OBJECTIVES OF THE COURSE

Textiles and fashion design is an emerging area in India. Indian textiles and apparel industry requires skilled workforce. The program enhances the creativeness of student and gain knowledge in textiles, apparel designing, fashion designing, apparel quality control, merchandising and computer application in designing. The course has huge job opportunity in diverse fields and promotes self employment.

ADMISSION CRITERIA

HSC/Polytechnic passed, Diploma awarded by State Board of Technical Education, Government of Tamilnadu

DURATION OF THE COURSE

3 Years (Annual pattern System)
Examinations shall be conducted at the end of every year for the respective subjects.

MEDIUM OF INSTRUCTION

English shall be the medium of instruction

DURATION OF EXAMINATION

3 hours
INTERNSHIP
At the end of the III year, the candidate must undergo 15 days internship in the field of Textile/Apparel units.

PASSING MINIMUM

A Candidate shall secure a minimum of 40 % marks individually in the practical and Theory Examinations. A candidate failing in any one component will have to reappear for that particular component only in the supplementary examination.

QUESTION PAPER PATTERN

Time - 3 hours

Max marks – 100

Part A
Answer all questions (10x2=20)

Multiple Choice Questions

Part B
Answer all questions (5x4=20)

(Internal Choice questions)

Part C
Answer all questions (5x12=60)

(Internal Choice questions)
## SCHEME OF EXAMINATION

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UNIT-I Textile Fibres

UNIT-II Yarn Manufacture
Objectives of various machineries in cotton spinning – process sequence for carded and combed yarns – yarn numbering systems – quality parameters of yarn – concepts of open-end and compact spinning – various types of fancy yarns and its application

UNIT-III Woven Fabric Manufacture & Structure
Mechanism: Objectives and principles of cone winding, warping and sizing – Classification of looms -Passage of material in a loom – Functions of primary and secondary mechanisms – Principles of dobby and jacquard – Features of auto loom and shuttle-less looms – Selection of shuttle-less looms for various fabrics - Fabric defects and causes

UNIT- IV Knitted Fabric Manufacture & Structure
Mechanism: Comparison of weaving and knitting – warp and weft knitting – basic terms and classification of knitting – knitting cycle of latch needle – production and properties of basic knitted structures: plain, rib, interlock and purl - fabric defects and causes – basic principles of flat and warp knitting.
**Fabric structure:** Principles of symbolic and diagrammatic representation – plain, rib, interlock and purl - plain derivatives: Fred perry, twill, honey-comb – rib derivatives: Milano and Cardigan - fleece

**UNIT- V Non-woven**


References


UNIT I
Fashion terminology: Fashion, Style, Design, Trend, Fad, Classic, Collection, Chic, Custom made Mannequin, fashion show, trend, forecasting, high fashion, haute couture, pre – a – porter, Fashion cycle

UNIT II
Design- definition and types – structural and decorative design, requirements of a good structural and decorative design. Elements of design – line, shape or form, colour, size and texture. Application of structural and decorative design in a dress

UNIT III
Principles of design- balance – formal and informal, rhythm- through repetition, radiation and gradation, emphasis, harmony and proportion. Application of principles of design in a dress

UNIT IV
Colour- definition, colour theories- prang colour chart and munsell colour system, Dimensions of colour- hue, value, and intensity. Standard colour harmonies- application in dress design. Psychology of Colors

UNIT IV
Designing dresses for unusual figures – becoming and unbecoming – for the following figure types. Stout figure, thin figure, slender figure, narrow shoulders, broad shoulders, round shoulders, large bust, flat chest, large hip, large abdomen, round face, large face, small face, prominent chin and jaw, prominent forehead.
UNIT V

Silhouettes and figures types—Pear figure, Hour glass figure, Rectangular Figure, Wedge Figure, Overall Roundness figure. Choosing the best dress for the figure types, Factors influencing design application for different age group, occasions and seasons

Reference:
1. Fashion Terminology, Joane E. Blair, Prentice Hall, 1992
8. The Very Best Dress, Erick Howard, Karan Kerry, 2014 Crafts & Hobbies
FUNDAMENTALS OF TEXTILES PRACTICAL

Major Practical-I

Analyse the following woven fabric sample for design, draft, peg-plan, warp count, weft count, ends per inch, picks per inch and areal density (g/m²)

1. Plain fabric
2. Plain – striped fabric
3. Plain – Madras checks
4. Plain twill
5. Denim
6. Satin
7. Honey comb
8. Mock leno
9. Terry

Analyse the given knitted fabric sample for design, yarn count, courses per inch, Wales per inch and areal density (g/m²)

