

Unit 122: Pattern Development For Fashion and Clothing

Unit code:	R/502/5391
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 skills and understanding needed to make patterns for fashion outcomes from their own design ideas.

● Unit introduction

The ability to develop successful and accurate patterns from original fashion sketches, flats or specification drawings is an essential skill for the fashion practitioner in the competitive and constantly evolving fashion industry.

Learners will develop the knowledge and skills to alter and develop pattern blocks suitable for a range of fashion outcomes. They will develop the skills to select, adapt and alter pattern blocks to produce full-size patterns that take into account the potential and limitations of selected designs and materials. Learners will become aware of the purposes of pattern-development skills. They will develop the skills to be able to use materials appropriately and economically through the use of lay planning and material costing. Learners will become aware of the uses and potential of computer-aided design (CAD) and computer-aided manufacture (CAM) within the fashion industry. Throughout their project work, learners will evaluate the potential and limitations of pattern development techniques and processes.

● Learning outcomes

On completion of this unit a learner should:

- 1 Be able to prepare blocks for pattern construction
- 2 Be able to make full-scale patterns
- 3 Be able to prepare a lay plan for production
- 4 Understand own pattern development.

Unit content

1 Be able to prepare blocks for pattern construction

Identification and selection of basic blocks: male, female; bodice, skirt, shirt, trouser, sleeve, specialist blocks eg swimwear, raglan, coat

Garment fitting: use of standard measurements eg length, bust, waist, hips, shoulder, sleeve, nape to waist, inside leg

Tools and equipment: for cutting eg table, shears, notchers, hole punch; for measuring eg rule, curved rules, tape, calculator; for marking, set square, grading square, curves, tracing wheel and paper, chalk; for holding eg weights and pattern hooks

2 Be able to make full-scale patterns

Seamlines and design details: seam and hem allowances appropriate for selected material(s)

Correct scale and proportion: garment shape, design details eg collars, darts, pleats, pockets; decorative features, eg appliqué, embroidery, printed details

Manipulation of darts and fullness: eg darts, gathers, pleats, tucks, 'slash and spread' and 'circular' cutting techniques

Modelling and draping on the stand to create patterns: toiles, specialist techniques, eg draping or moulage

Correct technical information: grain lines; seam allowances; notches; pattern piece name; centre front and back marks; number of piece; construction lines; pattern size; other instructions, eg cutting instructions

3 Be able to prepare a lay plan for production

Layplan production: grain, eg warp, weft, bias; features, eg one-way, naps, stripes, checks, pattern matches, specific instructions

Modification of design to accommodate limitations and potential of materials and construction methods: efficient lay planning; applying modification to a pattern to ensure minimum fabric wastage

Estimating cost of material(s): calculations of cost and meterage of specific material(s) required

Computer-aided design (CAD) and computer-aided manufacture (CAM): awareness of these tools for commercial design and manufacture

4 Understand own pattern development

Analysis of potential and limitations of processes and materials: block adaptation, pattern development, alteration for fit, economic use of material(s) for specific fashion idea(s), final outcome

Pattern development: design considerations eg form, shape, structure, size, proportion; modifications, refinements, revisions, alterations, techniques, processes, tools; methods eg annotated studies, notes, worksheets, design sheets

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 prepare accurate and well-fitting blocks for pattern construction [IE, RL, EP]	M1 produce accurate and well-fitting blocks and patterns that effectively interpret and develop the features of design ideas	D1 independently produce an innovative series of blocks and finished patterns with lay plans and costings that highlight practical skills and theoretical understanding, making perceptive and comprehensive evaluations of own pattern development.
P2 develop an accurate full-scale pattern that interprets the original design ideas [CT, TW, EP]	M2 create economical lay plans and accurate costings for the range of work produced, making considered evaluations of own pattern development.	
P3 prepare lay plans for production purposes [RL]		
P4 prepare costings for production purposes [IE, SM]		
P5 review own pattern development. [RL]		

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

This unit has been designed to enable learners to realise fashion garments from their own fashion sketches and designs. Typically, delivery would be through briefs that reflect current professional practice. An effective method of delivery may incorporate other specialist fashion units into 'design and make' project briefs that would provide opportunities for integrated project work.

Learning outcome 1 covers the preparation of accurate and well-fitting blocks for pattern construction. Tutors should introduce the range and purpose of standard blocks: bodice, skirt, shirt, sleeve and specialist blocks relevant to the particular project brief requirements. This learning outcome could be delivered by tutor demonstrations and relevant practical exercises which should enable learners to develop the skills to select relevant blocks for specific project briefs. Learners need to become familiar with the use of standard measurements to adjust blocks for particular purposes. Again, tutor demonstration and relevant exercises may be the most appropriate delivery tools.

