



# **INTERMEDIATE APPARE PRODUCTION NTQF LEVEL II**

## **Learning guide #24**

**Unit of Competence: Interpreting Pattern and  
Applying Pattern Information**

**Module Title: Interpreting Pattern and Applying  
Pattern Information**

**LG Code: IND IAP2M07 LO1-LG-24**

**TTLM Code: IND IAP2TTLM07 09 2019**

**LO1 : Analyze pattern making process**



## Instruction Sheet

## Learning Guide 24

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- ✓ Pattern making terminologies
- ✓ pattern making tools and equipment's
- ✓ Principles of pattern making
- ✓ Identification of Block Construction
- ✓ Identifying and analyzing
- ✓ impact of pattern making on production

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to

- Master pattern-making terminology
- Using pattern making tools and equipment's
- identify *Principles of pattern making*
- identify Block construction as required
- identify and analyze Pattern-making and pattern-modification processes
- Analyze Impact of pattern making on production
- ***Develop communication and work schedule with fit model for measurement taking, fittings and presentation of garments.***



## **Learning Instructions:**

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described in number 1 to 7.
3. Read the information written in the “Information Sheets 1”, Information Sheets 2, Information Sheets 3, Information Sheets 4, Information Sheets 5, and Information Sheets 6. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-check 1”, “Self-check 2”, “Self-check 3” “Self-check 4”, “Self-check 5” “Self-check 6”
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 1 “Self-check 2”, “Self-check 3” “Self-check 4”, “Self-check 5” “Self-check 6”).
6. If you earned a satisfactory evaluation you can proceed to Learning Guide #25.  
However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity.
7. Submit your accomplished Self-check. This will form part of your training portfolio.



## Information Sheet-1

## Terminology related to pattern construction

### 1.1 Terminology related to pattern construction:

**Grain:** the direction in which the yarn is woven or knit (lengthwise grain or warp, crosswise grain or weft)

**Selvedge:** the narrow, firmly woven, and finished strip on both lengthwise grain edges of the woven fabrics.

**Muslin:** a plain woven grey fabric made from bleached or unbleached corded yarns in variety of weights.

**Bowing:** condition of fabric that is off grain due to yarns not at true right angle with each other.

**Pattern Grading:** proportionally increasing or decreasing the size or shape of an original pattern within a give size range.

**Land Marks:** designated points around the body that corresponds with those of the form.

**Dart:** a wedge shape cut out in a pattern used as a means of controlling the fit of the garment. It has legs, intakes and points.

**Ease:** the even distribution of fullness without forming gathers.

**Template:** patterns one fourth or one half the regular pattern.

**Horizontal balance line:** A straight line parallel with the floor.

**Block Pattern:** it is the foundation pattern that reflects the size, shape and posture.

**Style Number:** it is an identification number used to code the pattern set.

**Notches:** It is illustrated as a straight line with a cross mark at the end. It is mainly used for identification of front and back, identification of joining parts, ease and gather control, centre line and seam allowance.

**Seam allowance:** It is an extra part added on the final pattern for proper stitch of the joining parts with sufficient allowance and proper joining of parts



## *Self-Check -1*

## *Written Test*

**Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page**

1. ....is an identification number used to code the pattern set? **(3points)**

- a) **Style Number**
- b) Notches
- c) Seam Allowance
- d) Grain

2. ....is illustrated as a straight line with a cross mark at the end **(3points)**

- a) Seam Allowance
- b) Grain
- c) Selvedge
- d) **Notches**

3..... is the foundation pattern that reflects the size, shape and posture?  
**(3points)**

- a) Seam Allowance
- b) Grain
- c) **Block Pattern**
- d) Selvedge
- e) Notches



**Note: Satisfactory rating - 3 points**

**Unsatisfactory - below 3 points**

You can ask your teacher for the copy of the correct answers.

### Answer Sheet

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



## Information Sheet-2

## pattern making tools and equipment's

### 1.2 pattern making tools and equipment's

1.2.1 Pattern blocks, scissors, ruler, square rule, marker pens, hole punch, pins, fashion triangle, French curve, pattern notches, weights, tape measure