10. Plain jersey
11. Rib
12. Interlock
13. Fred perry
14. Cardigan
BASIC APPAREL DESIGNING PRACTICAL

Major Practical-II

1. Preparation of samples for seam -plain, Top Stitched, Flat fell and piped seam.
2. Preparation of samples for seam finishes- overcast, Hem, Edge stitched and bound.
3. Preparation of samples for fullness-darts, tucks-pin, cross, group tucking with scalloped effect, Pleats-knife, box, kick, gathering by machine, elastic. Ruffles-single, double.
4. Preparation of samples for facing and binding-bias facing, shaped facing, binding.
5. Preparation of samples for plackets and fasteners-continuous, bound, faced and zipper plackets, button and buttonhole, press button, hook and eye.
6. Preparation of samples for sleeves-plain sleeve, puff sleeve, raglan or cap sleeve.
7. Preparation of samples with yoke -simple yoke, yoke supporting fullness.
8. Preparation of samples for collar - Peter Pan collar, shirt collar,
9. Preparation of samples for pocket-patch pocket

References:

- Armstrong J.H. “Pattern making for fashion design” Pearson Education.2001
FASHION SKETCHING PRACTICAL

Allied Practical-I

1. Lines & line drawings
Various types of lines - hand practice - using different grades of pencils - different mediums of inks - charcoal - water colour - poster colour - various brushes.

2. Drawing figures - facial features
Observing figures - using lines - centre, front lines - make stick figures - block figures - flesh figures - watching different types of eyes - noses - ears -mouths - eye brows - faces -heads

3. Dividing figures
Knowing shapes - object drawing - perspective drawings - enlarging - reducing figures - dividing in to eight & ten head figures - equal parts in height - find the width wise measurements of - shoulder - bust - waist - hip - thigh - knee - ankle practicing

4. Using Medias
Practicing pencil shading - colour pencil shading - water colour - poster colour - brushes - using method of brush techniques

5. Garment on figures
Knowing silhouettes - short and stout - tall and thin - short and thin - tall and stout - athletes - wearing garments on figures - sarees - churidhars - tops skirts - pants - watching and forming of garments.

6. Details of garments
Textures - ruffles - shining - pleats - draping - gathers - frills - smoking - cotton materials - giving shadings effects on garment

7. Accessories & jewels
Improving knowledge on accessories - materials - leather - bamboo - nylon - different types of accessories - old - new - jewels - creating new designs

REFERENCES;
2. Figure Drawing for Fashion Design, Elisabetta Drudi, Pepin Press, 2010
UNIT- I  Grey Preparation
Singeing objectives and need - principle gas singeing machine – yarn singeing - merits and
demerits of singeing – Desizing objectives and need – acid and enzyme desizing - relative
advantages and disadvantages - Scouring objectives and principles – scour loss - bleaching of
cotton materials with hydrogen peroxide – continuous bleaching with J-box - role of optical
brighteners
Mercerisation - objects and principle of mercerization - yarn and fabric mercerization - outline of
pad-less chainless fabric mercerization

UNIT- II  Dyeing
Classification of dyes, difference between dye and pigment, common terms used in textile
colouration – procedure of dyeing of cotton material with direct, reactive, vat dyes - dyeing of
wool and silk with acid, reactive and basic dyes – dyeing of polyester and polyester/cellulosic
blended materials using disperse and reactive dyes.
Dyeing machines - principles of working of jigger, winch, jet, soft-overflow and package dyeing
machines - garment dyeing machines

UNIT-III  Printing
Comparison of dyeing and printing - methods of printing - principles of block, roller, flat-bed
screen and rotary-screen printing – transfer printing techniques - styles of printing - principles of
direct, discharge and resist styles of printing – concept of batik printing and flock printing -
printing of cotton, wool, silk and polyester fabrics with dyes.
Printing with pigments – garment printing machines and printing inks.
UNIT-IV  Finishing

UNIT –V  Effluent Treatment

REFERENCES
4. Ronald James W., Printing and Dyeing of Fabrics and Plastics, Mahajan Book Distributors, 1996
PATTERN MAKING

Allied-II

UNIT-I
Definition of patternmaking, Types: Drafting, Draping, Placement method and flat pattern making- merits and demerits. Body measurements-Importance, Preparation for measuring, How to take body measurements for children, Men and Women

UNIT-II

Drafting: Tools required for drafting, Principles of pattern drafting, drafting children’s block and sleeve, drafting Men’s block and sleeve, drafting women’s block and sleeve
Introduction to commercial patterns, dress designing using commercial patterns, popular commercial patterns

