

**Post graduate Programme in M.Sc. in Textile and Apparel Designing
Semester System**

SEMESTER I

Paper Code	Papers	Credits	L-T-P-C	Marks		
				Sessional	End Semester	Total
HOM580	Textile Industry of India	4	4-0-0-4	40	60	100
HOM581	Apparel Designing and Construction-I	3	3-0-0-3	40	60	100
HOM582	Apparel Designing and Construction-I (Practical)	3	0-0-6-3	40	60	100
HOM583	Fashion Retailing and Merchandising	3	3-0-0-3	40	60	100
HOM584	Dyeing and Finishing	3	3-0-0-3	40	60	100
HOM585	Dyeing (Practical)	4	0-0-8-4	40	60	100
Total		20				600

SEMESTER II

Paper Code	Papers	Credits	L-T-P-C	Marks		
				Sessional	End Semester	Total
HOM586	Textile Printing	4	4-0-0-4	40	60	100
HOM587	Textile Printing(Practical)	4	0-0-8-4	40	60	100
HOM588	CAD in Textile and Fashion –I (Practical)	4	0-0-8-4	40	60	100
HOM589	Research Methods and Statistics	4	3-1-0-4	40	60	100
HOM590	Fabric Construction Techniques	4	4-0-0-4	40	60	100
Total		20				500

SEMESTER III

Paper Code	Papers	Credits	L-T-P-C	Marks		
				Sessional	End Semester	Total
HOM591	Entrepreneurship Management	3	3-0-0-3	40	60	100
HOM592	Textile Testing	3	3-0-0-3	40	60	100
HOM593	Textile Testing (Practical)	4	0-0-8-4	40	60	100
HOM594	Apparel Designing and Construction-II (Practical)	6	0-0-12-6	40	60	100
HOM595	CAD in Textile and Fashion-II (Practical)	4	0-0-8-4	40	60	100
Total		20				500

SEMESTER IV

Paper Code	Papers	Credits	L-T-P-C	Marks		
				Sessional	End Semester	Total
HOM596	Scientific paper writing	4	0-0-8-0	40	60	100
HOM597	Seminar	8	0-0-16-8	40	60	100
HOM598	Dissertation	6	0-0-12-6	40	60	100
HOM599	Summer Training	6	0-0-12-6	40	60	100
Total		24				400

The total credits of the 2 years semester of P.G. (Textile and Apparel Designing) are 84.

SEMESTER I

Paper Code: HOM580

LTPC: 4-0-0-4

Paper: Textile Industry of India

Objective:

- To acquaint students with multi faceted textile industry of India, the economic regime and the policy regulations within which textile industry is operated.

Contents:

UNIT I

1. An overview on business environment of India.
2. History, growth and present status of the India textile industry, sickness, revival and up-gradation

UNIT II

1. Importance of textile and clothing industry in the Indian economy in terms of consumption, employment and per capita income, gross national product and international trade.
2. National textile policy 1985 and 2000, change in focus over the years in terms of objectives, functional ability, regulatory mechanisms and futuristic trends.

UNIT III

1. Foreign trade policy. The mechanism of MFA. History and current status GATT and WTO. Implications of a free trade regime and protectionist regime.
2. Production, consumption, employment problems, prospects and SWOT analysis of Cotton, Wool, Jute, man-made fiber and filament yarn industry, Handloom industry, Readymade garment industry and Technical textiles.

UNIT IV

1. Textile management organizational structure- organized and decentralized structure, handloom and powerloom sector.

UNIT V

1. Export procedures, incentives, organization for promotion of exports.
2. Textile research organization and their functions.

Outcomes:

- Learners will acquire knowledge about the vast textile sector in India and world.
- Knowledge about different policies and different organizations, which are working on textile industry in India.

References:

- Mishra and Puri, Indian Economy, Himalaya publishing house.
- National textile policy-2000
- Journals- Cloth line, Business India, Business Today
- News papers- Economic Times, Financial Express and Apparel online
- Industry published journal, newsletter, WVEPC, HHEC
- Economic surveys, Government of India

Paper: Apparel Designing and Construction-I

Objectives:

- To impart in depth knowledge of style reading, pattern making and garment construction techniques.
- To develop and understand the principles of pattern making and draping.

