

**NATIONAL EDUCATION
POLICY-2020**

**PROPOSED STRUCTURE
Of
M. SC HOME SCIENCE
(CLOTHING AND TEXTILES)
SYLLABUS
2023**



CURRICULUM DESIGN COMMITTEE, UTTARAKHAND

Sr.N	Name & Designation	
0.		
1.	Prof. N.K. Joshi Vice-Chancellor , Sridev Suman Uttarakhand University, Tehri	Chairman
2	Dr. Manmohan Singh Chauhan, Vice -Chancellor, Kumaun University, Nainital	Member
3.	Prof. O.P.S. Negi Vice-Chancellor, Uttarakhand Open University, Haldwani	Member
4.	Prof. Jagat Singh Bisht Vice-Chancellor, Soban Singh Jeena University Almora	Member
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7.	Prof. K. D. Purohit Advisor, Rashtriya Uchcharat Shiksha Abhiyan, Uttarakhand	Member

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Members of Board of Studies - M.Sc. HOME SCIENCE

S. N.	Name	Designation	Department	BOS	Sing.
1.	Prof. G.K. Dhingra	Professor & Dean	Botany	Convener	
2	Dr. Dimple Bhatt	Assistant Professor	Home Science	Member	
3	Dr. Anamika Chauhan	Assistant Professor	Home Science	Member	
4	Dr. Pooja Rani	Assistant Professor	Home Science	Member	
5	Prof. Pushpa Negi	Principal		Member	
6	Prof. Pankaj Pant	Principal		Member	
7	Prof. Kuldeep Negi	Principal		Member	
8	Director, USERC, Dehradun	Director		Member	

OBJECTIVES OF THE M.Sc. HOME SCIENCE (CLOTHING AND TEXTILES)

- Master of Science in Clothing and Textiles is a Post-Graduate Textile course. The Master's degree program in Clothing and Textiles is of two-years duration and is conducted by many Universities both on a regular and correspondence basis. The wearing of clothing is exclusively a human characteristic and is a feature of most human societies.
- The Master of Science degree program in Clothing and Textiles is not known when humans began wearing clothes. Anthropologists believe that animal skins and vegetation were adapted into coverings as protection from cold, heat, and rain, especially as humans migrated to new climates; alternatively, covering may have been invented first for other purposes, such as magic, decoration, cult, or prestige, and later found to be practical as well.
- After pursuing courses in textile chemistry, the candidates open themselves to stable career choices. Companies usually hire candidates to retain them in the long run. The work gets diverse and more complex, followed by an increment in the package. Beneficial to develop the process of critical and analytical thinking and encourage the students to pursue further studies and research in the areas of Textiles and Apparels.
- They can choose to become researchers in this field who develop new techniques for the textile market. Teaching is an evergreen option with students of this degree course. They can choose to work in any famous brand and manage their textile work.
- The course is helpful for further studies such as Ph.D.
- Candidates can find employment in textile, chemical, and retail industries as well as in environmental and medical science. They are recruited by a broad range of companies, such as DuPont, Proctor & Gamble, Nike, General Motors, and even law enforcement for forensic science work. The degree also provides a firm foundation for further graduate studies.
- The module is designed to inculcate the perspective of appreciation for Art, in fashion students and design professionals who are interested in learning how to design, print using Photoshop. To create, capture and enhance the images in accordance with the final objective. It is a bitmap based graphic designing program that designers use to create professional artwork or advertisements In this course, students will explore

different art work and the final execution is implemented with the advanced features available with Photoshop including advanced text, color, layout and layers styles.

Programme outcomes (POs):

- Students will be able to understand fundamental knowledge on basics of chemistry involved in the colorants.
- Students will be able to describe the types of pigments and their applications
- Students will be able to understand and explain the physical properties of Pigments and dyes
- Students will be able to explain the synthetic methods used for azo dyes and their properties.
- Students will be able to explain the types of dyes on the basis of application, properties.

Learning outcomes:

- Students will be able to broaden their vision of textile industry at the global platform Through it students will enhance their scope in fabric and apparel quality, new opportunities for investment from economic – socio point of view.
- Students learn to draw different fashion postures in relation to the garment. Different techniques of presentation.
- Students will be able to understand the uniqueness of Indian culture and its diversity. Students will get an insight about the rich heritage of India.
- To Recognize color as a quality in the physical world, including natural phenomena. Be able to describe a variety of uses of color, including architecture, sculpture, and cinema or any form of art expression To learn how to Create designs incorporating color phenomena which result in an effective work of art .
- Knowing and using proper clothing care practices results in positive life/resource management and money saved. Students will increase life management skills and save money by properly caring for clothing and learning care labeling requirements for textile products supported by workshops.

