



மனோன்மணியம் சுந்தரனார் பல்கலைக்கழகம்
MANONMANIAM SUNDARANAR UNIVERSITY

SYLLABUS FOR DIPLOMA IN APPAREL MANUFACTURING AND
MERCHANDISING PROGRAMME OFFERED THROUGH
DIRECTORATE OF VOCATIONAL EDUCATION
(COMMUNITY COLLEGES AND VOCATIONAL SKILL DEVELOPMENT
CENTRES) FROM 2024– 2025



DIPLOMAIN APPAREL MANUFACTURING AND MERCHANDISING - 5280

ஆடை உற்பத்தி மற்றும் வணிகமயமாக்கல் பட்டயம்

SCHEME OF EXAMINATION

| Course Code | Title of the Course | Credit | Hours | Passing Minimum |
|--------------------|--|--------|-------|-----------------|
| Semester I | | | | |
| C24MM11 /E24MM01 | Apparel manufacturing Technology | 6 | 90 | 40/100 |
| C24MM12/ E24MM02 | TextileScience | 6 | 90 | 40/100 |
| C24MM13 / E24MM03 | Pattern making and Grading | 6 | 90 | 40/100 |
| C19CE10/ E19CE10 | Communicative English | 6 | 90 | 40/100 |
| C24MMPW /E24MMPW | Project/Internship | 10 | 150 | 40/100 |
| Semester II | | | | |
| C24MM21 /E24MM04 | Apparel Merchandising | 6 | 90 | 40/100 |
| C24MM22 / E24MM05 | Apparel Quality Assurance | 6 | 90 | 40/100 |
| C19LS23 /E19LS05 | LifeSkill | 6 | 90 | 40/100 |
| C24MMP1 /E24MMP1 | Practical I-Fundamentals of ApparelDesigning | 4 | 120 | 40/100 |
| C24MMP2 /E24MMP2 | Practical I I- Pattern making and Grading | 4 | 120 | 40/100 |

Eligibility for admission: Pass in 10th Std examination conducted by the Govt. of Tamil Nadu Board of Secondary Education, Government of Tamil Nadu or any other equivalent examination.

Examination: Passing Minimum for each Course is 40%. Classification will be done on the basis percentage marks of the total marks obtained in all the Courses and as given below:

| | | |
|-----------------------|---|-------------|
| 40% but less than 50% | - | Third class |
| 50% but less than 60% | - | Secondclass |
| 60% and above | - | First class |

TheoryPaper

Internal Marks-25

ExternalMarks-75

SYLLABUS

Semester I

| | | |
|------------|---|----------------------------------|
| Course I | : | Apparel Manufacturing Technology |
| Course II | : | Textile Science |
| Course III | : | Pattern Making and Grading |
| Course IV | : | Communicative English |
| Course V | : | Project/Internship |

Semester II

| | | |
|-------------|---|--|
| Course VI | : | Apparel Merchandising |
| Course VII | : | Apparel Quality Assurance |
| Course VIII | : | Life Skill |
| Course IX | : | Practical II-Fundamentals of Apparel Designing |
| Course X | : | Practical I-Pattern making and Grading |

***(Semester Pattern for Community College Only) Program**

Objectives

- The program enables the students to understand the concept of Apparel Manufacturing and Merchandising.
- Make the students understand about the manufacturing process of textiles.
- Enable the students to be self-employed as garment designers.

SEMESTER I

COURSE I

(C24MM11 /E24MM01) **Apparel Manufacturing Technology**

Objectives

- The learners will be able to understand the basic concepts of Apparel manufacturing.
- Acquire knowledge on planning, layout, sewing machines,.
- Understand about garment finishing and packageing.

UnitI

18Hrs

Apparel Industry: Introduction to apparel industry. Overview of apparel manufacturing technology. Overview of cutting department- spreading, Types of lay- single ply, multiply, stepped ply. Forms of Spreading - One way face to face, two way. Spreading methods - manual spreading, spreading carriage, automatic spreading machine.

UnitII

18Hrs

Introduction to sewing- types of sewing machines, parts & functions of single needle machine, double needle machine, over lock machine. Formation of stitch, stitch types & classification. Features & uses of chain stitch lock stitch, Multi thread chain stitch, over edge chain stitch & covering chain stitch, attachments used in Sewing machine.

UnitIII

18Hrs

Machine planning- definition, what are the factors affecting the machinery allocation. Machine layout- definition, Basic concept of machine layout, what are the factors affecting machine layout. Seams & seam finishes- definition, types of seams and seam finishes and their applications. Sewing machine- maintenance, common problems & remedies

UnitIV

18Hrs

Detailed study on various stitching, sewing and assembly defects - causes & remedies: skip stitch, unbalanced, puckering, gathering, needle defects, thread problems – quality of threads and its impact on sewing quality – sew ability and its influencing factors – needle cutting index.