1. **Straight pins:** Dress maker used it for draping and fitting.
2. **Straight pin holder:** Pincushion or magnetic holder which is used for wrist and table.
3. **Scissors:** There are different types of scissors such as paper scissor, **fabric** scissor etc.
4. **Pencils and pens:** Mechanical pencil and sharpener which is used for pattern work.
  - Red and blue colored pencils are used to identify pattern changes. Black, green, red and blue felt tip pens for pattern information.
5. **Rulers:** *Tailors* square (24 × 14) inch metal ruler with two arms forming a 90° angle that measures, rules and squares simultaneously.
  - Also used to triangle with the measurements to square lines.
6. **Curve rules:** French curve is one of the several curves used for shaping arm hole and neck line.
7. **Hanger hooks or ringers:** It is used to hold the patterns together for hanging on rods.
8. **Push pins:** Push pins are used for pattern manipulation. It also prevents pattern slippage when cutting several plies of paper together.
9. **Magic mend scotch tape:** It is used to mend pattern work.
10. **Black twill tape:** Black twill tape is used for the placement of style lines on garments.
11. **Notcher:** It is used to indicate seam allowance, center line and also to identify front and back of patterns.
12. **Tracing wheels:** It is used to transfer pattern shape into paper.



- 13. Awl:** It is used to indicate the ending of darts, pocket, trim and button hole placements.
- 14. Metal weight:** Metal weight is used to hold the patterns in place for tracing and marking.
- 15. Measuring tape:** It is used to measure the size of pattern.
- 16. Tailors chalk.** Tailors chalk is used for making adjusted seams and style lines.

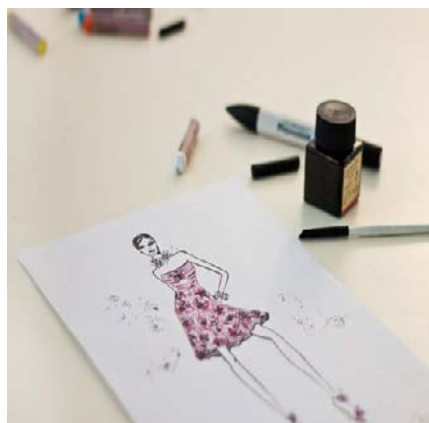
### 1.2.2 Sketches, drawings, illustrations, photographs

**Fashion Illustration** is the art of communicating **fashion** ideas in a visual form that originates with **illustration, drawing** and painting and also known as **Fashion** sketching.

A fashion sketch consists of the figurative fashion drawing of a slightly exaggerated, idealized and stylized human figure (male or female) along with the clothes and accessories adorning it.

You draw the human figure with your clothing design and present everything about the style of clothing, embellishments you want to add on it, then pepper it with the attitude you want to convey with that particular style – there you have your fashion sketch laid out for the world to take notice.

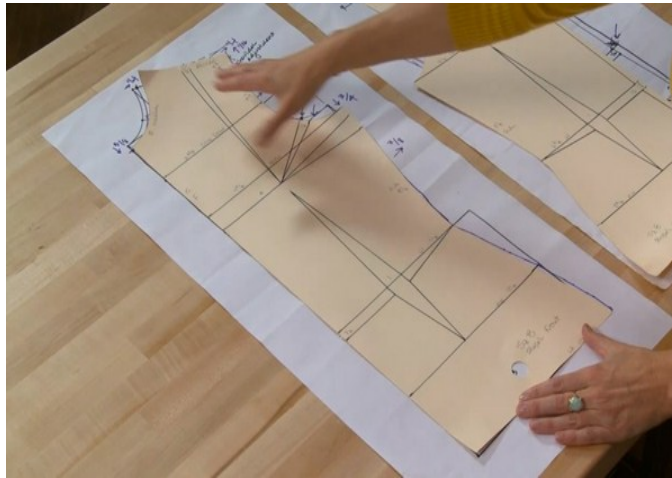
So you can say that a Fashion sketch is the first step in creating beautiful garments







**1.2.3 Samples of fabrics and garments:** A Pattern is the core of the product development process. A Pattern is the blueprint or template used to cut out the fabric which makes the sample. A good Pattern has considered Design, Balance, Fit, and reflects your idea perfectly



**1.2.4** Written descriptions and instructions

**Patterns for making Patterns** Understandable contain **patterns** that capture. **Pattern** is just "a **description** of a solution to a problem found to occur .You are **writing a pattern** language that provides step by step **instruction**

**1.2.5** A **specification sheet:** Specification sheets commonly referred to as "**Spec Sheet,**" is produced to provide essential details to ensure the correct execution of your designs into professionally finished garments. It should be given to the factory whenever a sample needs to be made and when you issue a docket.