For learning outcome 2, learners need to acquire the knowledge and skills to produce a full-size pattern that correctly interprets the original design idea. Learners need to be aware of, and be able to apply correctly, scale and proportion and the effective manipulation of fullness using a range of pattern-cutting techniques and work on the dress stand. Delivery may be most effective in the form of tutor-led discussions regarding the purpose of techniques as well as practical demonstrations of pattern-making techniques. Learners need the opportunity to apply these skills and techniques to their own pattern-cutting project work.

Learning outcome 3 covers effective lay planning and costing of materials. Learners need to know lay planning methods and constraints: straight of grain, repeat pattern, nap, pile and bias cut. Learners also need to be taught how and why designs and patterns may need to be altered in order to achieve economically efficient outcomes. Effective delivery would be tutor demonstration and subsequent practical application by learners. Learners also need to prepare detailed costings for production purposes, which will include considerations relevant to their designs of fabric type, amount and other factors such as the necessary tools, materials and equipment required for production.

Awareness of the purpose of the use of CAD and CAM in the fashion industry could be developed through a tutor-delivered presentation, backed up by a research assignment.

Learning outcome 4 requires learners to review their own pattern development work. Learners need to be taught, and encouraged to evaluate, the potential and limitations of the techniques explored throughout the development of project work. Analysis may take the form of notes developed throughout project work and records of discussions with tutors and/or peers.

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.
Introduction to pattern making – tutor-led workshop to make a pattern from a block or by drape modelling on a stand.
Learner-initiated study.
Making a basic block from learner measurements – tutor led.
Tutor led workshop to demonstrate lay planning. Use CAD/CAM if available.
Assignment 1: A Collarless Box Jacket from Block Learners: <ul style="list-style-type: none">• choose sleeve design• develop pattern• draw out and label pattern• draw and cost lay plan for two different fabrics – one with nap, one without• present pattern with lay plan.
Learner-initiated study.
Assignment 2: Economical Lay Planning Working from their own design for a sleeveless dress using a low budget. Learners: <ul style="list-style-type: none">• translate fashion design to a pattern• fit pattern and alter as necessary• research fabrics suitable for budget and pattern• draw lay plan with costings• review and refine work• present work with rationale.
Learner-initiated study.
Assignment 3: Catwalk Outfits To make pattern from their own design for two catwalk outfits. Learners: <ul style="list-style-type: none">• research on fabrics suitable for budget and design• develop pattern• mark pattern• draw lay plan with costings• adapt pattern to fit• adjust pattern and lay plan to budget• complete and present pattern• present work with rationale.
Learner-initiated study.
Review of unit and assessment.

Assessment

For P1, learners must prepare accurate blocks for pattern construction. Evidence may be in the form of selection of appropriate blocks and the adaptation of blocks for a specific purpose using standard measurements. Observation record sheets would be an effective method of evidencing the safe and effective use of specialist pattern-cutting tools and equipment.

For P2, learners need to develop an accurate full-scale pattern that interprets correctly the original design idea. Learners may provide evidence in the form of full-scale patterns which have been developed in response to fashion ideas. This should be supported with a folder of technical notes. Evidence of awareness of the use of CAD and CAM within the fashion industry could be in the form of an illustrated set of notes or an essay.

For P3 and P4, learners need to evidence that they have prepared lay plans and detailed costings for production purposes. They need to show their understanding of lay-planning methods and constraints: straight of grain, repeat pattern, nap, pile and bias cut. Learners also need to evidence how and why designs and patterns may need to be altered in order to achieve economically efficient outcomes. Evidence to support their understanding of lay planning needs to be in the form of lay plans for a specific garment designs and supporting folder. For both lay plans and costing, evidence could be through annotated studies, notes, reports, calculations, witness statements or recordings of learners' presentations.

For P5, learners must evaluate their own pattern development. This may be in the form of ongoing notes on the potential and limitations of techniques and materials throughout the project. Written evidence of discussions with tutors and peers, as well as clearly linked audio evidence, may also be used.

For M1, learners can need to produce well-finished blocks and patterns that interpret and develop the features of design ideas. Evidence is in the form of well-finished and accurately labelled blocks and patterns that meet these requirements. Learners need to show evidence of a thorough understanding of pattern construction, lay planning and costing techniques in the range of work produced. Evidence needs to be in the form of successfully developed pattern work, showing sound understanding of the purposes of techniques and the practical application of these techniques.

For M2, learners must evidence considered review and evaluation of their pattern development and a comprehensive folder of detailed technical notes. Other evidence can take the form of that outlined for P3 and P4.

For D1, learners need to independently produce original and imaginative blocks, finished patterns, lay plans and comprehensive costings that highlight practical skills and theoretical understanding. Practical and theoretical work should demonstrate informed understanding of pattern development. Learners should produce comprehensive evaluations on the functional and aesthetic qualities of their designs.

