

Unit 123: Pattern Grading for Fashion and Clothing

Unit code:	D/502/5393
QCF Level 3:	BTEC National
Credit value:	10
Guided learning hours:	60

● Aim and purpose

The aim of this unit is to enable learners to develop the basic principles of pattern cutting including the techniques of pattern grading. Learners will apply these principles to a variety of fashion design styles.

● Unit introduction

Fashion designers have an influence on many aspects of contemporary life. The clothes that people wear can make a statement about their lifestyle, aspirations and status. Clothing also needs to provide adequate protection and be produced in materials appropriate for that purpose. As the human figure comes in all shapes and sizes, designers and producers need to have the skills necessary to design and make garments that cater for this range. This unit gives learners with the opportunity to develop the basic principles of pattern cutting including the techniques of pattern grading, and applying these principles to a variety of fashion design styles.

Learners will obtain a basic understanding of the manual methods of grading patterns up and down sizes. Learners will be encouraged to use specialist computer applications in this process and will learn about the current technology used within the fashion and clothing industry.

Learners will be encouraged to make industrial visits to see production methods first-hand, or visit trade shows.

Learners should look at a variety of fashion design features in order to develop their skills in, and understanding of, the techniques required for pattern grading.

The knowledge and understanding gained in this unit underpins other fashion and clothing specialist units within the qualification. Assignment briefs should be designed to include the opportunity for integrated assignment work. Learners should have the opportunity to develop and demonstrate individual skills and understanding.

● Learning outcomes

On completion of this unit a learner should:

- 1 Understand the principles of pattern grading
- 2 Be able to use tools, equipment and technology for pattern grading
- 3 Be able to grade blocks and pattern adaptations.

Unit content

1 Understand the principles of pattern grading

Pattern grading: grading up sizes; grading down sizes; measurements

2 Be able to use tools, equipment and technology for pattern grading

Tools, equipment and technology: eg using hand tools, equipment, hand shears, scissors, botches, hole punch, grading squares, software, hardware, digitizer, plotter, 2D/3D scanning

3 Be able to grade blocks and pattern adaptations

Basic block: various blocks eg bodice, skirt, sleeve, trouser, dress

Pattern adaptations which include given and selected design features: eg princess line dress, gathered sleeve and cuff, skirt including pleats, bodice with collar, trousers with in-seam pockets

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 explain the principles of pattern grading [RL]	M1 consistently apply principles of pattern grading to blocks to include a variety of size alternatives both up size and down size	D1 produce and present independently a comprehensive range of graded blocks and pattern adaptations, which demonstrate fluent practical skills and theoretical understanding.
P2 use tools, equipment and technology for pattern grading [SM]	M2 skilfully select and purposefully use tools, equipment and technology for pattern grading to effectively produce blocks and pattern adaptations.	
P3 grade blocks and pattern adaptations. [RL, CT]		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

Tutors should consider integrating the delivery and assessment of this unit with other relevant fashion and clothing specialist units learners are taking as part of the programme of study. In planning the delivery of assignment briefs, tutors must ensure that a range of basic blocks (and a variety of design adaptations and features) are included in order to provide learners with the opportunity to develop and demonstrate practical skills and understanding.

Tutors delivering this unit are expected to provide learners with an introduction to the basic principles of pattern grading. In the first instance, delivery will take the form of tutor demonstration followed by a series of practical exercises to build learners' skills and understanding.

For learning outcome 1, tutors should introduce learners to the basic principles of pattern grading. Delivery should take the form of tutor demonstration followed by a series of practical exercises to build learners' skills and understanding. Learners need supported through initial guidance and practical demonstrations of techniques and specialist equipment.

For learning outcome 2, learners need to produce a portfolio or reference folder of basic blocks and adaptations, with a range of pattern grading examples to include both up sizes and down sizes. Pattern samples should include at least one whole garment such as a dress or coat. Learners should be given the opportunity to work on alterations such as those relating to individual measurements that do not conform to a standard block. Learners should also have access to computer applications used for pattern grading and have the opportunity to produce work using this alternative method of technology.

Learners should have access to adequate space for producing full-scale patterns and pattern grading to a variety of sizes. If specific computer software applications are not available, learners should have internet access so that they can research and observe current technology and new developments used within the fashion industry.