**DEPARTMENT OF HOME SCIENCE SYLLABUS OF M. SC HOME SCIENCE
(CLOTHING AND TEXTILES)**

Research in Clothing & Textile						
Year	Sem	Course Code	Paper Title	Theory/Practical	Credits	
1	1	CT/C001	Textile Chemistry	Theory/Practical	4+1	
		CT/C002	Apparel Construction	Theory/Practical	4+1	
		CT/C003	Historic textiles & costumes	Theory	5	
		CT/C004	Printing in textiles	Theory/Practical	4+1	
		CT/C005	Research Methodology	Theory	5	
					Total	25
	2	CT/C006	Fabric construction & woven analysis with Draping, pattern making, and grading	Theory/Practical	4+1	
		CT/C007	Statistics	Theory	5	
		CT/C008	Textile industry in India	Theory	5	
		CT/C009	Dyeing in textiles	Theory/Practical	4+1	
		CT/C010	Fashion Marketing & Fashion illustrations	Theory/Practical	4+1	
					Total	25
	Master in Clothing & Textile					
	2	3	CT/C011	Textile testing and quality control	Theory/ Practical	4+1
			CT/C012	Industrial Tour Report*	-	5
CT/C013			Project*	-	5	
CT/C014			Fashion Communication	Theory/Practical	4+1	
CT/C015			Electives (Any One of the following) * 1. Fashion Merchandising 2. Textile decoration techniques	Theory	5	
				Total	25	
4		CT/C016	Seminar+ Review Paper*	-	5	
		CT/C017	Garment production technology	Theory+ Practical	4+1	
		CT/C018	Social & Psychological Aspects of Clothing	Theory	5	
		CT/C019	Dissertation	Theory	10	
						Total

* Electives (Any One of the following) *

1. Fashion Merchandising
2. Textile decoration techniques

Total Credits = 25x4=100

Total Number of hours = T-60, P-40b /Paper

SEMESTER-1

Paper- 1

(CT/C001) Title of the course: Textile Chemistry

Unit -I

Polymer Chemistry:

- (a) Polymer, methods of polymerization, polymerization process.
- (b) Definition of co-polymer, oligomer, graft-co-polymer.
- (c) Degree of Polymerization.

Unit -II

Chemistry of Natural Fibres:

- (a) Cellulosic fibres: Introduction to cotton, varieties, properties, longitudinal and cross-sectional view. Molecular structure, action of acids and alkalis, hydrocellulose and oxycellulose, mercerisation.
- (b) Regenerated Cellulosic fibres: - Viscose-rayon, cuprammenium rayon, cellulose acetate, Polynosic - their manufacture properties and uses.

Unit -III

- (c) Protein fibres: - Wool & silk Chemical composition, molecular structure, physical & chemical properties action of acids & alkalis and other chemicals. Felting of wool, degumming and weighting of silk, shrink proofing of wool.
- (d) Synthetic Fibres: - Polyester (Terylene, Dacron) Polyamide (Nylon 6, Nylon 66) and acrylonitrile fibres, Chemistry of fibres: - Raw material, manufacturing process from polymer to fibre stage. Physical & chemical properties their uses in textile & clothing. Comparison of wet, dry and melt spinning methods.

Unit -IV

- (e) Other natural and synthetic fibres their chemical composition, properties and uses namely: - Jute flax, polyethylene, polypropylene, polycarbonate, metallic glass fibre, and polyurethane fibres.
- (f) New developments in Fibre manufacture Bi-component and Biconstituent fibres special purpose fibres.

Textile Chemistry (Practical)

1. Identification of fibres: - (Cotton, Polyester, Viscose, Polyamide, silk, Wool etc.) Use of burning test, Microscopic examination, chemical test & solubility.
2. Qualitative & Quantitative analysis of binary blends- Polyester/ cotton, Polyester/viscose, polyester/wool, cotton/ wool.

REFERENCES

- Shenai, V.A. (1984): Technology of Textile Processing, Vol.-IX, Sevak Publication
- Cook, J. Gordon, Hand Book of Textile Fibres, Man-Made Fibres, Merrow Publishing Co. Ltd. England.
- Moncnef : RW Manmade Fibres, John Willey & Sons New York.
- Trotman, E.R. (1975): Dyeing and Chemical Technology of Textile Fibres Charles Griffino Company Ltd., London.
- Marsh; J.T. (1979): An Introduction to Textile Finishing, B.I., Publications.
- Mark H., wooding N.S. & Atlas, Smeeds, (1970): Chemical after Treatment of Textiles, John Willey & Sons Inc., NY.
- Lewin, M. and Sello, Stephen B. (1983): Handbook of Fiber Science and Technology. Vol. II, Chemical Process of Fibers and Fabrics, Functional Finishes- Part A, Marcel Deker,Inc., NY and Basel.
- Shenai, V.A. (1991): Introduction to the Chemistry of Dyestuffs, Sevak, Prakashan.
- Gulrajani M.L. and Gupta, D (1992) : Natural Dyes and their Application to Textiles, IIT Delhi.