Contents:

UNIT I

1. Detailed study of industrial machine and equipment used for:
 - a. Cutting
 - b. Sewing
 - c. Finishing
 - d. Embellishment

UNIT II

1. Study the interrelationship of needles, thread, stitch length and fabric.

UNIT III

1. Method of pattern making:
 - a. Drafting
 - b. Flat pattern
 - c. Draping

UNIT IV

1. Developing paper pattern:
 - a. Understanding the commercial paper pattern
 - b. Layout on different fabrics, width and types

UNIT V

1. Buying criteria for:
 - a. Knits, denims, silks and other special
 - b. Readymade garments

Outcomes:

- Learners will develop skills in apparel construction
- Learn basic principles of garment construction

References:

- Armstrong, Pattern making for fashion designing, Pearson Education
- Gioello and Berke, Figure type and size rang, Fairchild publications, New York.
- Grate and Storm, concepts in clothing, McGraw Hill Book Co., New York
- BinaAbling, Fashion sketch book, Fairchild publications, New York.
- Claire Shaeffers, Fabric sewing guide, Chilton book company, Randot, Pennysyivania.
- Harold Carr and BarabaraLathan, The technology of Clothing Manufacturer, Oxford BSP professional book, London
- Slamper, Sharpo and Donnell, Evaluating apparel quality, Fairchild publications, New York.
- Natalle Bray, Dress Fitting, Blackwell science ltd.

Paper Apparel Designing and Construction-I (Practical)

Objective:

- To inculcate various garment construction techniques among students

Contents:

UNIT I

1. Designing through Flat Pattern:

- a. Dart manipulation
- b. Development of variation in sleeves
- c. Development of variation in collars (Rolled and shawl collar)

UNIT II

1. Neckline and Facings:

- a. Scooped necklines
- b. Built up neckline
- c. Cowl neckline
- d. Designer necklines

UNIT III

1. Plackets:

- a. Center button closing
- b. Double breasted
- c. Asymmetrical closing

UNIT IV

1. Sleeve Construction:

- a. Set-in –sleeves
- b. Flared sleeves
- c. Raglan sleeves
- d. Puff sleeves

UNIT V

1. Designing Through Draping:

- a. Basic draping principle and techniques
- b. Developing patterns

Outcome:

- Students will learn different techniques of making garments with the help of draping.

References:

- Pamela Stringer, Pattern drafting for dressmaking, Batsford Ltd.
- Helen Joseph Armstrong, Draping for apparel design, Fairchild publications, New York

Paper: Fashion Retailing and Merchandising

Objectives:

- To understand the dynamics of fashion and fashion designers
- To develop understanding visual merchandizing and its importance in today's consumer market.
- To gain knowledge about the management aspect of retailing.
- To impart knowledge regarding the prevalent merchandizing practices.

Contents:

UNIT I

1. The Dynamics of Fashion:

- a. Fashion terminology, fashion cycle, fashion adoption theories, fashion forecast and the role of designers in merchandizing.

2. The Concept of Retailing:

- a. Definition, role of retailing in merchandizing the retail mix, retail environment types of retail store.

UNIT II

1. Element and Principle of Art and Design:

- a. Element of design colour, textile line form, space principals of design rhythm, balance proportion, emphasis, unity interpretation for designing retail store.

2. Visual Merchandising:

- a. Plans and Schedules: Season holiday promotion, Sales themes ideas
- b. Types of Display: Window display, Interior display
- c. Elements of Display: The merchandising, the backdrop walls and shelves, mannequins and forms signage lighting- luminance levels relation to colors.

UNIT III

1. Planning and Budgeting for a Retail Store:

- a. Maintenance and ordering of stocks, preparation of sales report.

1. Recruitment and Management of Sales Force:

- a. Types of compensation package for sales force, personal selling as a means of promotion.

UNIT IV

1. Marketing and Merchandising:

- a. Core concepts, marketing environment, marketing and merchandising, environment of India.