Draping: Techniques to drape the front bodice, back bodice and skirt using dress form

UNIT-III

Placement method: Techniques to transfer patterns from finished garments
Flat pattern making: Introduction and principles of flat pattern techniques

Dart manipulation:

1. Styles created by shifting of blouse darts by slash method:
Shoulder dart to side seam dart, Shoulder dart to waistline, Shoulder and waistline dart to underarm, Shoulder and waist line dart to neckline, Shoulder and waist line dart to center front dart, shoulder flanges and French dart

2. Styles created by shifting of blouse darts by pivot method:
Shoulder to underarm point, shoulder to larger waist dart, shoulder to neck dart, waist to center front dart, back shoulder to back neck dart
3. Bodice styles:

Converting darts to gathers at neckline, center front and shoulder
Converting darts to seams-Princess style line from shoulder and armhole
Converting darts to yokes-front yoke and back yoke, partial yokes with gathers

UNIT-IV

Know your fabric: Selvedges, Grain-Lengthwise, crosswise and bias, Preparing the fabric, knowing right from wrong, placing the pattern pieces on grain, Step to lay the pattern pieces on the fabric: types of layout, Pinning and cutting out pattern pieces, transferring pattern markings

UNIT-V

Standards for a good fit, steps in preparing a blouse for fitting, checking the fit of a blouse, solving fitting problems in a blouse

Pattern alteration –importance of altering patterns, general principles for pattern alteration, common pattern alteration in a blouse

References
4. Practical clothing construction, Mary Mathews I & II, Cosmic Press, Madras
TEXTILE CHEMICAL PROCESSING AND FINISHING PRACTICAL

Major Practical-III

1 Scouring of cotton using alkali-boiling method
2 Bleaching of cotton with hydrogen peroxide
3 Dyeing of cotton with direct dyes
4 Dyeing of cotton with cold and hot brand reactive dyes
5 Dyeing of cotton with vinyl sulphone group dyes
6 Dyeing of cotton with vat dyes
7 Dyeing of silk fabric with acid dyes
8 Dyeing wool fabric with acid dyes
9 Dyeing nylon fabric with acid dyes
10 Screen printing of cotton with pigments
11 Printing on cotton using discharge style on cotton
12 Printing on cotton using resist style on cotton
13 Transfer Printing of polyester with discharge dye
14 Softening of cotton with silicon softener
15 Finishing of cotton fabric with water repellent finish
16 Finishing of cotton fabric with flame retardant finish
SURFACE EMBELLISHMENTS PRACTICAL
Major Practical-IV

Prepare samples for the following

1. Hand embroidery – 20 stitches -10 samples
3. Applique ( machine / hand )- 3 types
4. Smocking -3types
5. Laces – 6 types
6. Bead Work -1 sample
7. sequins work -1 sample
8. Zardosi work -1 sample
10. Mirror work -1 sample
11. Fixing the stones-1 sample
GARMENT CONSTRUCTION I PRACTICALS

Allied Practical-II

Designing, drafting and constructing the following garments for the features Prescribed

1. Bib- Variation in outline shape

2. Panty-plain panty

3. Jabla- without sleeve, front open (or) Magyar sleeve, back opens

4. A-Line petticoat- double pointed dart, neck line and arm hole finished with Facing (or) petticoat with gathered waist

5. Summer frock- with suspenders at shoulder line, without sleeve/collars (or) Angel top with raglan sleeve, fullness at neck line

6. Yoke frock- yoke at chest line, with open, puff sleeve, gathered skirt or frock-with collar, without sleeve, gathered/ circular skirt at waist line(or)Princess line frock

7. Knicker- elastic waist, side pockets

Reference:


3. Practical cutting and tailoring part II Eshwasi Anwahi, Lakhraj Hans R.B Publications, Delhi
APPAREL EXPORT MERCHANDISING

Major-III

UNIT: I
Merchandising—Definition, Merchandiser-definition, Types of Merchandising-Export, retail and visual merchandising, Qualities of merchandiser and merchandising terminologies

UNIT-II
Departments involved in Exports, Process flow in merchandising department, Responsibilities of Merchandiser, Qualities of merchandiser and Process flow of order execution.

UNIT-III
Costing of garment -Calculation of consumption of fabric, threads, trims, accessories and packing material to produce one garment, Cut-make cost, Role of sampling department involved in sampling-stages of sampling, types of samples.

