

M.Sc.(Home Science)

Prospectus No. 2012195

Semester-I & III Examination - Winter-2011,
Semester-II & IV Examination - Summer-2012

संत गाडगे बाबा अमरावती विद्यापीठ
SANT GADGE BABA AMRAVATI UNIVERSITY

गृहविज्ञान विद्याशाखा
(FACULTY OF HOME SCIENCE)

PROSPECTUS

OF

M.Sc. (Home Science) (Textile and Clothing)
Semester-I & III Examination, Winter-2011
Semester-II & IV Examination, Summer-2012



2011

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(Semester-I to IV)
(Prospectus No.2012195)

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SANT GADGE BABA AMRAVATI UNIVERSITY
SPECIAL NOTE FOR INFORMATION OF THE STUDENTS

- (1) Notwithstanding anything to the contrary, it is notified for general information and guidance of all concerned that a person, who has passed the qualifying examination and is eligible for admission only to the corresponding next higher examination as an ex-student or an external candidate, shall be examined in accordance with the syllabus of such next higher examination in force at the time of such examination in such subjects, papers or combination of papers in which students from University Departments or Colleges are to be examined by the University.
- (2) Be it known to all the students desirous to take examination/s for which this prospectus has been prescribed should, if found necessary for any other information regarding examinations etc. refer the University Ordinance Booklet the various conditions/provisions pertaining to examinations as prescribed in the following Ordinances-
- | | | |
|-----------------------|---|--|
| Ordinance No. 1 | : | Enrolment of Students. |
| Ordinance No.2 | : | Admission of Students |
| Ordinance No. 4 | : | National Cadet Corps |
| Ordinance No. 6 | : | Examination in General (relevant extracts) |
| Ordinance No. 18/2001 | : | An Ordinance to provide grace marks for passing in a Head of passing and Improvement of Division (Higher Class) and getting Distinction in the subject and condonation of deficiency of marks in a subject in all the faculties prescribed by the Statute NO.18, Ordinance 2001. |
| Ordinance No.9 | : | Conduct of Examinations (Relevant extracts) |
| Ordinance No.10 | : | Providing for Exemptions and Compartments |
| Ordinance No. 19 | : | Admission of Candidates to Degrees |

Ordinance No.109	:	Recording of a change of name of a University Student in the records of the University
Ordinance No.6 of 2008	:	For improvement of Division/Grade.
Ordinance No.19/2001	:	An Ordinance for Central Assessment Programme, Scheme of Evaluation and Moderation of answer books and preparation of results of the examinations, conducted by the University, Ordinance 2001.

Dineshkumar Joshi

Registrar

Sant Gadge Baba Amravati University

PATTERN OF QUESTION PAPER ON THE UNIT SYSTEM

The pattern of question paper as per unit system will be broadly based on the following pattern.

- (1) Syllabus has been divided into units equal to the number of question to be answered in the paper. On each unit there will be a question either a long answer type or a short answer type.
- (2) Number of question will be in accordance with the unit prescribed in the syllabi for each paper i.e. there will be one question on each unit.
- (3) For every question long answer type or short answer type there will be an alternative choice from the same unit. However, there will be no internal choice in a question.
- (4) Division of marks between long answer and short answer type question will be in the ratio of 40 and 60.
- (5) Each short answer type question shall contain 4 to 8 short sub question with no internal choice.

Syllabus Prescribed for M.Sc. (Home Science) (Textile & Clothing) Semester-I & Semester-II (Implemented from the Academic Session 2010-11)

Semester-I Subject Code 114AT45 Advanced Textile Design

Theory : 4 periods/wk (Credits 4)	Theory Mks. : 60
Practical : 3 periods/wk (Credits 1.5)	Th. Int. Mks. : 40
	Practical Mks. : 20
	Pra.Int.Mks. : 05
	Total Mks. : 125

Objectives :-

- To develop awareness and appreciation of art & aesthetics in textiles.
- To impart creative and technical skills for designing textiles with special emphasis on structural design.

Theory

Unit-1 : **Elements of Wave Design :** Construction of elementary weaves, development of weaves from elementary basis. Derivatives of plain, twill and satin weaves. Dobby and Jacquard shedding and weaving terrypile.