2. Product in Relation to Fashion:

- a. Classification of fashion product life cycle the process of product development, the marketing of the brand, branding strategies, brand management, brand image building.

UNIT V

1. Promotion and Distribution:

- a. Role of promotion, methods of promotion, advertising, sales promotion and selling. Designing and management of different methods of promotion, and their employment in relation to cost effectiveness and life cycle.

2. Pricing:

- a. Principles and methods of pricing: pricing in relation to product type product life cycle, distribution outlet etc.

Outcome:

- Student will be ready to enter in the market of fashion industry as they will learn different marketing strategies, retailing merchandising etc.

References:

- Frings G.S, Fashion form Concept to Consumer Prentice Hall Inc. Engelwood Cliff's New Jersey.
- Chuter A.J, Introduction to Clothing Production Management, Blackwell Science Ltd.
- Stone E. and Sample J.A, Fashion Merchandising: An Introduction, McGraw Hill Book.

Paper: Dyeing and Finishing

Objectives:

- To understand the theory of dyeing in relation to various classes of dyes and its application. Inculcate awareness of different methods of printing and appreciate the technical advantage of each and develop technical competency in printing with different dyes on different fabrics.
- To study the chemicals used in textile processing from sizing to finishing along with the essential properties of raw material used in their manufacture and study the recent development in various finishing processes.

Contents:

UNIT 1

Dyeing:

1. History of dyestuff concept of colours and its relation to light classification and types of dyes/colouring matter
2. Chemistry of dyes and pigments- composition structure, properties, affinity towards fibre.

UNIT II

1. Dyeing with chemical dyes direct, reactive, vat, sulphur, azo, acid, and basic and disperse dyes.
2. Dyeing with natural dyes role of methods.

UNIT III

1. Dyeing machines for fiber yarn and fabric industrial dyeing practices.
2. Dyeing auxiliaries and their uses. Banned dyes and auxiliaries regarding dyeing soaping and washing.

UNIT IV

Finishing:

1. Finishing concept scope and importance finishes- soil repellent soil resistant soil release, antistatic, anti-pilling, wash wear, crabbing, decanting, water proof and repellency mildew proof flame resistance and flame proof, antibacterial

UNIT V

1. Recent advancement in dyeing.
2. Recent advancement in finishing

Outcomes:

- Students will learn different methods of dyeing on different fabrics.

References:

- V. A. Sehnai, Chemistry of Dyes and principle of Dyeing. Sevak Prakasahan, Mumbai
- V. A. Sehnai, Azo Dyes Facts and Figures. SevakPrakasahan, Mumbai
- K. Venkatrama Chemistry of Synthetic Dyes, Part I and Part II
- H. A. Lubs, Robert E. The Chemistry of Synthetic Dyes and Pigments, Krieger Publishing Company New York.
- Bermad P Corbman. Textile-Fiber
- Prayag R. S. Textile Finishing
- VaidyaA&Trivedi, textile Auxiliaries & Finishing Chemicals. ATIRA, Ahemadabad

Paper: Dyeing (Practical)

Objective:

- To impart skill in dyeing on different fabrics

Contents:

UNIT I

1. Dyeing of cotton and jute with corresponding dyes by exhaust method in laboratory dyeing machine.

UNIT II

1. Dyeing of silk and wool with corresponding dyes by exhaust method in laboratory dyeing machine.

UNIT III

1. Resist dyeing- Tie dye on silk, jute, cotton, chiffon, georgette

UNIT IV

1. Resist dyeing- Batik on silk, cotton

UNIT V

1. Visit to dyeing and processing unit

Outcome:

- Students will learn techniques of dyeing fabrics.

References:

- V. A. Sehnai, Chemistry of Dyes and principle of Dyeing. SevakPrakasahan, Mumbai
- V. A. Sehnai, Azo Dyes Facts and Figures. SevakPrakasahan, Mumbai
- Nalini Srivastava, Tie and dye, PanditSunderlal Sharma Central Institute of Vocational Education

SEMESTER II

Paper Code: HOM586

LTPC: 4-0-0-4

Paper: Textile Printing

Objectives:

- To impart the knowledge about preparation of fabric for printing.
- To inculcate awareness of the different methods of printing and appreciate the technical advantage of each.