**2.2.4 Storyboards:** A storyboard is a graphic organizer in the form of illustrations or images displayed in sequence for the purpose of pre visualizing a motion picture, an Straight pins Straight pin holder Scissors: Pencils and pens

### Storyboards



**2.2.4** Motion, motion graphic or interactive media sequence.

Rulers, Curve rules Hanger hooks or ringers Push pins Notches , Tracing wheels Metal weight Measuring tape Tailors chalk A specification sheet:

**2.2.5 CAD software :** Available 3D CAD software for the clothing manufacturing industry is listed in the below:

- Modaris 3D Fit from Lectra,
- Virtual fashion from Reyes Infografica,
- Vidya from Assyst-Bullmer,
- Accumark Vstitcher from Gerber,



- 3D Runway from Optitex,
- Haute Couture 3D from PAD System,
- Design concept from Lectra,

**CAD** is the contraction which stands for **Computer Aided Design**. This term means different things to different people involved in designing, manufacturing and mechanical engineering. **CAD** or **Computer Aided Design** has brought a revolution in the Textile industry, especially in **apparel** industry.



<b>Self-Check -2</b>	<b>Written Test</b>
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**Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page what is a Straight pin?**

1. What is Straight pin holder?
2. What is Scissors?
3. What is Pencils and pens?
4. What is Rulers?
5. What is a Curve rule?
6. What are Hanger hooks or ringers?
7. What is Push pins?
8. What is Notcher?
9. What is tracing wheels?
10. What is Metal weight?
11. What is Measuring tape?
12. What is Tailors chalk?
13. What is A specification sheet?
14. What is Storyboards?



**Note: Satisfactory rating - 14 points**

**Unsatisfactory - below 14 points**

You can ask your teacher for the copy of the correct answers.

### Answer Sheet

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



### Information Sheet-3

### Pattern making Principles

#### 1.3 Patternmaking Principles

For making flat pattern and for making alterations according to different design it is very important to know the pattern making principles. If we know the basic principles of pattern making and alteration, we can create any design without affecting the size and shape of the original pattern. Any pattern can be created and modified if we know the basic three principles, which are:

- 1.3.1 Principle of dart Manipulation:** there are many rules for creating, combining and dividing the darts and transferring dart at different places on a pattern piece. Dart can be shifted to a new place by slash and spread method and by pivot method.
- 1.3.2 Principle of added Fullness:** there are rules for adding fullness in a garment. Fullness can be provided in a garment with the help of gathers, pleats, tucks etc.
- 1.3.3 Principle of contouring:** there are rules for making contoured patterns to make it fit the curves of the human figure.



### Self-Check -3

### Multiple choose Written Test

**Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page**

1.....is can be provided in a garment with the help of gathers, pleats and tucks

**(2 points)**

- a) Principle of dart Manipulation
- b) Principle of added Fullness
- c) Principle of contouring

2.....is used to make fit the curves of the human figure. **(2 points)**

- a) Principle of dart Manipulation
- b) Principle of added Fullness
- c) Principle of contouring

3. ....is used to shifted to a new place by slash and spread method and by **(2 points)** pivot method

- a) Principle of dart Manipulation
- b) Principle of added Fullness
- c) Principle of contouring



**Note: Satisfactory rating - 3 points**

**Unsatisfactory - below 3 points**

You can ask your teacher for the copy of the correct answers.

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_





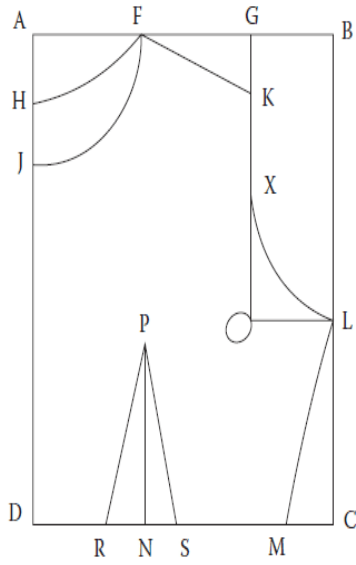
## Information Sheet-4

## Identification of Block Construction

### 1.4 Identification block construction

A slope **pattern** (home sewing) or **block pattern** (industrial production) is a custom-fitted, basic **pattern** from which **patterns** for many different styles can be **developed**. The process of changing the size of a finished **pattern** is called grading.