Paper- 2

(CT/C002) Title of the course: Apparel Construction

Unit - I

Detailed study of industrial mechanism and equipments used for

- (a) Cutting
- (b) Sewing
- (c) Finishing
- (d) Embellishment

Unit II

Buying Criteria for

- (a) Knits, silks, denim & other special fabrics
- (b) Readymade garments.

Unit - III

Methods of pattern making

- (a) Drafting
- (b) Flat pattern
- (c) Draping

Unit- IV

Developing paper patterns:

- (a) Understanding the commercial paper pattern.
- (b) Layout on different fabrics, widths & types.

Apparel Construction (Practical)

- I Design through flat pattern - Dart manipulation
- II Development of variation in sleeves, sleeves and bodice combination.
- III Development of variations in collars- Roll over collar, Collar with bodices (shawl)
- IV Necklines & Facings:- Scooped necklines, Built - up necklines, Cowl necklines
- V Plackets:- Centre button closing, Asymmetrical Closing, Double breasted
- VI Development of paper pattern and construction of garments (using checks, stripes, Unidirectional & novelty fabrics)
- VII Observation of working of any boutique for five to seven days

REFERENCES

- Armstrong, Pattern Making for/Fashion Design Gioello and Berke : Figure Type And Size Ramnge, Fairchild Publications, New York.
- Grate and Storm : Concepts in Clothing, McGraw Hill Book Co. New York. Bina Abling, Fashion Sketch Book, Fairchild Publications, New York
- Claire Shaeffers : Fabric Swing Guide, Chilton Book Company, Radnot, Pennsylvania.
- Harold Carr and Barbara Lathan : The Technology of Clothing Manufacture, Oxford BSP Professional Book London.
- Slampller, Sharp & Donnell : Evaluating Apparel, Quality - Fairchild Publications, New York.
- Natalle Bray : Dress Fitting Published By Blackwell Science Ltd.

Paper- 3

(CT/C003) Title of the course: Historic Textiles & Costumes

Unit – I

Study of traditional textiles of India-Patolas of Gujrat, bandhani of Rajasthan, shawls & carpets of Kashmir, brocades of Banaras, kalamkari of AP, mulmul, jamdani, amroo, himroo, mashroo, patchitra- orissa, madhubanibihar, pichwai (painting of God)- bhilwada, sholapur, Traditional sarees-ikat sarees of Orissa, chanderi, Maheshwari, patola, baluchar, paithani,kanjivaram, kanchipuram, jamdani, sidipeth, narayanpeth, pochampalli, bandhni, banaras brocade sarees,gadwal, gharchola, vichitrapur, gari, tanchoi

Unit -II

Development of Resist dyeing in Indonesia, Development of weaving in India and England

Unit - III

Ancient Indian dresses: Dress of Aryans, Dress during 1100 AD to 1730 AD (Islamic Influence) Dress during 1730 AD to 1947 AD (British Period).

Unit- IV

Costume in ancient civilization, factors that influenced clothing design emphasis of fabric, garment features, garment structure, use of colour, decoration & accessories including head & footwear.

- A. ASIA
(a) Babylonia (b) Persia (c) Assyria
- B Europe
(a) Greece (b) Rome (c) Byzantine (d) France
- C Africa
(a) Egypt (b) Coptic

REFERENCES

- Bosomworth Dorothy (1995): The Encyclopedia Of Patterns and Motifs, Studio Editions, London.
- Dhamija Jasleen (1979) : Living Traditions of Iron's Crafts, Vikas Publishing House, New Delhi.
- Dupont Auberville,M. (1989): Classic Textiles, Bracken Books, London.
- Gillow John (1992): Traditional Indonesian Textiles, Thames AND Hudson, London.
- Gillow John and Sentence Bryan (1999): World Textiles, Thames and Hudeson, London.

- Ginsburgh, M. (1977): Embroidery, Marshall Cavendish Editions, London.
- Guy John (1998) : Woven Cargos, Thames and Hudson.