Contents:

UNIT I

1. **Introduction to Printing:** Difference between Dyeing and Printing. Historical development of printing methods.
2. **Methods of Printing:** Block, Stencil, Screen, Roller, Rotary screens used at cottage and industrial level.

UNIT II

1. **Principle of Printing:** Cotton, Polyester, Acrylic, Silk. Thickeners, auxiliaries for printing. Fixation of prints using various methods/ machineries, rotary screen printing machine. Preparation of screen.
2. **Printing Pastes:** Thickening agents and auxiliaries for the printing and their suitable to various classes of dyes and fibers. Preparation of printing pastes for different dyes and different fibers.

UNIT III

1. **Styles of Printing:**
 - a. Direct style, resist or reserve style, discharge style and raised style.
 - b. Styles and methods of printing traditionally used in India.

UNIT IV

1. **Special Printing Procedures:**
 - a. Polychromatic dyeing transfers printing, carpet printing, flock printing.

UNIT V

1. Finishing and after treatment of printed goods at cottage and industrial level.
2. Recent advances in printing.

Outcome:

- Students will learn about different printing techniques.

References:

- V.A. Shenai. Technology of Textile Processing. Vol. IV. Sevak Publication.
- R.S Prayag. Technology of Textile Printing. Noyes Data Corporation.
- Joyce Story. The Thames & Hudson Manual of Textile Printing. Thames & Hudson 4.Vilensky G. Textile Science. CBS.

Paper: Textile Printing (Practical)

Objective:

- To impart skill in screen printing on different fabrics

Contents:

UNIT I

1. Printing of cotton, jute, silk, polyester with respective dyes and fixation using steaming techniques.

UNIT II

1. Printing with pigments. Block printing on silk, cotton
2. Product development

UNIT III

1. Preparation of screen for printing single color and design screen for 3 colors separately.

UNIT IV

1. Printing and Product development using prepared screens

UNIT V

1. Visit to printing unit

Outcome:

- Students will learn about different printing techniques on different fabrics.

References:

- V.A. Shenai. Technology of Textile Processing. Vol. IV. Sevak Publication.
- R.S Prayag. Technology of Textile Printing. Noyes Data Corporation.
- R. Vatsala, Textbook of Textile and Clothing, ICAR publications

Paper: CAD in Textile and Fashion – I (Practical)

Objective:

- To enable students to work on computer for fashion illustrations.

Contents:

UNIT I

1. Basic knowledge of computer

UNIT II

1. Basic illustration using Corel draw softwar

UNIT III

1. Basic illustration using Adobe Photoshop software

UNIT IV

1. Application of Corel draw software in different design development

UNIT V

1. Application of Adobe Photoshop software in different design development

Outcome:

- Students will learn designing on computer.

References:

- Veisainet, D.D. 1987 Computer Aided drafting design concept and application
- Fugii, D. Calour with stryle, Graphic-Sha Publishing company Ltd.
- Winifred, A. 1990 metric pattern cutting for men's wear: including Unisex casual clothes and CAD, BSI Profession at books Oxford.
- Carklin P.G. 1990 pattern clothing for womens clothes, the technology of sizing BSP professional books Oxford
- Aldrich, W 1994 CAD in clothing and textile Blackwell Sciences Ltd.

Paper: Research Methods and Statistics

Objectives:

- To understand the signification of statistics and research methodology in Home Science research.
- To understand the type's tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.

Contents:

UNIT 1

1. Science, scientific methods, scientific approach.
2. Role of statistic and research in Home Science discipline, objective of research explanation, control and prediction.

UNIT II

1. Type of research historical, survey and experimental, case study, social research, participative research.
2. Definition and identification of a research problem.
 - a. Selection of research problem.
 - b. Justification

UNIT III

1. Theory, hypothesis, basic assumption, limitation and delimitation of the problem.
2. Types of variable.
3. Theory of probability
 - a. Population of sample.
 - b. Probability sampling systematic random sampling, two stages and multi stage sampling, cluster sampling.