UnitV

18Hrs

Introduction to various machines for garment finishing – Fusing – Sucking – Ironing - Packing. Pressing-Purpose of pressing –Categories of pressing-The means of pressing-pressing equipment and methods-Iron and steam presses. Packaging-Types of package forms-Types of packaging materials-Quality specification of packaging materials-Merchandising packaging Shipment Packaging-Selection of package design

TEXT BOOKS:

1. Merchandising- Theory, Principles and Practice Grace I. Kunz II Edition, Fairchild Publications, Inc. New York. 2005
2. Fashion Marketing by Easey M(Ed), Blackwell Science 1994.
3. Jeremy A Rosenau& David Wilson, "Apparel Merchandising: the Line Starts Here", Fairchild Books, 3rd Edition, 2014.
4. Ruth E Glock & Grace I Kunz, "Apparel Manufacturing: Sewn Product Analysis", Pearson / Prentice Hall Inc. 4th Edition, 2005
5. Frances Harder, "Fashion for Profit", Harder Publication, 10th Edition, 2014.
6. Elaine Stone, Jean A Samples, "Fashion Merchandising", McGraw Hill, 5th Edition. 1990.

References:

- Apparel Manufacturing Hand Book, Jacob Solinger, Bobbin Media Corporation, 1988
- Technology of Clothing Manufacture, Herold Carr& B. Latham, Wiley-Blackwell, 1994
- Mary Mathews, "Practical clothing construction" Thomson & co., madras, 1974.
- Laing R.M. Webster J. "Stitches and seams", The textile institute 1998.

COURSE II
(C24MM12 /E24MM02) **Textile Science**

Objectives

- The learners will be able to understand the properties of textile fibers and fabric.
- Understand the manufacturing process of yarn and fabric.
- Understand various fabric dyeing, printing and finishing processes.

Unit I

18Hours

Introduction to the field of textiles –classification of fibers–natural and manmade–primary and secondary characteristics of textile fibers. Manufacturing process, properties and uses of natural fibers – cotton, linen, Jute, sisal, silk, wool fibers, man-made fibers –Viscose rayon, nylon, polyester, acrylic.

Unit II

18Hours

Spinning –Definition and classification; Chemical and mechanical spinning. Flow chart of ring spinning process – Blow room, carding, combing, drawing, roving, spinning and cone winding. Yarn - Definition and classification- simple and fancy yarns. Yarn count and twist.

Unit III

18Hours

Weaving Introduction, Elements and components of a simple loom; Essential weaving operation. Classification of looms and its advantages - Types of shuttle less looms–Rapier–Projectile–Airjet–Waterjet. Basic Weaves and its properties– Plain weave, Twill, Satin and Sateen weave structures.

Unit IV

18Hours

Knitting introduction - classification of weft & warp knitting-elements of knitting-comparison between knitting and weaving, knitted fabric and woven fabric. Working process of single and double jersey machines. Type's knitting needles and stitches (knit, tuck, and miss stitch). Types of knitted structures-plain, rib, purl and interlock. Knitted fabric defects– causes and remedies

Unit V

18Hours

Process Sequence Of wet processing – Singeing, Desizing, Scouring, Bleaching – Types of Bleaching. Mercerization. Printing - introduction – Different styles of Printing – Direct, Reactive & Resist. Types of Printing. Finishing – introduction. Types of Finishing.

Text Book:-

- Corbman, Bernard. P,(2000). Textiles: Fibre to Fabric, 6th edition. Singapore: International students Edition McGraw Hill Book.
- Hearle, J. W. S. (2004). Principles of textile science. Woodhead Publishing

Reference

- Textiles- Fiber to fabric Corbman B.P. International Students edition McGrawHill Book Co.Singapore.
- Textiles fabrics and their Selection – Wingate I B, Allied publishers Ltd, Chennai.
- Fundamentals of Textiles and their Care- Susheela Dantyagi , Orient Longmann Ltd (1980).
- Technology of textile processing Book Vol III, V, VII, VIII–V.A. Shenai.
- Shenai V.A.,, "Technology of Finishing"" Sevek Publications, Mumbai (1996)

COURSE III

(C24MM13 /E24MM03) Pattern making and Grading

Objectives

- The learners will be able to understand the concept of pattern making
- Acquire knowledge about pattern positioning and layouts.
- Understand the concept of fitting and draping.

