Subject: Principles of Pattern Making

Unit 1: Introduction to pattern making

Quadrant 1 – E-Text

Learning Objectives

The learning objectives of this unit are to:

- Match a tool to their function for drafting patterns.
- Identify the different weights of muslin and paper.
- Discuss the importance of the dart.
- Discuss the importance of math in all aspects of the production process.
- Use workroom related terms accurately when communicating with associates.
- Define production terms and the associate’s tasks related to the terms.

1.1 Pattern Making Methods

Drafting

Drafting is a method of pattern making in which the body measurements are taken accurately. Ease is then added for easy body movement.

Pattern are made based on calculations and step by step instructions.

Drafting:

- Can be done with only measurements.
- It assists in creating various designs.
- It requires a model or dress form to take measurements.
- Some measurement can be found by using the calculation, when all the measurements are not available.
- It is widely used in the readymade garment industry, and
- Can make use of computer applications.

Drafting:

- Requires many calculations.
- The fit can be seen only during test fit.
- Is time consuming.
1.2 Draping
This is a pattern making technique in which the muslin fabric or similar fabric of the original garment put directly on the dress form to make the patterns.

The fabric is adjusted for fit, dart, ease and design (like gathers, pleats etc) and outline of the garment parts is traced to make the patterns.

Draping:
- Is easy no calculation required.
- Allows the fit to be seen without stitching.
- Is best suited for contour fit garment.
- Does not require body measurements.
- Is used by most of designers.

Draping:
- Requires a dress form for every customer.
- Requires the model to stand till the draping is over. This can take a long time.

1.3 Knockoff
The knockoff method:
- Is useful if you want to reproduce the garment with same fit.
- Does not require pattern making skills.

In this method:
- Garment parts are copied into patterns.
- Garments are ironed and folded into half and place on the flat table and seam lines are traced. Then necessary seam allowances and marks added later.

The knockoff method:
- Is easy to make patterns.
- Can achieve similar fits.

In the knockoff method garments with Darts is difficult to knock off. Today many manufacturers developed the Apparel CAD System.
Some of the developers are:

- Optitex
- Gerber
- Lectra
- Pad
- Tucktech
- Pad
- Investronica

1.4 Digitizer

With the digitizer patterns can be digitized with the help of mouse. All the pattern marking like Grainline, Notches, pockets can be marked while digitizing. Nested digitized can be done for graded patterns.

The pattern development system helps to make the flat patterns on computers. It helps to make the patterns, Check the patterns, Adding Seam allowances, marking notches, Walking the pieces, Grading etc. Today many developers are offering 3D Virtual stitching.

1.5 3D Virtual Sampling

3D body scanners are used to scan the models. Then the models are imported in virtual sampling application. Preset models are also available. The models measurements are adjusted if required.

The patterns are placed in position and stitching lines defined. The simulators virtually stitch the garment. The fabric properties can be adjusted. The required fabric designs can be rendered and many fabric design combination rendered easily.

Garment fitting can be seen for the same.

1.6 Marker Making System

The Marker Making System helps to make the markers.

Automarker save lot of time to the operator and help to increase the efficiency.

1.7 Plotters

Plotters help to print the patterns in real size. The marker also plot in real size and used for cutting.

1.8 3D Body Scanner
A 3D body scanner used to scan the body and converting into digital format. This enables many measurements to be taken accurately. It has a light-emitting device that can produce scans accurate to 1/16”.

1.9 Pattern Making Terminology And Principles

Pattern making requires a number of tools that help during the pattern making process. This includes an awl, compass, French curve, Hip curve ruler, square, muslin, notcher, pattern making paper, mechanical pencils, pins, push pins, ruler transparent, scissors or shears, measuring tape, and tracing wheel.

The awl is a Pointed tool with a wooden handle. Used to pierce small holes such as to indicate apex, Pocket markings etc.

The compass is a tool consisting of two rods, one sharply pointed and the other equipped with a drawing end; Compasses are available in various sizes to draw circles of different measurements. It is used for making ruffles and circular skirts.

The French curve is A plastic curve shape device used to draw curve lines like armhole and neck shapes.

The Hip curve ruler is a wooden / Plastic / metal curved shaped ruler. The Edges are marked with measurements. It is mostly used to draw the hip shape of the skirt and Pant. It can be used to draw slight curve shape like Hemline etc.

The L square is A wooden / metal / plastic ruler with one side longer than the other. It is used to make perpendicular lines.

Muslin is a plain weave fabric used for test fit the garment. Available in light, medium and heavy weights.

The Notcher is a hand punching tool which produces a 1/16” (0.2 cm) nick in pattern. Used to establish notches at the outer edge of seam when pattern is completed.

White or Brown coloured paper available in a variety of width and weights. Light weight papers are used while drafting and thicker papers are used for sloppers. Some papers available with dot at 1” interval for easy marking and drawing parallel and perpendicular lines.

Mechanical pencils are used to draw patterns. Normally 4H lead is used for pattern making.

Size 17 pins are used to pin the fabrics.

Push pins are used to pin the pattern on the table.
The transparent ruler is a see through scale used to mark parallel lines.

The scissors or shears is a cutting device, used for cutting paper and fabric. Normally 6” to 9” used.

Measuring tape is Plastic coated very flexible 60” long and has metal tips at the ends. These are mostly marked both Inches and centimeters.

A tracing wheel is a pointed wheel at one end and wooden or plastic handle in the other end. It is used to transfer pattern marking.

Metric pattern master is a see through plastic tool useful for marking parallel lines, giving seam allowances and draw bias lines.

1.10 Pattern Terminology

1.11 Conclusion

To summarize, this course, in this unit you have been given an overview of pattern making techniques.