UNIT IV

1. Non- probability sampling, purposive quota and volunteer sampling/snowball sampling.
2. Basic principle of research design.
3. Qualitative research methods.

UNIT-V

1. Definition and types of qualitative research.
 - a. Research and techniques of data collection
 - b. Informal group discussion
 - c. Interview: Key information, In-depth interviews
 - d. Observation
 - e. Social mapping
 - f. Participatory rapid assessment
 - g. Participatory learning assessment

Outcome:

- Students will learn the importance of research in Home Science.

References:

- C. R. Kothari, GauravGarg, 2014 Research Methodology Method and Techniques, (IIIrdedition), New age International Publishers
- S.P. Gupta, 1999, Elimentary statistical Methods, Sultan Chand & Sons
- Bandarker, P.L. and Wilknsn T.S. 2000, Methodology and Techniques of Social Research, Himalaya Publishing House, Mumbai
- Bhatnagar, GL. 1990: Research Methods and Measurements in Academy, New Delhi.
- Dooly, D, 1995, Strageies for interpreting Qualitative data: sage Publication California

Paper: Fabric Construction Techniques

Objective:

- To enable students to understand and learn methods of developing fabric by using different fibers, yarn and fabric making techniques.
- To gain knowledge and understanding of fundamental of weaving machinery and processes.
- To analyze different weave pattern and learn principles of creating design through weaving.

Contents:

UNIT I

1. Principles of yarn manufacture-yarn processing.
 - a. For natural fibers cotton, wool and worsted, jute, linen by conventional system and recent development like Rotar, Vortex, Friction Ajrjit, Electrostatic Twistless, Laminated yarns.

UNIT II

1. Modern development in yarns and in their manufacturing process
 - a. Modern yarn production-principles of spinning in production of man-made fiber, hot and cold drawing, spun yarn, bled yarn and bicomponent yarn. Cold drawing,
 - b. Textured yarn technology principle methods and process variable in texturing and their effect on properties of textured yarn, morphological change induced by texturing.

UNIT III

1. Principles of fabric manufacture- basic principles, characteristics and significance of different processes- woven knitted non woven laces braids.

UNIT IV

1. Fabric faults and their remedies
 - a. Fiber
 - b. Yarn
 - c. Fabric

UNIT V

1. Recent advancement in spinning, weaving, knitting and non-wovens.

Outcome:

- Students will learn different techniques of fabric construction

Reference:

- Grociki Z.J. Watson Textile Design and Colour, London Newness Butter Wo1q1qrths.
- William Watson Advanced Textile Design London Longmans Green and Co.Ltd.
- Corbman, B. Fibre to Fabric.
- AmalsarF.M.Fabric Structure and Cloth Analysis.
- Ajgaonkar D.B. Knitting Technology, Universal Publishing Corp-Mumbai.
- Spun Yarn Technology, Eric Oxtoby Butterworth publication.

SEMESTER III

Paper Code: HOM591

LTPC: 3-0-0-3

Paper: Entrepreneurship Management

Objective:

- To provide conceptual inputs regarding Entrepreneurship management
- To sensitize and motivate the students towards entrepreneurship management
- To orient and impart knowledge towards indentifying and implementing Entrepreneurship opportunities.

Contents:

UNIT-I

- 1. Entrepreneurship:** Definition, characteristics employment promotion, efforts to introduce entrepreneurship

UNIT –II

1. Conceptual Frame Work:

- a. Concept need and process in entrepreneurship development
- b. Role of enterprise in a global economy
- c. Types of enterprise merits and demerits
- d. Government policies and scheme for enterprise development and management.
- e. Institutional support to enterprise development and management.

UNIT- III

1. The Entrepreneur:

- a. Entrepreneurial motivation- dynamics of motivation.
- b. Entrepreneurial competency- concept
- c. Developing Entrepreneurial competencies-requirement and understanding the process of entrepreneurship development, self awareness interpersonal skills creativity, assertiveness achievement factors affecting entrepreneur's role.