For learning outcome 3, learners need to grade full size blocks and pattern adaptations. This outcome could link to fashion design requirements for another unit, if appropriate.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topic and suggested assignments/activities and/assessment
Introduction to unit.
Workshop to teach technical processes of pattern grading up and down working on basic blocks for a shirt and a sleeveless top.
Workshop to teach practical grading up and down for a skirt or trousers.
Assignment 1: Super Size Me Basic bodice block with sleeves to be graded up through four sizes. Learners: <ul style="list-style-type: none">• assess block and prepare pattern• add grading marks and correctly mark pattern• present work.
Workshop to teach practical grading on half-scale patterns. Learners to work on a variety of patterns from blocks, such as evening wear, corsets, coats.
Learner initiated study.
Assignment 2: Zero to Panto Dame Sleeved evening wear, eg sleeveless evening dress and bolero jacket with collar, to be graded up from a UK size 4 to a 20. Learners: <ul style="list-style-type: none">• prepare size 4 patterns• grade patterns up through seven sizes• grade size 20 pattern to specific body measurements• add grading marks and correctly mark pattern• present work.
Learner initiated study.
Assignment 3: Teenager to Little Sister Child's pattern for dungarees and shirt to be graded down from average age 13 to 6. Learners: <ul style="list-style-type: none">• prepare dungaree and shirt patterns• grade down patterns• add grading marks and correctly mark pattern• present work.
Learner initiated study.
Review and evaluation of all assignments and course work.

Assessment

Portfolios of work may include evidence of both manual and computer applications if available.

For P1, learners must demonstrate the principles of pattern grading on a simple basic block by grading up and down at least one size.

For P2, learners are expected, with guidance, to select and use appropriate tools, equipment and technology to complete a range of pattern adaptations. This may include the use of software applications. From this they should produce a folder of recorded samples.

For P3, learners must appropriately grade a range of full size basic blocks and pattern adaptations using either manual methods or computer technology.

For M1, learners need to apply the principles of pattern grading to a variety of basic blocks and pattern adaptations. This should include a variety of sizes both up and down from the original block.

For M2, learners should produce work that is effective and shows skilful application of pattern grading techniques to effectively realise a series of blocks. Learners must present their work in a coherent manner so that the range of designs and sizes can be clearly identified.

For D1, learners must independently produce and present a comprehensive range of graded blocks and pattern adaptations, which demonstrate a fluent standard of practical skills and informed theoretical understanding. Portfolios should include a wide range of graded blocks, fashion designs and pattern adaptations. The portfolio should be presented in a professional format and accompanied by evidence of learners' understanding of the grading process and techniques. All patterns should be completed, correctly labelled and ready for use, highlighting a full range of sizes.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, P2, P3 M1, M2 D1	Assignment 1: Super Size Me	Patternmaker assesses requirements, prepares the pattern, grades it up, adds grading marks and marks pattern correctly.	Pattern graded and marked. Recorded samples. Tutor/self assessment.
P1, P2, P3 M1, M2 D1	Assignment 2: Zero to Panto Dame	Pattern maker prepares size 4 patterns for sleeved evening wear, grades them up to size 20, alters pattern to specific body measurements, adds grading marks and marks pattern correctly.	Work presented. Tutor and self assessment.
P1, P2, P3 M1, M2 D1	Assignment 3: Teenager to Little Sister	Using a child's pattern for dungarees and shirt, patternmaker grades down from average age 13 to 6, adds marks and marks patterns correctly	Work presented. Tutor and learner self-assessment.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Art and Design sector suite. This unit has particular links with the following unit titles in the BTEC Art and Design suite:

Level 1	Level 2	Level 3
Introduction to Pattern Construction	Developing Pattern Construction Skills	Fashion Media, Techniques and Technology
Introduction to Garment Making	Developing Production Techniques for Fashion	Pattern Construction for Fashion and Clothing
	Working with Fashion Design Briefs	Pattern Development for Fashion and Clothing
		Garment and Production

National Occupational Standards

This unit also provides development opportunities for some of the underpinning skills, knowledge and understanding of the following National Occupational Standards:

Skillfast-UK Sector Skills Council

- AMTech13 Construct and adapt patterns to customer requirements
- AMTech6 Produce Block and Graded patterns for Apparel Products
- AMT7 Produce Prototype/Sample Patterns and Assess for Fit
- ATM8 Produce Lay Plans for Apparel Products

Essential resources

Centres need to provide adequate equipment and resources for learners to grade full-scale patterns, for example studios or workshops, paper, rulers, grading squares, dress stands and, pattern cutting tables (one metre height). Learners need access to computer software for pattern cutting, for example Gerber, Lectra and Ormus as well as internet access.

Employer engagement and vocational contexts

Centres should develop links with practising artists, craftspeople and designers, to deliver assignments to learners or to provide work experience.

Links with employers are essential to the delivery of the programme for work experience and employment.

Vocational learning support resources:

- Learning and Skills Network – www.vocationallearning.org.uk

Business and finance advice:

- local and regional Business Link – www.businesslink.gov.uk

Assignments should be vocationally relevant; centres should consider the delivery of 'live projects', for example, to support the vocational content of the unit and programme.