- **GRAIN LINE:** Grain line is always parallel to the warp of vertical yarns. This is shown on the pattern with a straight line with arrow on both side of the line. It is denoted as: Warp, Weft and Bias grain lines.
- **STYLE No:-**is always present on the pattern this mark shows the style no. which you have taken for particular design.
- **DART:** Dart is represented with the symbol of triangle with a straight line at the centre of the angle, .and all the three line start from the same point.
- **NOTCHES:** Notches are given in the pattern to show the indication of seam allowance and balance marks. it indicate dart legs, joining parts used in final assembly, folding part, identifying parts etc.
- **ON-FOLD :** On-fold mark is given on the pattern to indicate that fabric will fold here while cutting
- **Drill mark:** it helps to indicate dart point, pocket placement and so on
- **Cutting instruction:** the no. of pieces cut out of the given pattern piece. E.g. cut 1, cut 2, cut 4
- **Size:** it shows the appropriate size of the pattern piece. E.g. small, medium, large etc





Self-Check -4	Written Test
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**Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page**

1. .... is represented with the symbol of triangle with a straight line at the centre of the angle(3 point)

- a) Grain line
- b) Dart
- c) Notches
- d) On-fold
- e) Drill mark
- f) Cutting instruction
- g) Size

2. ....is always parallel to the warp of vertical yarns(3 point)

- a) Grain line
- b) Dart
- c) Notches
- d) On-fold
- e) Drill mark
- f) Cutting instruction
- g) Size

3 .....are given in the pattern to show the indication of seam allowance and balance marks

- a) Grain line
- b) Dart
- c) Notches
- d) On-fold



- e) Drill mark
- f) Cutting instruction
- g) Size

**Note: Satisfactory rating - 3 points**

**Unsatisfactory - below 3 points**

You can ask your teacher for the copy of the correct answers.

**Answer Sheet**

Score = _____
Rating: _____

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. \_\_\_\_\_
2. \_\_\_\_\_



## Information Sheet-5

## Identifying and analyzing pattern-making and pattern-modification processes

### 1.5 pattern-making and pattern-modification processes

Pattern can be made in any of the three major ways-either by drafting, draping fabric on a dress form or by flat pattern designing. Flat pattern method is the technique of developing patterns for varied styles by modifying a basic pattern.

#### Methods of Pattern Making:

The concentration here is on the type of communication from the fashion designer that takes initiates the patternmaking method. Basically pattern making consist three methods –

- **Paper Pattern Making**
- **Draping**
- **Digital Pattern Making**

**a. Paper Pattern Making:** A system of pattern making that depends on measurements taken from a dress form or model to create basic, foundation, or design patterns. It is a two dimensional basic method of preparing a paper pattern. The garment prepared by this method fits exactly to the satisfaction of the wearer or consumers. It is economical to draft one's own pattern. Also changes in style can be made adopting the basic pattern set. Measurements for total length, Neck, chest, Shoulder, waist, hip and so on, and ease and sewing allowances are marked on paper and construction lines are drawn to complete the pattern.

**b. Draping:** Draping can be treated as one involving a detailed survey and study of the figure to build up a reliable fitting experience. Draping originally was called modeling. This was the original method of



constructing garment patterns. Draping is a free approach and is always to a certain extent experimental and cannot be described as a precise technique. It involves the draping of a two dimensional piece of fabric around a form, conforming to its shape, creating a three-dimensional fabric pattern. Ease allowances for movement of body are added to make the garment comfortable to wear. Advantage of draping is that the designer can see the overall design effect, style and silhouette of the finished garment on the body form before the garment piece is cut and sewn. However, it is more expensive and time consuming than paper pattern making. Draping can be made on a dress form.

**Digital Pattern Making:** A system of pattern making which depends on measurements taken from a dress form or model or measurement chart which is given by buyer. In this system mainly created one specific size pattern which called basic size or base size. After that adding grading on basic size according to measurement differences between basic to other sizes to different sizes pattern. Then completion of grading all sizes pattern sent to marker making for industrial bulk production. Different types of pattern making software are used in industry to make the pattern. Like LECTRA, GERBER TECHNOLOGY, TUKA TEC, OPTITEX and so on. It is one of the easiest ways, time consuming and requires minimum number of staff rather than paper pattern making and draping.

**Process of Pattern Making:** Above mentioned method there are different pattern making terms which are related to the workroom have pointed out in the following:

- Pattern Drafting
- First Pattern
- Working Pattern



- Revised Pattern
- Grading Pattern
- Master or Block Pattern
- Production Pattern

**a. Pattern Drafting:** Pattern drafting is most often associated with apparel. It is a form of drafting used to produce, through a series of stages, a graded paper pattern for sewing. Using body measurements, a pattern maker converts individual specifics into a series of straight lines and curves on template paper. During subsequent stages, those lines and curves determine how the garment is broken down into sections, cut and tested for fit, and ultimately converted to a reusable pattern. Specific methods and stages of pattern drafting vary from pattern maker to pattern maker, depending on each professional's chosen approach, any software used, and if the pattern is intended for eventual mass production.