UNIT- IV

1. Launching and Organizing an Enterprise:

- a. Environment scanning information source, scheme of assistant problems.
- b. Enterprise selection market assessment enterprise feasibility study, SWOT analysis.
- c. Recourse mobilization finance, technology, raw material, site and manpower.
- d. Costing and marketing management and quality control.
- e. Feedback, monitoring and quality control.
- f. Feedback. Monitoring and evaluation.

UNIT- V

1. Growth Strategies:

- a. Performance appraisal and assessment.
- b. Profitability and control measure demand and challenges
- c. Need for diversification.
- d. Future growth- technique of expansion and diversification, vision strategies.

2. Enterprise Networking:

- a. Concept and dynamics
- b. Methods

c. Joint venture, co-ordination and feasibility study.

Outcomes:

- Student will be able to recognize a business opportunity.
- Students will be able to develop an entrepreneurial mindset and network.
- Students will be able to develop an ability of self analysis in context of an entrepreneurial career.
- Student will develop analytical and critical thinking skills necessary for making financial decision. Through SWOT analysis students will able to select appropriate enterprise.

References:

- Kantikar, A. Grass roots Entrepreneurship, Entrepreneurs and Micro- Enterprise in Rural India, New Age International, New Delhi.
- Michel Armstrong, A handbook of management techniques Kogan page limited.
- SKG Sundaram; Entrepreneurship: A handbook for Beginners, SNTD Women's University Mumbai.

Paper: Textile Testing

Objective:

- To develop and understand the method and technique used to analysis textile fiber yarns and fabric for end performance.
- To acquire knowledge and understanding of various structural properties of textile and relate them to end use fabrics performance and product.
- To familiarize student with the different testing equipment, their underlying principals and the international accepted standards, test method and the language and measurement.
- To be able analyze and interpret the result and predict the general textile behavior performance.
- To develop understanding of importance of quality control in testing.

Contents:

UNIT I

Introduction:

- a. Importance and objective of textile testing and analysis.
- b. Use of statistics in handling data in the area of textile testing.
- c. Sampling procedures and selection of sample method of testing.
- d. Development of standard test method ISO series national and international organization involved in textile testing.
- e. Atmospheric condition for testing humidity and moisture and temperature, standard condition for testing.
- f. Unit of measurement and scales of testing,

UNIT II

Fibre Testing:

- a. Length, linear density, maturity, fiber fineness.

UNIT III

Yarn Testing:

- a. Yarn number or count single and lea strength, twist, evenness, crimp properties and measurement of crimp percentage.

UNIT IV

Fabric Testing:

- a. Length, width, thickness, weight per unit area and per unit length, fabric count, cover factor of fabric.
- b. Air permeability measurement of air permeability and fabric properties.
- c. Fabric stiffness handle and drape, Shirley stiffness tester, flexural rigidity, measurement of handle and drape.
- d. Appearance of retention, crease resistance, crease recovery, measurement of crease recovery, fabric characteristics affecting wrinkle resistance.
- e. Pilling of fabric pilling testing.
- f. Durability, serviceability, wear and abrasion resistance testing of abrasion resistance, abrasion testing instruments aesthetic of abrasion and wear.

- g. Water and fabrics relationship, definition and methods of testing for water repellence, spray test boundation spray test and shrinkage testing for thread testing.
- h. Tensile strength test- definition and terminology factors affecting the tensile properties of textile, different principals of tensile testing machine (CRT, CRE) single yarn strengths tester, bursting strength tester, tearing strength tester.
- i. Comfort and related physical properties of textile- physical phenomenon affecting thermal comfort, evolution of textile properties related to comfort.

UNIT V

- a. Safety aspects and protective properties of textile- flammability definition and terms. Factors affecting flammability, flame resistance and flame proof finishes on fabric flame resistance finishes and its toxicity, protective clothing.
- b. Colourfastness: colour fastness to washing, perspiration, rubbing, sunlight, dry cleaning on gray scale.
- c. Labeling and care of textiles.

Outcomes:

- a. Student will be able to analyze fiber/yarn/fabric properties for end performance.
- b. Student will get familiar with different testing equipments and their underlying principal.
- c. Student will get to know about different test method standard ASTM Standard, ISO Standard etc.
- d. Student will be able to understand the importance of quality control in textile testing.
- e. Student will be able to explain the care of textile items and interpret the meaning of different care labels with symbols.