Creative and Cultural Skills (www.ccskills.org.uk), the Sector Skills Council for Arts, Crafts and Design, has launched the web portal Creative Choices (www.creative-choices.co.uk). This portal has a range of information about careers in the arts, crafts and design sector, including job descriptions.

Skillfast-UK, the Sector Skills Council for Fashion and Textiles (www.skillfast-uk.org), provides details on careers (www.skillfast-uk.org/justthejob) and the industry and has regularly updated news and events pages.

Indicative reading for learners

Textbooks

Aldrich W – *Metric Pattern Cutting for Women's Wear* (Wiley-Blackwell, 2008) ISBN 978-1405175678

Armstrong H – *Pattern Making for Fashion Design* (Prentice Hall, 2005) ISBN 978-0131112117

Beazley A and Bond T – *Computer-Aided Pattern Design & Product Development* (Wiley-Blackwell, 2003) ISBN 978-1405102834

Cooklin G – *Pattern Grading for Children's Clothes* (Wiley-Blackwell, 1991) ISBN 978-0632026128

Cooklin G – *Pattern Grading for Women's Clothes* (Wiley-Blackwell, 1990) ISBN 978-0632022953

Moore C L, et al – *Concepts of Pattern Grading; Techniques for Manual and Computer Grading* (Fairchild Books, 2009) ISBN 978-1563676970

Taylor P J and Shoben M – *Grading for the Fashion Industry* (Nelson Thornes, 1990) ISBN 978-0748704231

Journals

Arena

Art Monthly

Art Review

Contemporary

Crafts Magazine

Creative Review

Design Magazine

Drapers

Elle Decoration

GQ

International Textiles

Websites

www.craftscouncil.org.uk

www.creativehandbook.co.uk

www.design-council.org.uk

www.designmuseum.org

www.drapersonline.com

www.fashion-era.com/C20th_costume_history

www.manchestergalleries.org/our-other-venues/platt-hall-gallery-of-costume/the-collection

www.moda.mdx.ac.uk/exploring/collections/silver.htm

www.moma.org/exhibitions/1998/textiles/home.html

www.skillfast-uk.org

www.textilearts.net/directory/textile_traditions/museums

www.vam.ac.uk

www.vogue.co.uk

Crafts Council

Showcasing Creative Services

Design Council

Design Museum

Drapers magazine online:

Costume history line drawings

The Gallery of Costume

Silver Studio

Contemporary Japanese Textiles

The Sector Skills Council for Fashion and Textiles

Textile art

Victoria and Albert Museum

Vogue Magazine

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
Independent enquirers	preparing accurate and well-fitting blocks, patterns and costings
Creative thinkers	dealing with problematic pattern adaptations whilst demonstrating the principles of pattern grading
Reflective learners	demonstrating the principles of pattern grading and applying them to pattern adaptations and basic blocks
Team workers	sharing studio space with others when drawing out large patterns
Self-managers	using tools and equipment
Effective participators	observing health and safety in the pattern cutting and studio area.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	researching and developing a wide range of fashion ideas for development into patterns
Creative thinkers	developing ideas inspired by research into fashion from past decades
Reflective learners	improving original ideas
Team workers	producing patterns to match a theme for a fashion show or catwalk collection
Self-managers	producing well researched and presented patterns that exceed expectations
Effective participators	participating in designing patterns for a group collection.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	using ICT packages to support pattern design and lay plans
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	researching fashion design ideas, lay plans, methods and processes including web-based material and CD ROMs
Manage information storage to enable efficient retrieval	exploring, extracting and assessing the relevance of information from websites and CD ROMs
Follow and understand the need for safety and security practices	
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	researching ideas, methods and processes including web-based material and CD ROMs
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	exploring, extracting and assessing the relevance of information from websites and CD ROMs
ICT – Develop, present and communicate information	
Select and use ICT to communicate and exchange information safely, responsibly and effectively including storage of messages and contact lists	exchanging emails with tutor using VLE message boards
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	measuring own body to make pattern block making pattern block
Identify the situation or problem and the mathematical methods needed to tackle it	accurately measuring, developing and adjusting patterns calculating grading measurements
Select and apply a range of skills to find solutions	measuring correctly for lay plans and producing information for fabric purchasing
Use appropriate checking procedures and evaluate their effectiveness at each stage	costing and producing budgets and estimates
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	

Skill English	When learners are ...
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	discussing their own and others' pattern designs of own and others
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	seeking and reading and responding to research
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	annotating sketchbooks writing up formal evaluation of their own pattern development.