

## **Apparel and Textile Production I-Course Outline**

### 1.01

- A. Industrial Revolution
  - 1. Flying shuttle
  - 2. Spinning Jenny
  - 3. Cotton Gin
  - 4. Spinning Mule
  - 5. Elias Howe
- B. 19th Century
  - 1. Sewing Machine
  - 2. Paper Pattern
  - 3. Ready-to-wear
  - 4. Ebenezer Butterick
  - 5. Charles Worth
  - 6. Levi Strauss
- C. 20th Century
  - 1. Standardized sizes
  - 2. WWI & WWII
  - 3. Christian Dior
  - 4. Coco Chanel
- D. 21st Century
  - 1. Internet
  - 2. Fast Fashion

### 1.02

- A. Elements of Design
  - 1. Color
  - 2. Line
  - 3. Shape/form
  - 4. Texture
- B. Principles of Design
  - 1. Balance
  - 2. Proportion
  - 3. Rhythm
  - 4. Emphasis
- C. Design Process
  - 1. Croquis
  - 2. CAD
  - 3. Technology

### 2.01

- A. Characteristics

1. Abrasion resistance
2. Absorbency
3. Durability
4. Elasticity
5. Hand
6. Resiliency
7. Strength
8. Warmth
9. Wicking

## B. Fibers

1. Natural
  - a. Cellulosic
    - i. Cotton
    - ii. Flax/linen
  - b. Protein
    - i. Wool
    - ii. Silk
  - c. Specialty Hair
    - i. Angora
    - ii. Mohair
    - iii. Cashmere
2. Manufactured
  - a. Cellulosic
    - i. Acetate
    - ii. Lyocell
    - iii. Rayon
  - b. Non-cellulosic
    - i. Nylon
    - ii. Olefin
    - iii. Polyester
    - iv. Spandex

## C. Fabric Construction

1. Weaves
  - a. Plain
  - b. Satin
  - c. Twill
  - d. Pile
2. Knits
  - a. Weft
  - b. Warp
  - c. Seamless
3. Non-wovens

## D. Finishes

1. Dyeing

- a. Fiber dyeing
- b. Yarn dyeing
- c. Piece dyeing
- d. Garment dyeing
- 2. Printing
  - a. Roller printing
  - b. Screen printing
  - c. Rotary screen printing
  - d. Heat transfer printing
  - e. Digital printing

## 2.02

### A. Products, processes, and environmental concerns

- 1. Care techniques
  - a. Sorting
  - b. Pretreating
  - c. Machine Washing
  - d. Hand Washing
  - e. Drying Clothes
- 2. Laundry detergents
  - a. Fragrance and dye free detergents
  - b. Light-duty detergents
  - c. HE (high- efficiency) detergents
- 3. Soil and stain removers
  - a. Prewash soil –and- stain removers
  - b. Enzyme presoaks
- 4. Laundry bleaches
  - a. Chlorine bleach
  - b. Non-chlorine Bleach
- 5. Other Laundry Products
  - a. Fabric Softeners
  - b. Water softeners

### B. Permanent Care Labeling Rule

- 6. Fiber Content
- 7. Percentage of fiber by weight
- 8. Identification of manufacturer
- 9. Country of origin
- 10. Care instructions/Symbol

### 3.01

#### A. Evaluating Proper Fit

##### 1. Body Measurements

- a. Male: Chest, Waist, Inseam, Hips, Neck band, and arm length
- b. Female: Back Waist Length, Bust, Waist, and Hips
- c. Determine Pattern Size

##### 2. Indicators of Proper Fit

- a. Shirts and blouses
- b. Jackets and suits
- c. Jeans and slacks
- d. Dresses and skirts

#### B. Understanding Patterns

##### 1. Pattern Envelope

- a. Photo
- b. Pattern Number #
- c. Cost
- d. Sizes Available
- e. Suggested Fabrics
- f. Notions
- g. Yardage
- h. Measurements /size
- i. Sketch

##### 2. Pattern Symbols

- a. Grain line
- b. Cutting Line
- c. Place on Fold
- d. Dart-stitch and fold
- e. Adjustment line

##### 3. Guide-sheet

- a. View Selections
- b. Pattern Pieces to Use
- c. Cutting Layouts
- d. Folds/selvages
- e. Pin/Cut/Mark

### 3.02

#### A. Apparel Construction Tools and Equipment

##### 1. Tools

- a. Measuring
- b. Pinning
- c. Cutting
- d. Marking
- e. Stitching
- f. Pressing

##### 2. Equipment

- a. Sewing machine
- b. Serger

### 3.03

#### A. Characteristics and Types of Stitches

##### 1. Characteristics

- a. Standard Stitching
- b. Basting
- c. Reinforcement Stitching

##### 2. Types of Machine Stitching

- a. Stay-stitching
- b. Standard Seam Stitching
- c. Backstitching
- d. Understitching
- e. Topstitching
- f. Edgestitching
- h. Stitch-in-the-ditch
- i. Zigzag Stitching
- j. Specialty Stitches

#### B. Seams and Seam Finishes

1. Plain seam
2. Flat-felled seam
3. French seam
4. Pinked and stitched seam finishes
5. Zigzag seam finish
6. Overlock (Serged) seam finish
7. Turned and stitched finish

#### C. Reducing Bulk

1. Trimming
2. Grading
3. Clipping
4. Notching

#### D. Controlling Fullness

1. Darts
2. Casings

3. Easing
4. Gathering
- E. Interfacing
  1. Fusible
  2. Non-fusible
- F. Hems
  1. Applying hems (marking, finishing, removing fullness, finishing)
  2. Machine
  3. Hand
- G. Fasteners
  1. Zippers (lapped and centered)
  2. Buttons/buttonholes
  3. Snaps
  4. Hook & eyes
  5. Hook & Loop Tape