UNIT-IV
Apparel Production Process, job responsibilities of production merchandiser, time and action calendar, Inspection follow up-Types of inspection-Packing and Shipment

UNIT-V
Export procedure-Pre shipment procedure and post shipment procedure, terms of shipment, export documents and terms

References
1. Apparel Merchandising: The Line Starts Here, Jeremy A. Rosenau, David L. Wilson
A&C Black, 27-Feb-2014
2. Merchandising of Fashion Products, Doris H Kincade, Pearson Education India
TEXTILE TESTING AND QUALITY CONTROL

Major-IV

UNIT – I

UNIT - II
Yarn testing - determination of yarn count, yarn numbering system, yarn twist, single yarn Strength, lea strength, Yarn evenness test and measurements, yarn crimp, hairiness and yarn Fault measurements.

UNIT - III
Fabric Testing - EPI, PPI calculation, fabric bursting strength, thickness, shrinkage, abrasion testing, GSM, crease recovery, pilling test, crease recovery. Stiffness tester, tearing strength, Tensile strength.

UNIT - IV
Definition of quality control, Scope and importance of quality and quality control. Raw material inspection - fabric inspection -4 point system -10 point system-in process inspection-Final inspection- no inspection- 100% inspection - statistical sampling-AQL standards.

UNIT - V

References
FABRIC CARE

Major -V

UNIT I
Water – sources of water, types of hardness, methods of softening water and determination of hardness. Laundry soaps - Manufacture of soap (Hot process, cold process), composition of soap types of soap, soap less detergents, chemical action, detergent manufacture, advantages of detergents.

UNIT II

UNIT III

UNIT IV

UNIT V
Laundering of different fabrics – cotton and linen, woolens, coloured fabrics, silks, rayon and nylon. Special types of Laundry – water proof coats, silk ties, leather goods, furs, plastics, lace.
REFERENCES

4. Household Textiles and Laundry Work – Durga Duelkar, Amla Ram & Sons, Delhi
COMPUTER AIDED DESIGNING-PRACTICAL

Major Practical-V

1. Creation of motifs/small designs
2. Designing various styles in Children’s garments
3. Designing various styles in Women’s garments
4. Designing various styles in Men’s garments
5. Creation of print designs for applying on garments
6. Creation of logos for branded companies
7. Creation of Name, size and care labels for garments
8. Application of elements of design on garments
   - Line
   - Shape
   - Size
   - Texture
   - Colour
9. Application of Principles of design on garments
   - Balance – Formal and informal
   - Rhythm – by line movement, gradation, repetition
   - Emphasis
   - Proportion
   - Harmony
10. Application of colour harmony on garments
    - Monochromatic colour harmony
    - Analogous colour harmony
    - Complementary colour harmony
    - Double Complementary colour harmony
    - Split complementary colour harmony
    - Triad colour harmony
- Tetrad colour harmony
- Neutral colour harmony

11. Designing garments for occasions.
- Casual wear
- Formal wear
- Party wear
- Fashion show
- School uniforms
PORTFOLIO PRESENTATION PRACTICAL

Major Practical-VI

1. Understanding Fashion

Port folio-definition-figure-colour complexion-occasions-seasons-accessories

2. Designing garments with different effects

Designing saris- fashion garments- party wears- occasional wears- casual wears- evening wears- professional wears-uniforms with Lines-checked effects-printing effects-in one colour or more than one colour

3. Designing Special garments

Medical-police-navy-aeronautics-sports-space-collections from ancient to 20th centuries

4. Portfolio techniques

Customer profile-customer profile with full details of the customer

Mood board-creating mood board-collection of pictures of old magazines-giving mood to the viewer

Colour board-using colors of fabric, Fabric board-material-texture-design journal-rough sketches to improve the mood board

Client’s idea-presentation board-selecting from design journal (2 designs), Final presentation board, Final figure with full garments -accessories-ornaments

Story board-collections-inspirations-decorating-accessories and ornaments, Cost of the costume-write up, Source of fashion magazines to develop mood board / theme board

REFERENCES:

1. Fashion design and drawing course – Caroline Tatham & Julian Seaman, 20th-century fashion-John Peacock
Designing, drafting and constructing the following garments for the features prescribed

**Women’s wear**

1. Saree Petticoat- Six Panel
2. Sari Blouse
3. Salwar
4. Kameez
5. Churidhar

**Men’s wear**

1. Slack shirt – full open, shirt collar, patch pocket
3. Pleated trousers – pleats in front, Darts at back, side pocket, fly with button /zip.
4. T-Shirt – open collar, zip attached

**References**

1. Easy cutting – Juvekar, commercial Tailors Corporation pvt 166 Dr. Ambedkar Road dadar.
2. Commercial system of cutting – Juvekar, commercial Tailors Corporation pvt ,166 Dr. Ambedkar Road dadar.