence would have to be made. For example candidates could be questioned on the portfolio produced. Arrangements would also have to be made for supervised assessment of Outcome 4.

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: Textile Fibres, Yarns and Fabrics

In this Unit you will build up a portfolio of reference materials about fibres, yarns and fabrics. This will help you in your work in apparel manufacture and design. You will learn how to research fibres, yarns and fabrics and note their features, special uses and technical data on them. You can do your research through the internet, textbooks, trade and general magazines.

The Unit will provide you with an understanding of the application of selection criteria for textile products. You will develop an understanding of fibres, yarns and fabrics and their associated processes. This understanding will support you in employment as fashion and textile designers, manufacturers, apparel technicians, buyers, merchandisers and retailers.

The Unit is also designed to provide you with contextual elements required for many articulating degree programmes.

In undertaking this Unit you will also develop your Core Skills in Communication and IT.