Grading Patterns

ADM4307 Apparel Manufacturing
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Objectives

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  - To understand the concept of grading patterns using CAD.
  - To learn how to create a grade rule table and grade patterns using AccuMark PDS System.

Reference:

Concepts of Pattern Grading

- Pattern grading
  - Pattern grading is the process of systematically increasing and decreasing the dimensions of a master pattern in a range of sizes for production.
  - Due to cost constraints, one sample size pattern is developed and fitted, then other sizes are graded from this master pattern.
  - The purpose is to achieve a good fit in each size without changing the style sense of the garment design from the master pattern.

Pattern Grading Systems

- Grading systems
  - Systems are developed to translate the body changes from size to size to corresponding pattern pieces.
  - A grading system is an aggregate of grade rules that specifies how the increase or decrease is distributed throughout the pattern piece.
  - The procedure to develop a grading system:
    - Collect anthropometrical data
    - Statistically analyze the collected data to determine sizing specification and standards
    - Distribute the dimensions from the size specifications across the body, to replicate the body shape change from size to size.

Grade Distribution

- Grade Distribution
  - The total grade is distributed throughout the pattern.

Cardinal points/ Grade rules

- The dimensional changes are made on the perimeter of the pattern pieces at cardinal points that include the intersection of same and in some cases, curved areas of the pattern.
- A grade rule specifies the amount of increase or decrease at each cardinal point for each size in the size range relate to the sample size.
Graded Nested Pattern

- All sizes graded from the master pattern can be stacked into a graded nest so that the incremental differences are easily observed.
- A simplified grading system assumes the dimensional changes occur equally in the back and front of the body.

Grade Nest Pattern

Grading Methods

- Manual grading
  - Time consuming
  - Waste materials
  - Inaccurate

- Computer grading
  - Efficient and Accurate!

Computer Grading Method

- Cartesian graph concept.
  - The procedure using the Cartesian graph is to first determine the pattern orientation.
  - The X, Y coordinates of a grade rule are based on the pattern orientation.
  - This establishes the zero, zero (0,0) point of reference.

Creating a Grade Rule Table

Creating a Grade Rule Table

Grading with AccuMark/PDS

- AccuMark Explorer
  - To create storage area.
- PDS
  - To open patterns
  - *Preference (please make sure your storage area is)
- PDS
  - To assign Grade rule numbers
  - To assign the Rule table
  - To view grade patterns
- Grade Rule Editor
  - To create Rule table.