Paper- 4

(CT/C004)Title of the course: Printing in Textiles

UNIT – I

- I. Introduction to printing – difference between dyeing and printing.
- II. Methods of printing: Historical development of printing methods – block, stencil, screen roller and rotary screens used at cottage and industrial level.
- III. Printing pastes – thickening agents and auxiliaries for printing and their suitability to various classes of dyes and fibers. Preparation of printing pastes for different dyes and different fibers.

UNIT – II

- IV. Styles of Printing. Direct style, resist or resource style, discharge style and raised style. Styles and methods of printing traditionally used in India.

Unit -III

- V. Special Printing Procedures: · Polychromatic dyeing, transfer printing, carpet printing, flock printing.
- VI. Finishing and after treatment of printed goods at cottage and industrial level.
- VII. Advances in printing technology

PRINTING IN TEXTILES (Practical)

- I. Developing designs for block, stencil, screen printing and hand painting. · Sources of design, sequel arrangements of unit, center line design, spot design border design and eve all design (Sheet work).
- II. Printing – preparation of screens and stencils for printing.
Making samples with stencil, block, screen printings and hand painting on cotton, silk, wool, cotton cool, cotton silk and cotton polyester with different dye classes.
Make one article each of block, stencil, screen and hand painting.

REFERENCES:

- Shenai (1987), Chemistry of Dyes and Principles of Dyeing Sevak Prakashan, Mumbai.
- H. A. Lubs, Robert E. The Chemistry of Synthetic Dyes and pigments, Krieger Publishing Company, New York.
- V. A. Shenai (1999), Azo Dyes – Facts and Figures – Sevak Prakashan, Mumbai.
- R. S. Prayag, Technology Textile Printing – Noyes Data Corporation.
- V.A. Shenai (1977), Technology of Printing – Technology of Textile Processing, Vol. IV, Sevak Publication.

- M.L. Gulrajani and Deepti Gupta (1990), Natural dyes and their Application to Textiles”, ed. I.T.I. Delhi Publications.
- John and Margarot Cannow (1994), Dye Plants and Dyeing, The Herbert Press (UK).

Paper- 5

(CT/C005) Research Methodology

Unit-I

Science, scientific methods, scientific approach.

Research, definition, nature, role, need, step.

Types of research: Historical, descriptive, experimental, case study, social research, participatory research.

Unit-II

Definition and identification of research problem, selection of a problem nature, type and function of hypothesis. Types of variables.

Unit-III

Research design- definition, types, basic principles and purpose. Population and sample. Probability sampling, non-probability sampling.

Unit-IV

Sources of data. Different type of data, Importance of data, Data collection techniques.

Books Recommended:

1. S.C. Gupta & V.K. Kapoor: Fundamentals of Mathematical Statistics
2. S.C. Gupta: Fundamentals of statistics
3. G. Udny Yule, N.M.G. Kendall: An Introduction to the theory of Statistics
4. Croxton, F.C. and Cowden, D. J. Applied General Statistics, Prentics hall Inc. 1955 2
Garrett. H. Statistical in Psychology and Education. Oxford book Co. 1960. 3 R.P.
Hooda: Introduction to statistics. The MacMillon Co.
5. Scotharman, W. A. Textbook of Statistics, (Revised edition) 1973.
6. Kerlinge, Foundations of Behavioral Research
7. Sneedecer G. W. Statistical Methods. Applied Pacific Private Ltd., 1961.

SEMESTER –2

Paper- 6

(CT/C006) Title of the course: Fabric Construction and Woven Fabric Analysis with Draping, pattern making, grading

Unit - 1

- I Principles of Yarn Manufacture - Yarn processing: for natural fibers cotton, wool and worsted, jute, linen by conventional and non-conventional systems –
- a) OE Spinning - Rotar, Vortex, Friction, Airjet electrostatic, Twisters (Bobbtex, Cover, Signaal, twilo)
 - (b) Self -Twisting
 - (c) Yarn from Fibres

Unit -II

- II Principles of spinning in production of man-made fibre: - Hot and cold drawing, spun yarn, bi-constituent and bi-component yarn. Blending: principles, types & technology.
- III Modern development in yarns and at their manufacture
- IV Fabric Faults - yarn and fabric defects and their remedies.

Unit - III

- VI Principles of fabric manufacture basic principles, characteristics, and significances of different processes woven knitted, non-woven, laces, braids, etc.