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, P4	Assignment 1: A Collarless Box Jacket from Block	Dressmaker makes blocks.	Tutor, self evaluation.
P1, P2, P3, P4, P5 M1, M2 D1	Assignment 2: Economical Lay Planning	Patternmaker translates a fashion design to a pattern, fits pattern and alters as necessary. Researches fabrics suitable for budget and pattern and prepares lay plan with costing.	Tutor, self evaluation.
P1, P2, P3, P4, P5 M1, M2 D1	Assignment 3: Catwalk Outfits	Patternmaker makes pattern from own design for two catwalk outfits.	Tutor, self evaluation.

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	Pattern Grading for Fashion and clothing
Introduction to Garment Making	Developing Production Techniques for Fashion	Exploring Specialist Techniques
Introduction to Fashion Design	Working with Fashion Design Briefs	Pattern Construction for Fashion and Clothing
Explore Materials, Techniques and Processes in Art and Design	Working with Textiles Briefs	Production Techniques for Fashion and Clothing
		Fashion Media, Techniques and Technology

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

- TP18 Drafting pattern for costumes
- AMTech13 Construct and adapt patterns to customer requirements
- AMTech19 Investigate markets, materials and styles
- 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

It is important that learners have access to sufficient studio space to be able to produce full-scale patterns. Learners should also have access to professional pattern-cutting tables of the correct height (one metre) to avoid strain on the back, shoulders and neck. Tailors, models should be available if drape modelling exercises are planned. Learners should also have access to software applications and the internet.

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 future 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 – *Fabric, Form and Flat Pattern Cutting* (Wiley Blackwell, 2007) ISBN 978-1405136204

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

Aldrich W – *Pattern Cutting for Women's Tailored Jackets: Classic and Contemporary* (Wiley Blackwell, 2001) ISBN 978-0632054671

Armstrong H – *Patternmaking for Fashion Design* (Pearson, 2005) ISBN 978-0132003292

Carr H – *Fashion Design and Product Development* (Wiley Blackwell, 1992) ISBN 978-0632028931

Jenkyn Jones S – *Fashion Design (Portfolio Series)* (Laurence King, 2005) ISBN 978-1856694360

Shoben M and Ward J – *Pattern Cutting and Making Up for Outerwear Fashions* (Butterworth-Heinemann, 1994) ISBN 978-0750621380

Silberberg L and Shoben M – *The Art of Dress Modelling I* (Butterworth-Heinemann, 1992) ISBN 978-0750602570

Tallon K – *Creative Fashion Design with Illustrator* (Batsford, 2006) ISBN 978-0713490220

Journals

Arena

Art Monthly

Art Review

Contemporary

Crafts Magazine

Creative Review

Design Magazine

Drapers

Elle Decoration

GQ

International Textiles

Selvedge

Vogue

Website

www.drapersonline.com

www.vogue.co.uk

www.skillfast-uk.org

www.craftscouncil.org.uk

www.design-council.org.uk

www.designmuseum.org

www.vam.ac.uk

www.creativehandbook.co.uk

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

www.fashion-era.com/C20th_costume_history

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

www.textilearts.net/directory/textile_traditions/museums

[www.manchestergalleries.org/our-other-venues/
platt-hall-gallery-of-costume/the-collection](http://www.manchestergalleries.org/our-other-venues/platt-hall-gallery-of-costume/the-collection)

Drapers magazine online

Vogue Magazine

The Sector Skills Council for Fashion and Textile

Crafts Council

Design Council

Design Museum

Victoria and Albert Museum

Showcasing Creative Services

Contemporary Japanese Textiles

Costume history line drawings

Silver Studio

Textile art

Gallery of Costume

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	developing accurate full-scale patterns that develop original design ideas
Reflective learners	preparing accurate and well-fitting blocks and lay plans for pattern construction
Team workers	sharing studio space with others when drawing out large patterns
Self-managers	preparing detailed costings for production purposes
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	
Enter, develop and format information independently to suit its meaning and purpose including: <ul style="list-style-type: none"> • text and tables • images • numbers • records 	designing digitally using scanners inputting and formatting information from sources
Bring together information to suit content and purpose	developing design ideas digitally importing visual and textual information relevant to brief/activity
Present information in ways that are fit for purpose and audience	using digital means to plan, create and give presentations to different audiences
Evaluate the selection and use of ICT tools and facilities used to present information	assessing their progress and commenting on the appropriateness of their selection of ICT tools and facilities, eg use of software
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

Skill	When learners are ...
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 measuring correctly for lay plans and producing information for fabric purchasing
Select and apply a range of skills to find solutions	costing and producing budgets and estimates
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	
English	
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 discussing the project brief describing the physical properties and characteristics of different materials contributing to group discussions and the sharing of ideas evaluating their own and others' designs and finished work presenting to target audiences
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	seeking and reading and responding to research annotating, commenting and comparing using contextual texts and images to relate to their own ideas evidencing understanding through discussion, crit sessions, evaluations and presentations
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.