UnitI

18Hours

Introduction – Concept of basic pattern and grading – Different types of block pattern. Methods of pattern making with special reference to pattern drafting - Pattern making tools – Various pattern production terms – Standard body measurements for men’s wear, women’s wear and kids wear of different countries. Style wise component parts of a garment.

UnitII

18Hours

Pattern positioning and lay out – Concept of pattern layout - Rules and methods of pattern layout – Adjusting the patterns to fabric. Fitting: Definition – Principles for a good fit– Checking the fit of a garment –Solving fitting problems in various garments.

UnitIII

18Hours

Draping – Importance of draping – Dress form and types – Draping steps for basic bodice, skirt, Pants. Procedure to develop necklines: Jewel neck - Round neck - „U“ neck - Square neck - Pentagon neck - Star neck - Inside and outside scallop neck. Procedure to develop sleeves: Plain and puff sleeves.

UnitIV

18Hours

Procedure to draft the ¼th patterns for Ladies wear: Blouse, kameez, salwar, midi, midi top. Style detailing – Skirt, Plackets, Pockets, Pants, Sleeve, Collar, Necklines.

UnitV

18Hours

Basic principle of dart manipulation – Displacement of bust dart (waist – side seam, armhole – neck of front edge).Grading – Definition – Principles of grading

Text Books:

1. Halen Josep Armstrong “Pattern Making for Fashion Design” 5 th Edition, Pretence Hall, New Jercey , 2014.
2. Claire Schaeffer, “The Complete Book of Sewing Shortcuts”, Sterling Publishing(NY), 2009.
3. Armstrong, Helen. J. (2011). Patternmaking for Fashion Design. 5th Edition. Pearson Education Pvt. Ltd.
4. Aldrich, Winifred. (2012). Metric pattern cutting for children’s wear and baby wear. 4th Edition. John Wiley and Sons

Reference:

- Practical clothing construction -part I and part-II Mary Mathews, cosmic press Chennai (1986)
- Pattern Grading for women's clothing, The technology of sizing –Gerry cooklin ,Blackwell Science Ltd (1990)
- Zarapker system of cutting –zarapker. K. r., Navneet publications Ltd.

COURSE III

(C19CE10/E19CE10) Communicative English

1. Basic Grammar:

- a. Review of grammar
- b. Remedial study of grammar
- c. Simple sentence
- d. Word passive voice etc.

2. Bubbling Vocabulary:

- a. Synonyms
- b. Antonyms
- c. One-word Institution

3. Reading and Understanding English

- a. Comprehension passage
- b. Précis-writing
- c. Developing a story from hints.

4. Writing English

- a. Writing Business letters.
- b. Paragraph writing
- c. Essay writing
- d. Dialogue writing

5. Speaking English

- a. Expressions used under different circumstances
- b. Phonetics

Reference

1. V.H.Baskaran – “English Made Easy”
2. V.H.Baskaran – “English Composition Made Easy”
(Shakespeare Institute of English Studies, Chennai)
3. N.Krishnaswamy – “Teaching English Grammar”
(T.R.Publication, Chennai)
4. “Life Skill” – P.Ravi, S.Prabakar and T.TamzilChelvam,
M.S.University, Tirunelveli.

COURSE V

(C24MMPW/E24MMPW) Project/Internship

- The students can either make a study or can undergo training in any one of the textile industry / garment manufacturing unit / research institute to find out solution for a problem / to obtain hands on skills training in either textile / apparel / fashion areas.
- The practical knowledge obtained through trainings should be presented in the form of report.

SEMESTER II

COURSE VI

(C24MM21/E24MM04) Apparel Merchandising

Objective

- The learners will be able to understand the concept and process of Merchandising.
- Understand the types and functions of merchandiser.
- Understand about the procedure of product preparation.

Unit I

18Hours

Merchandising: Introduction, Meaning- Apparel Merchandising, Process of merchandising, needs of merchandiser, Importance of merchandising, Types of Merchandising Company and its difference.

Unit II

18Hours

Merchandising business & service business, Activities of merchandising, Concepts of „Six Rights“ – Organization structure of an apparel industry – Classification of Exporters - Rating or Grading of export houses – Classification of buyers – Export merchandising and retail merchandising – Company profile and its contents.

Unit III

18Hours

Types of merchandiser - Functions of a merchandiser – Essential requisites of a good merchandiser – Vendor sourcing, evaluation and development – Global sourcing – Vendor nomination by buyers – Reasons for vendor nomination.

Unit IV

18Hours

Work of merchandiser- role of merchandiser in garment Industry, apparel industry, super market and retail sales, Concepts of merchandising, concepts and apparel product lines, dimensions of product change, determination and development of product line and product range.