UNIT-IV

Knitting- Knitting machines, Types of knitting - Properties
Felts & Non Wovens - Braiding & Lacemaking

Fabric Construction and Woven Fabric Analysis with Draping, Pattern Making and grading (practical)

1. Introductions to draping and silhouette of the individual – dress form, Elements of fabric woven, knitted.
2. Development of the ladies block crotch line garments by drafting and draping (Shorts, Bermudas, trousers etc)
3. Development of pattern with variation in- One-piece dresses- Two-piece dress
4. Draping of bodice block and skirt block and their variation.
5. Pattern markings, pattern envelope and guide sheet.
6. Categories of patterns – body types and Measurements, Infants, toddler's children, preteen, pre-teen, junior misses, woman, half size.
7. Pattern Making:

- (a) Essential symbols and terms, Piece identification, grain line, Notches, dart, centre front, centre back, fold line, long lengthen / shorten.
 - (b) Helpful markings, cutting line, stitching line, stitching direction, ease, gathers, pleats, tucks, hem width edge – finishes, clip, lap line.
8. Introduction to grading
- Children – bodice blocks, screen block skirt and shorts block.
 - Women – Bodice block, Sleeve block skirt and shorts block.

REFERENCES

1. Spun Yarn Technology- Eric Oxtoby Butterworth Publication. American Cotton Handbook - Merrill
2. Subodh Kumar Aggarwal (1980): Textile Processing and Auxiliaries. Textiles - Burker - (1988) Abhishek Publication.
3. Essentials of Textiles - M. Joseph, Holf Rinechants, Winston Publications. Irene Wallen Designing with Threads.
4. Edward Miller (1992) Textiles. Corbman, B. Fibre To Fabric. Book Textiles Year 1998 By A.F. Barker Chapter-7, Principles of Weaving Pg., 154-171
5. Book - From Fibres to Fibrics, Gale, E., 1968, p.54 Colour and Weave - Margaret & Thomas, Winderkuechd.
6. Grociki, Z.J. : Textiles Design and Colour, London, Longmans Green and Co. Ltd.
7. William Watson : Advanced Textiles Design, London, Longmans Green and Co. Bombay. 1. Crawford C.A., The art of Fashion draping, fair child publications New York.

Paper- 7

(CT/C007) Title of the course: Statistics

UNIT-I

Meaning and uses of statistics, classification and tabulation of data construction of frequency distribution table.

UNIT-II

Diagrammatic representation of data- single-dimensional diagram (line and bar), two-dimensional diagram(pie)

Graphical representation of data- Graphs of frequency distribution. (Histogram, frequency polygon, frequency curve)

UNIT-III

Descriptive statistics: Measure of central tendency: (Arithmetic mean, mean ,median, mode), relation between mean median and mode ;Measure of dispersion: Range, Mean deviation & Standard deviation; Skewness and Kurtosis .

UNIT-IV

Theoretical Probability Distribution: Binomial, Poisson and normal distribution; Testing of Hypothesis: Null and Alternative Hypothesis, level of significance, Student‘t’ distribution and its application, Chi-square(χ^2) test & its application, ‘f’ test and its application.

UNIT-V

Correlation, Regression and ANOVA analysis: Types of correlation; simple, partial and multiple correlation, Method of study & testing the significance of correlation coefficient, Rank Correlation, Regression analysis: regression equations and regression lines, Properties of regression lines, regression coefficient, testing the significance of regression coefficient. Analysis of variance (ANOVA): One way and two way classification and their applications.

References:

1. Statistical Methods – S.P.Gupta, Sultan Chand & Sons Publisher- New Delhi
2. Research Methodology, Methods and Techniques – C.R. Kothari Wiley Eastern Limited – New Delhi
3. Elements of Statistics, Theory & Practice – M.Singhal. Lakshmi Narain Agarwal, Educational Publisher – Agra
4. An Introduction to Statistical Methods – C.B.Gupta & V.Gupta- Vikas Publishing House PVT Ltd. New Delhi.
5. Research Methods & Measurements in Behavioural & Social Sciences – G.L.Bhatnagar – Agri. Cole. Publishing Academy, New Delhi.
6. Statistical Methods – S.P.Gupta, Sultan Chand & Sons Publisher- New Delhi

Paper- 8

(CT/C008) Title of the course: Textile Industry in India

Unit - I

Importance of textile and clothing industry in the Indian economy in terms of domestic consumption, employment and per-capita income, gross national product and international trade.

National textile policy 1986, and latest policy - changes in focus over the years in terms of objective, function ability, regulatory mechanism and futuristic trends.

Unit-II

Status of textile and clothing Industry over a decade - in relation to production and consumptions pattern, locale, employment potential, R & D, problems and prospects ,research associations & institutes, cotton, wool, silk , jute, rayon and synthetic industry, Handloom industry, readymade garment industry, hosiery industry.