**b. First Pattern:** The first pattern is a pattern set that has been created from drafting pattern. Where trace the main line or necessary lines from drafting pattern no seam allowance include on it. It usually prepares to check the shape of the pattern. The original pattern or first pattern developed for each design. Half a pattern for front, back & sleeve is developed unless the design is asymmetrical.

**c. Working Pattern:** After the testing or checking shapes from first pattern then added sewing allowance on it which known as working pattern. Working pattern is that which is used as a base for manipulation to generate design patterns. This pattern is generally made from mark on paper and usually requires fitting and adjustments. Then it transfer to fabric to stitch for checking fit of a particular body measurement according to requirements.

**d. Revised Pattern:** This pattern process not work anymore unless if any problems are on working pattern then need to solve the



problem and modify on it which called revised pattern. After checking sample, understands which measurements have to modify. Again trace modify pattern and add seam allowance after modify pattern then it will turn in to working pattern. On revised pattern then it transfer to fabric for stitching and checking fit

**e. Graded Pattern:** Pattern grading is the process of turning base size or sample size patterns into rest of sizes using a size specification sheet according to measurements. Grading system can be done manually or digitally using computerized pattern cutting software. This system is referred to as garment grading rules. Grading is a necessary step that must be taken before approaching sample manufacturers or factories, because they require sets of your specific patterns and an order of garments to be produced. Grading determines how your garments will fit in all sizes. Having a variety of sizes for each of your garments fills out your minimum garment order cost effectively. Grading will not create shape or changing shape, but only system to increase or decrease size of original shape.

**f. Master or Block Pattern:** A master or block pattern is a basic garments shape from which a pattern drafted from as starting point. Also known as a basic template, from this clothing patterns are created with different design variations. Pattern cutters use basic pattern shapes and adapt draft pattern each season to create clothing connection with different wearing ease for fitted, semi fitted and loose fitted shapes. Block pattern is any pattern without seam allowance from which other pattern are designed, also called block pattern or foundation pattern. Ease is the amount of space in a garment beyond the body measurement, the specific amount of ease will from style to style.

**g. Production Pattern:** The production pattern is a pattern set that has been correct and perfect and contains every pattern piece required to complete the garment. In the production pattern have seam allowance & all information. Production pattern has to be full pattern as we always make half pattern of full garments. There are some basic info should be included like Grain line, Style name, Size, and sometimes number of cut





<b>Self-Check -5</b>	<b>Written Test</b>
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**Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page**

1. What are Methods of Pattern Making?
2. What is Process of Pattern Making?
3. What is Paper Pattern Making
4. What is Draping Pattern Making
5. Digital Pattern Making



**Note: Satisfactory rating - 3 points**

**Unsatisfactory - below 3 points**

You can ask your teacher for the copy of the correct answers.

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_



## Information Sheet-6

## Analyzing impact of pattern making on production

### 1.6 Impact of pattern making on production

It is one of the most important parts of garment manufacturing industry. Pattern making is a highly skilled technique which calls for technical ability, sensitivity for design interpretation and a practical understanding of garment construction.

Pattern making is a bridge function between **design** and **production**

A correct pattern helps to make an **appropriate sample**. Pattern contains clear **information** of construction, **sewing allowance, grain line & fabric cutting direction**. It helps to get more order from buyers. Pattern suggests the factory to estimate the resources required for construction of a particular style. It is one of the most important parts of garment manufacturing industry. Pattern making is a highly skilled technique which calls for technical ability, sensitivity for design interpretation and a practical understanding of garment construction.

Pattern making is a bridge function between design and production



<b>Self-Check -6</b>	<b>Written Test</b>
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**Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page**

1. One of the following is Pattern information of construction **(3 point)**
  - a) sewing allowance   b) grain line   c) fabric cutting   d) **all of the above**
2. .... is a bridge function between design and production **(3 point)**
  - a) **Pattern making**   b) pattern grading   d) sample making

**Note: Satisfactory rating - 3 points                      Unsatisfactory - below 3 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = _____
Rating: _____

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_



## Reference:-

- 1) Complete Guide to Sewing; THE READER'S DIGEST ASSOCIATION LIMITED; 1987.
- 2) Helen Joseph-Armstrong Patternmaking for Fashion Design, 5th Edition 2009
- 3) Metric pattern making book
- 4) EOS Level II; UOC 5; Version 2011 G.C.
- 5) Untitled hand outs.