Unit V

18Hours

Flow process of sample merchandising, Procedure of sample preparation, study on Teck pack details, Flow process of product merchandising, Procedure of product preparation, study on Product development. Preparation of shipment sample

TEXT BOOKS:

1. Merchandising- Theory, Principles and Practice Grace I. Kunz II Edition, Fairchild Publications, Inc. New York. 2005
2. Fashion Marketing by Easey M(Ed), Blackwell Science 1994.
3. Jeremy A Rosenau & David Wilson, “Apparel Merchandising: the Line Starts Here”, Fairchild Books, 3rd Edition, 2014.
4. Ruth E Glock & Grace I Kunz, “Apparel Manufacturing: Sewn Product Analysis”, Pearson / Prentice Hall Inc. 4th Edition, 2005
5. Frances Harder, “Fashion for Profit”, Harder Publication, 10th Edition, 2014.
6. Elaine Stone, Jean A Samples, "Fashion Merchandising", McGraw Hill, 5th Edition. 1990.

Reference

- Apparel Merchandising, Robin Mathew, Book Enclave Publishers, Jaipur, 2008.
- Inside the Fashion Business, Mc Millan Publishing Co, 7th Edition, 2004.
- Fashion Merchandising, Elian Stone, Glencoe/McGraw-Hill School Publication, 20043. Mehta

COURSEVII
(C24MM22/E24MM05) Apparel Quality Assurance

Objectives

- The learners will be able to Understand the concept of Quality.
- Understand about the inspection and AQL .
- Understand the concept of seven tools and TQM.

UnitI

18Hours

Basic concepts of Quality – Meaning of quality - Dimensions of Quality – Quality Planning- Elements of Cost of Quality – Optimum cost performance- Trend analysis- Pareto analysis.

UnitII

18Hours

Inspection – importance, types. 1. Raw material inspection – Fabric inspection – Sewing threads – Zippers – Buttons-Buckles –Snap fasteners – interlinings. 2. In- process inspection- Patterns – Spreading – Cutting – Sewing – Pressing /Finishing. 3. Final Inspection – Garment specifications – How much to inspect – 100% inspection – Spot Checking – Arbitrary sampling – statistical sampling - CSP1 – MIL STD 105 scheme– AQL –AOQL – Comparability checks.

UnitIII

18Hours

Implementation of quality control program - Seven Tools of Quality – Check sheet [data collection sheet]-Histogram-Cause and effect Diagram[or Fishbone diagram] – Pareto Diagram – Stratification Analysis – Scatter diagram – Control Chart-Quality reports Inline, MID, Pre final, Hourly report , Carton Audit report.

UnitIV

18Hours

Continuous process improvement –Introduction –Input/output process model –Juran’s quality Trilogy – PDCA cycle [Deming wheel]. 5W2H Method – 5S system – Kaizen – Bench marking – Six Sigma Principle – Total Productive Maintenance – Failure Mode Evaluation Analysis.

UnitV

18Hour

TQM-Quality Assurance -Definitions – Basic concepts – Characteristic – Elements – Principles – Barriers – Benefits. Introduction to quality management system –ISO- ISO 9000 Series of Standards – Implementation of ISO 9000 – Advantages of ISO Certification, OEKO Tex – Standard 100.

TEXT BOOKS:

1. Merchandising- Theory, Principles and Practice Grace I. Kunz II Edition, Fairchild Publications, Inc. New York. 2005
2. Fashion Marketing by Easey M(Ed), Blackwell Science 1994.
3. Jeremy A Rosenau& David Wilson, “Apparel Merchandising: the Line Starts Here”, Fairchild Books, 3rd Edition, 2014.
4. Ruth E Glock & Grace I Kunz, “Apparel Manufacturing: Sewn Product Analysis”, Pearson / Prentice Hall Inc. 4th Edition, 2005
5. Frances Harder, “Fashion for Profit”, Harder Publication, 10th Edition, 2014.
6. Elaine Stone, Jean A Samples, "Fashion Merchandising", McGraw Hill, 5th Edition. 1990.

Reference

- Quality Assurance for Textiles and Apparel (2nd Edition), Sara J. Kadolph, Bloomsbury Academic, (2007).
- Quality Tools Implementation in Apparel Manufacturing, Pradip V. Mehta, et al., Apparel Resources Pvt. Ltd., (2020).
- Apparel Quality – A Guide to Evaluating Sewn Products, Janace E. Bubonia, Fairchild Books, (2021).