References:

- Booth, J. E; principals of Textile Testing, Newness Butter Worth, London.
- John, H. Skinkle: Textile Testing, Brooklyn, New York
- Grover and Hamby: Handbook of Textile Testing and Quality Control, Wiles.
- Billie, J. Collier and Helen H. Eps: Textile Testing and Analysis, Prentice Hall, New Jersey.
- ISI Specification, BIS Specification
- ASTM Standards.

Paper: Textile Testing (Practical)

Objectives:

- To give knowledge about textile testing and quality control
- To develop and understand the method and technique used to analysis textile fiber yarns and fabric for end performance.
- To acquire knowledge and understanding of various structural properties of textile and relate them to end use fabrics performance and product.
- To familiarize student with the different testing equipment, their underlying principals and the international accepted standards, test method and the language and measurement.
- To be able analyse and interpret the result and predict the general textile behaviour performance.
- To develop understanding of importance of quality control in testing

Contents:

UNIT I

1. Fiber testing:

- a. Identification of Textile fibers
- b. Determination of Cotton fiber maturity
- c. Moisture content of different fibers

UNIT II

1. Yarn testing :

- a. To identify the twist in the given yarn and to determine the twist per inch
- b. Determination of yarn count using Beesley balance
- c. Determination of yarn count using Quadrant balance
- d. To determine Yarn evenness

UNIT III

1. Fabric Testing:

- a. To determine the Thread count/fabric count of different fabric samples
- b. GSM (weight per unit area) of different fabric samples
- c. Fabric thickness of different fabric samples

UNIT III

- a. Crease recovery of different fabric samples
- b. Bending length and Flexural rigidity of different fabric samples
- c. To determine the drapability of fabric

UNIT IV

- a. Abrasion resistance of fabric
- b. Pilling resistance of fabrics using ICI pilling box tester
- c. To determine the dimensional change (shrinkage) in the fabric

UNIT V

- a. Colour fastness of dyed textile materials to washing
- b. Colour fastness of dyed textile materials to rubbing
- c. Colour fastness of dyed textile materials to light
- d. Colour fastness of dyed textile materials to perspiration

Outcomes:

- a. Student will be able to analyze fiber/yarn/fabric properties for end performance.
- b. Student will get familiar with different testing equipments and their underlying principal.
- c. Student will get to know about different test method standard ASTM Standard, ISO Standard etc.
- d. Student will be able to understand the importance of quality control in textile testing.
- e. Student will be able to explain the care of textile items and interpret the meaning of different care labels with symbols.

References:

- Booth, J. E; principals of Textile Testing, Newness Butter Worth, London
- John, H. Skinkle: 1949 Textile Testing, Brooklyn, New York
- Grover and Hamby: Handbook of Textile Testing and Quality Control Wiles.
- Billie, J. Collier and Helen H. Eps: Textile Testing and Analysis, Prentice Hall, New Jersey.
- ISI Specification, BIS Specification
- ASTM Standards.
- Jinlian HU, 2008 Fabric Testing, Woodhead publishing limited, Cambridge England
- B.P Saville, 1999 Physical testing of textiles, Woodhead publishing limited,
- Dr. J.V. Rao, Quality Evaluation, Northern India Textile research Association,
- Dr. J.V. Rao & Vivewk Agarwal, 2006 Care Labeling, Northern India Textile research Association
- Dr. Alka Goel and Ruchikholiya, Textile Testing (a laboratory manual) GBPUA & T Pantnagar
- Samuel Russell Tortman, Edward Russell Tortman, 1932, Textile Analysis, C. Griffin, Limited
- P. Angappan, Textile Testing

Paper: Apparel Designing and Construction-II (Practical)

Objective:

- To inculcate various garment construction techniques among students

Contents:

UNIT I

1. Market Survey:

- a. Collection of various type of fabrics
- b. Collection of various type of embellishments
- c. Types of value addition on fabric.