Unit - III

status of textile & apparel industry in global scenario Gatt/WTO ISO 9000-2000 series and ISO 14000 series SWOT analysis

Unit-IV

Export and Import policies of textiles & apparels

- (a) Problems in export and import of textiles,
- (b) Trends in Indian Exports
- (b) c) Export infrastructural facilities & incentives.

Paper- 9

(CT/C009) Title of the course: Dyeing in Textiles

UNIT – I

- I. Preparation of fabric for dyeing and printing
 - Scouring, bleaching, desizing
 - Reagents used and their application
 - Specific preparatory steps for cotton, wool, silk and man-made fibres.
 - Equipments used at cottage and industrial level for yarn, fabric and price goods.

UNIT- II

- II. Dyes
 - Classification, definition, components.
 - Colour and chemical constitution of dyes.
 - Dyeing with chemical dyes.
 - Direct, reactive, vat, sulphur, azo (for cellulosic).
 - Acid, metal complex, chromeomordant (for proteins).
 - Basic, disperse (for man-made).
- III. Dyeing auxiliaries

UNIT – III

- IV. Dyeing with Natural dyes
 - Use of pigments
 - Dyeing machines for fiber, yarn and fibers.
 - Industrial dyeing practices.
 - Dyeing auxiliaries practices.
 - Dyeing of blends.

UNIT-IV

- V. Textile design through dyeing
 - Tie and Dye
 - Batik
 - Level & Cross dyeing
- VI. Dyeing defects and remedies.
- VII. Advances in dyes& dyeing technology

DYEING IN TEXTILES

(Practical)

- I. Preparation of fabric for dyeing and printing:
 - Scouring
 - Bleaching
 - Desizing, at cottage level for different and fiber blends.
- II. Dyeing of yarns and fabrics with different fiber and fiber blend, shade matching.
- III. Creating designs on fabrics through various dyeing process
 - Tie & Dye
 - Batik
 - Observation of working of dyeing unit for 1 week and submission report.

REFERENCES:

1. Shenai (1987), Chemistry of Dyes and Principles of Dyeing Sevak Prakashan, Mumbai.
2. H. A. Lubs, Robert E. The Chemistry of Synthetic Dyes and pigments, Krieger Publishing Company, New York.
3. V. A. Shenai (1999), Azo Dyes – Facts and Figures – Sevak Prakashan, Mumbai.
4. R. S. Prayag, Technology Textile Printing – Noyes Data Corporation.
5. V.A. Shenai (1977), Technology of Printing – Technology of Textile Processing, Vol. IV, Sevak Publication.
6. M.L. Gulrajani and Deepti Gupta (1990), Natural dyes and their Application to Textiles”, ed. I.T.I. Delhi Publications.
7. John and Margarot Cannow (1994), Dye Plants and Dyeing, The Herbert Press (UK).
8. ASTM and ISI Standards.
9. K. Venkatrama (1970), Chemistry of Synthetic Dyes, Part I and II.

Paper- 10

(CT/C010) Title of the course: Fashion Marketing and Fashion Illustration

UNIT – I

Fashion marketing terms, activities involved in marketing distribution channels, supply chain- horizontal & vertical integration marketing strategy- pricing, distribution, promotion, branding etc. The Concept of Retailing Definitions, history, Types of Retailing & retail stores.

UNIT – II

Sales promotion Techniques: -(a) Advertising (b) Publicity (c) Personal Selling Method of sales promotion i) Brand ii) Standard iii) Labelling iv) Fashion show v) Exhibition. Planning and budgeting for a retail store. Maintenance and ordering of stocks, preparation of sales reports. Apparel brands. Advances in fashion marketing

UNIT – III

Terminology used in fashion industry and for fashion illustrations. Selection of materials for fashion illustration. Principles of sketching fashion figures. Steps in creating movement in figures and achieving proportions.

UNIT – IV

Principles and rules in sketching and proportioning body parts. Different types of silhouettes. Importance and types of rendering techniques. Role of fashion illustrator and career opportunities

Fashion Marketing and Fashion Illustrations (Practical)

1. Sketching of different action croquet (based on basic figure learnt earlier)
2. Garments and garment details: - Necklines and collars- Sleeves details- Skirts & pants - Blouses, coats & jackets- Drawstring & fastenings- Pleats, gathers, darts and tucks - Frills, flounces, ruffles, fringes -cowls & cascades - Macrames and patchwork. - Shirring, smoking, quilting - Yokes and ties.
3. Sketching of Accessories: - Hats & headgears- Footwear- Bags & Purses- Jewellery
4. Basic Rendering Techniques:- Colour matching using different mediums.- Stripe - Checks, gingham and plaids- Patterns & textures- Shading
5. Theme Rendering: Developing a line of garments based on a theme (any one the following)