COURSE VIII
(C19LS23/E19LS05) Life Skill

I Life Coping or adjustment

- (a) External and internal influence in one's life
- (b) Process of coping or adjustment
- (c) Coping with physical change and sexuality
- (d) Coping with stress, shyness, fear, anger far live and criticism.

II Attitude

- (a) Attitude
- (b) Self acceptance, self-esteem and self actualization
- (c) Positive thinking

III Problem Solving

- (a) Goal Setting
- (b) Decision Making
- (c) Time Management and stress Management.

IV Computers

- (a) Introduction to Computers
- (b) M.S.Office
- (c) PowerPoint

V Internet

- (a) Introduction to internet
- (b) E-mail
- (c) Browsing

References

- 1) Life Skill Programme course I&II by Dr.XavierAlphonaMCRDCE Publications. R.K.Mutt Road, Chennai – 28
- 2) M.Selvaraj Community College,Palayamkottai
- 3) "Life Skill"– P.Ravi,S.Prabahar & T.TamilChelvam, M.S.University, Tirunelveli

COURSE IX

Practical I

(C24MMP1/E24MMP1) Fundamentals of Apparel Designing

Objective:

- The learners will be able to acquire practicals skills on sewing.
- Develops samples for different garment details.

List of Exercises

1. Preparation of samples for seam and seam finishes.
2. Preparation of samples for fullness.
3. Preparation of samples for facing and binding.
4. Preparation of samples for pockets.
5. Preparation of sample for sleeves any 3 style.
6. Draft and construct Men's Pyjama.
7. Draft and construct children's Yoke frock.
8. Draft and construct women's Maxi.

Textbooks

1. Zarpakar, K.R., System of Cutting, Navneet Publications, India.
2. Mary Mathews, Practical clothing construction Part-I "Basic Sewing Processes"
3. Mary Mathews, Practical clothing construction Part-II "Designing, Drafting and Tailoring"
4. Winifred Aldrich (2009), "Metric Pattern Cutting for Children's Wear and Baby Wear", Wiley Blackwell Publications, UK, 4th Edition.
5. Padmavathi B, "Techniques of Drafting & Pattern Making, Garments for Kids & Adolescents", Atlantic Publishers & Distributors P Ltd.
6. Anita Tyagi (2012), Handbook of fashion Technology, Sonali Publications, New Delhi.
7. Nancy J. S. Langdon and Sabine Pollehn (2010), Sewing Clothes Kid;s Love, Creative Publishing International Inc. USA.
8. Peg Couch (2011), Garment Construction: A Complete course on making clothing for fit and Fashion, Fox Chapel Publishing. USA.
9. Samantha Me Nes (2005), Baby Couture, K.P. Books, USA.

REFERENCE:

1. Mary Mathews "Practical Clothing construction"–Part I and II Cosmic Press, Chennai.
2. The complete Book of Sewing, Dorling Kindersley Limited, London (1986)
3. Sewing and Knitting–A Readers Digest, step by step guide, Readers Digest Pvt. Ltd,
4. Injoo Kim and Mykyung Uh, Apparel Making in Fashion Design, Fairchild Publications, New York.
5. Sumathi G.J. Elements of Fashion and Apparel Design, New Age International (P) Ltd., New Delhi (2002)

COURSE X
Practical-II

(C24MMP2/E24MMP2) Pattern making and grading

Objective

The learners will be able to acquire practical skill in pattern making

List of Exercises

Men's Wear

1. Men's Pyjama
2. Men's kurta
3. T-shirt with full sleeve.
4. S.B Waistcoat
5. Men's Bottom with cut ANM sew

Women's Wear

1. Kurti
2. Maxi
3. Skirt with decorative
4. Womens maternity wear ,Sleep BRA

Kid's Wear

1. Yoke frock
2. Jabla
3. Panty
4. Kids Blazer

Text Book:-

- Mathews, Mary. Practical clothing construction Part-II Designing, Drafting and Tailoring. (No Year and Publication)
- Zarapkar, K. R. (2011). System of Cutting. India: Navneet Publications.
- Laing, R. M., Webster, J. (1998). Stitches & Seams. India: The Textile Institute.

REFERENCE:

1. Mary Mathews "Practical Clothing construction" –Part I and II Cosmic Press, Chennai.
2. The complete Book of Sewing, Dorling Kindersley Limited, London (1986)
3. Sewing and Knitting – A Readers Digest, step by step guide, Readers Digest Pvt.Ltd,
4. Injoo Kim and Mykyung Uh, Apparel Making in Fashion Design, Fairchild Publications, New York.
5. Sumathi G.J. Elements of Fashion and Apparel Design, New Age International (P) Ltd., New Delhi (2002)