UNIT II

1. Seasonal Colour Story and Colour Forecasting According to Season:

- a. Colour combinations-50 sample

UNIT III

1. Boutique Management:

- a. Window designing
- b. Investment and accounting

2. Portfolio Management:

- a. Portfolio to showcase the skills of the designer
- b. How to create a portfolio

UNIT IV

1. Visit to Garment Manufacturing Units:

UNIT V

1. Theme Garment-

- a. Developing line of garment based on a theme, Sketching, Designing, Sizing and Stitching
- b. Theme will be any one of the following-
 - Indo-western
 - Tradition Indian
 - Western
 - Bridal-wear
 - Children's garments
 - Evening wear
 - Nightwear
 - Casual wear

Outcomes:

- Students will learn different types of garment construction techniques
- Students will learn boutique management and portfolio management strategies
- Students will have exposure to garment manufacturing unit
- Students will learn designing and construction of theme garment.

References:

- Armstrong, pattern making for Fashion Design
- Gioello and Berk; Figure Type and Size, Fair child publication, New York.
- BeenaAbling, Fashion Sketch book, Fair child publication, New York.
- Harrold and Barbara. The Technology of Clothing Manufacture, Oxford BSP Profession book, London.
- NatelleyBrey, Dress Fitting. Published by Blackwell
- Fiber, Fabric and Fashion- S. Srivastava, Central Publication, Allahabad.

Paper: CAD in Textile and Fashion-II (Practical)

Objective:

- To enable students to work on computer for fashion illustrations

Content:

UNIT I

Advanced: In the advanced module students develop design with consistent with current fashion trends. Stress will be on professional techniques of garment construction utilizing computers.

UNIT II

- 1. Advance illustration Fashion CAD software:**
 - a. 3D technique in design development

UNIT III

- 1. Advance illustration Garment CAD software:**
 - a. Pattern making
 - b. Drafting
 - c. Marking
 - d. Grading

UNIT IV

- 1. Application of Fashion CAD software in design development:**

UNIT V

- 1. Application of Garment CAD software in pattern making:**

Outcome:

- Students will learn designing on computer.

References:

- Veisainet, D.D. 1987 Computer Aided drafting design concept and application
- Fugii, D. Calour with style, Graphic-Sha Publishing company Ltd.
- Winifred, A. 1990 metric pattern cutting for men's wear: including Unisex casual clothes and CAD, BSI Profession at books Oxford.
- Carlin P.G. 1990 pattern clothing for womens clothes, the technology of sizing BSP professional books Oxford
- Aldrich, W 1994 CAD in clothing and textile Blackwell Sciences Ltd.

SEMESTER IV

Paper Code: HOM596

LTPC: 0-0-8-0

Paper: Scientific writing

UNIT I

1. **Scientific writing:** Introduction, Types, Characteristics of scientific writing, Articles, Chapter, Monographs, Dissertations, Bibliographies.
2. **Use and guidelines:** For drafting Titles, Heading, Sub heading, Tables, Illustrations, and Appendices.
3. **Parts of Dissertation/Research report/Article:** Introduction, Review of Literature, Method, Results and Discussion, Clarity, Validity and Objectivity during writing each of the above parts

UNIT II

1. Report Writing, CV and Resume making, plagiarism.
2. **Writing for Grants:** Question to be addressed, Rationale, Importance, Conceptualization, Pilot data, Clarity, Specificity of method, Budgeting, Outcome.
3. **Plagiarism:** Concept and Guidelines, Software's.

Reference Books

- Wren & Martin, High School English Grammar and Composition, S.Chand, Paperback, 2005
- Using English in Science & Technology, Singh, R.K., Prakash Book Depot, Bareilly, 2000.

Paper Code: HOM597

LTPC: 0-0-16-8

Paper: Seminar

- This paper will include a presentation on any advance topic related to Textile and Apparel Designing

Paper Code: HOM598

LTPC: 0-0-12-6

Paper: Dissertation

- This paper will include individual topic for practical, presentation & Report writing

Paper Code: HOM599

LTPC: 0-0-12-6

Paper: Summer Training

- Summer training will be of three months duration