- Beachwear - Cocktail wear
- Swimwear - Eveningwear
- Casual wear - Ramp wear
- Action/Sports wear - Executive wear
- Nightwear - Traditional Indian Costume

REFERENCES

1. Abling Bina, Fashion Sketchbook, Fairchild Publishers, New York.
2. Mckelvey Kathyarn, Illustrating Fashion Blackwell Science Munslow Janine.
3. Seaman Julian, Professional Fashion Illustration, B.T. Batsord Ltd. London.
4. Ireland, Patrick John, Fashion Illustration, B.T. Batsford Ltd. London.
5. Allen Anne Seaman Julian Fashion Drawing The Basic Principles B.Batsford Ltd. London.
6. Dhake. Spoons. (1992): Green world Retail Fashion Promotion and Advertising, Mac Millian Publication.
7. Joamow. J. A. Judelie, B. and Guerreiro, M. (1981) : Inside the Fashion Business, John Wiley & sons, NY, Toranto, Bribane.
8. Frings G. S. (1982): Fashion from concept to consumer, Prentice Hall Inc., Englewood cliffs, New Jersey.
9. Easey, M. (1995): Fashion Marketing, Prentice Hall of India, New Delhi.
10. Majare, S. (1995): The Essence of Marketing, Prentice Hall of India, New Delhi.

SEMESTER – 3

Paper -11

(CT/C011) Title of the course: Textile Testing and Quality Control

UNIT – I

Objectives & importance of textile testing. Importance of standards, different types of standards, Introduction to internal bodies such as ISI, ASTM, BIS etc

- Quality control of textile products.
- Quality standards as applicable to various types of textiles (Garments yardage, knits, woven, carpets, processing, dyeing)

UNIT –II

Fiber Testing: Definition, objectives & method of testing staple length, mean length, short fiber percentage, fineness, evenness, maturity, tensile strength, elongation at break, and interpretation of results.

UNIT – III

Yarn Testing: Definition, Objective and methods of testing count, Denier twist, diameter, crimp, tensile strength, elongation at break, stress strain curve, elastic recovery, yarn appearance & evenness, cloth cover, interpretation of results.

UNIT – IV

Fabric Testing: Definition, objectives & methods of testing length, width, bow & skewness, thread count, ends & picks, weight, thickness, breaking strength, tear strength, bursting strength, abrasion, resistance, stiffness, drapability, pilling, crease recovery, handle, flammability & interpretations of results.

TEXTILE TESTING AND QUALITY CONTROL

(Practical)

Yarn Tests

(a) Count (b) Breaking strength (c) twist (d) Crimp

Fabric Analysis

(a) Thread count (b) Weight (c) Thickness (d) Abrasion (e) Strength (Tensile, Tear, Bursting) (f) Crease Recovery (g) Dimensional changes in laundering (h) Stiffness

Color Partners to

(a) Laundering (b) Crocking (c) Pressing Dry and Wet (d) Perspiration – Acid and Alkaline.

REFERENCES:

1. Booth, J.E.: Principles of Textile Testing – Newness Butter Worth, London.
2. Billie, J. Collier and Heler H. Epps – Textile Testing and Analysis – Prentice Hall, New Jersey.
3. John, H. Skinkle – Textile Testing – Brooklyn, New York.
4. Grover and Hareby – Handbook of Textile Testing and Quality Control, Wiles.
5. ISI Specifications, BIS specifications.
6. ASTM standards.

Paper- 14**(CT/014) Title of the course: Fashion Communication****Unit- I**

Concept, definition, and scope of communication. Functions of mass communication through different media.

Unit -II

Role of media in society and its need in the fashion world. Media ethics. Creative writing.

Unit- III

Interview types and how to conduct them. Designing catalogs and brochures. Editing and its various techniques. Event management- fashion shows and photo shoots.

Fashion communication (Practical)

Creative photo shoots, network fashion communication, writing of fashion articles.

Paper 15**CT/C015 Electives (Any One of the following)****1. Fashion Merchandising****Unit 1**

Fashion retailing and fashion merchandising terminology. A brief history of fashion, and fashion cycles. Theories of fashion adoption.

Unit 2

Various factors affect fashion. Operational patterns within the industry. Types of retailing and merchandising. Types of retail outlets.

Unit 3

The organizational structure of stores. Nonstore retailing. Effect of fashion cycle on retailing. Fashion forecasting, sources, and interpreting customer demand. Sales promotion techniques. Definition, concept, and purpose of visual merchandising.

2. Textile decoration techniques

Unit 1

Surface decoration techniques used in textiles. Types of fabric embellishments. Survey of embellishments available in the market. Use of various embellishments for surface decoration. Materials used for fabric painting.

Unit 2

Designing through fabric painting and application of 3D-effects. Types of appliqué work. Equipment, material and method used for appliqué work. Designing through patch work. Basic stitches used in crochet work, increasing and decreasing of stitches.

Unit 3

Preparation of samples of stitch variations. Crochet edging, insertion and trimmings. Designing and preparation of one crochet article. Preparation of article by combining various techniques of surface decoration. Cost estimation of the prepared articles. Documentation of designs and portfolio development.

SEMESTER – 4

Paper- 17

CT/017) Title of the course: Garment Production Technology

UNIT – I

- I. Introduction to the background and structure of the garment / creating Industry.
- II. The organization of the garment factory

Unit -II

1. Principles of Management.
2. Various Departments like: Design Departments, Marketing Departments, Finance Departments, Purchasing Departments, Production Departments, Operations Departments

UNIT – III

- III. Manufacturing Technology
- A) Cutting & Cutting Room
 - (i) Market planning
 - (ii) Efficiency, Method & use of worker plan.

UNIT- IV

Methods of spreading of fabric and requirements of the spreading process.

Cutting the fabric – objectives and methods of cutting fabric.

Sewing threads – types of fiber, construction and furnish, thread size, thread package thread costs, thread properties and seam performance. Sewing problems; Stitch formation, damage along the seam live puckering. Sewing machinery. Use of components and Trims Alternative Methods of forming materials Fusing Welding and adhesives Moulding Pressing Technology Production Technology Ware Housing

Garment Production Technology (Practical)

Hands on training on machines, paper exercises, Machine operations, special attachments and their uses.

REFERENCES:

1. Gerry Cooklin – Introduction to Clothing Manufacture, Black Well Sciences.
2. Harold Carr & Barbara Lathare – The Technology of Clothing Manufacture – Blackwell Science.
3. A.J. Chuter – Introduction to Clothing Production Management Blackwell Science.
4. D. J. Tyles – Materials Management in Clothing production – Blackwell Science.

5. Harold Carr & Barbara Lathan (1992): Fashion Design and Product Development – Blackwell Science.
6. Mike Easey – Fashion Marketing. Blackwell Science.

Paper 18

(CT/C018) Title of the course: Social and Psychological Aspects of Clothing

UNIT – I

Origin of Clothing, Theories of Clothing – theory of modesty, immodesty, protections, adornment, combined need theory, other theories in fashion. Relation between clothing and other disciplines.

(a) Physical Health (b) Mental Health Clothing and first impressions.

UNIT – II

Relation between clothing and the wearer

(i) Personality and self-concept.

(ii) Motivation in clothing choices.

Individual values, interests and attitudes related to clothing.

UNIT-III

Behaviour and clothing choices, practices and effect and clothing on the individual.

UNIT –IV

Clothing and Society. Clothing and social behaviour Clothing influenced by religion and culture. Clothes and conformity Clothes and occupation Uniforms in schools and college. Clothes and colour and impact of colour.

REFERENCES:

1. Avis, M. Dry (1961): The Psychology of Jung, Methuen & Co., London.
2. Horn, Marilyu J. (1968): The Second Skin, Houghton Mifflin Co., USA.
3. Flugel, J.C. (1950): The psycho – analytical study of the family, The Hograth Press & the Institute of Psycho Analysis, London.
4. Richard Wollhein (1985): Freud, Fontana Press, London.
5. Vincent Brome (1978): Jung, Granada Publishing, London, Toronto Sydney, New York.

CT/C012	Industrial Tour Report	Practical	5
CT/C013	Project	–	5
CT/C016	Seminar+ Review Paper	–	5
CT/C019	Dissertation	Theory	10

Program/Class: Bachelor (Research) in CLOTHING AND TEXTILES	Year: First	Semester: I & II
Course Code: CT/C001 - FN/C010	Course	
Credits: 25x 2= Total 50	Compulsory	
Max. Marks: T=100 P = 50	Min. Passing Marks.....	

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Program/Class: Master in CLOTHING AND TEXTILES	Year: Second	Semester: III & IV
Course Code: CN/C011 - CN/C018	Course	
Credits: 25x 2= Total 50	Compulsory	
Max. Marks: T=100 P = 50 Viva= 50	Min. Passing Marks:.....	

Total Number of hours = T-60, P-40/Paper