Unit-2 :

- Introducing to knitting. Definition of knitting, basic structural terms and principles of knitting technology.
- Basic mechanical principles of knitting technology. Elements of knitted loop structure, four primary base structure (plain, rib, interlock, purl.)
- Weft and Warp Knitting – related terms and definition, warp and weft knitting machines.

Unit-3 :

- Nonwoven textiles, fabric obtained by different manufacturing techniques.

Unit-4 : **Design Analysis :**

- Principles and elements of design, sources of inspiration for basic, sketching and painting, understanding the tools

and equipment and their appropriate use for sketching. Painting and achieving textural effects.

Unit-5 : Process of Designing :

- Motif development – Geometrical, simplified, naturalized, stylised, abstract and ornamental, big and small motifs, enlargement and reduction.
- Colour consideration – colour harmonies and colour ways.

Practicals :-

- (1) Survey – Fabrics available in local market.
- (2) Creating motif designs and patterns for different placements and usages.
- (3) Fabric Analysis – Design repeat, draft, peg plan and other details.
- (4) Weaving on simple loom – Plain, rib, matt, and twill weave.

References :-

- (1) Prakash K. (1992), Expression Ethnic Indian Textile Designs, Deluxe Packaging.
- (2) Prakash K. (1989), Impressions, Deluxe Packaging.
- (3) Prayag, R.S., Technology and Textile Printing Noyes Data Corporation.
- (4) Shenai, V.A. (1977), Technology of Textile Printing - Technology of Textile Processing Vol.-IV, Sevak Publication.

Semester-I
Subject Code 114TC46
Textile Chemistry

Theory : 3 Periods/wk (Credits 3)	Theory Paper :	45
Practical : 3 Hrs/wk (Credits 1.5)	Th. Int.Asst.Mks. :	30
	Practical Marks –	35
	Pra.Int.Ass.Mks. -	15
	Total Mks. :	125

Learning Objectives :- To acquaint the students about the polymers of which the textile fibers are made.

- To understand textile chemistry production and fundamental properties of natural and synthetic fibers.
- To understand the theory of dyeing in relation to various classes of dyes.

Theory

Unit-1 : Need and Importance of study of Textile Chemistry :

- Polymer Chemistry.
- Polymers, methods of polymerization, polymerization process.
- Degree of polymerization, types of polymers.

Unit-2 : Chemistry of Cellulosic Fibers :

Molecular structure of cellulose, properties and grading of cotton.

- Regenerated cellulosic fibers.
- Rayon, types of rayon, their manufacturing processes and properties.
- Protein Fibers – Wool and Silk.
- Molecular structure, properties, processing of protein fibers like degumming, scruing, weanting, shrink proofing felting etc.

Unit-3 : Systematic fibers – Polyester, polyamides and acrylonitriles. Chemistry of Synthetics, raw materials, manufacturing process from polymer to fiber stage, properties and their uses, blends of different fibers, their properties and uses.

Unit-4 : Dyeing :

- Preparation of fabric.
- Theory of dyeing.
- Classification, colour and chemical constitution. Application of dyes, pigments and their application.
- Dyeing methods and industrial application.

Unit-5 : Printing :

- Preparation of fabric for printing.
- Styles of printing.
- Methods of printing.
- After treatment.

Practicals :-

- (1) Preparation of fabric for dyeing and printing.
- (2) Dyeing of yarns and fabric.
 - Direct, reactive, vat, sulphur, azo.
 - Acid, chrome, metal complexes.
 - Basic, disperse
 - Natural dyes.
- (3) Printing – Screen, block, resist, discharge, stencil and flock printing, mordant printing.
- (4) Internship of 1 month at dyeing, printing unit.

References :-

- (1) Shenai, V.A. (1991), Introduction to the Chemistry of Dye Stuff - Sevak Publication.
- (2) Cook, J. Gordon, Hand Book of Textile Fibres, Merrow Publishing Co.
- (3) Trotman, E.R. (1975), Dyeing and Chemical Technology of Textile Fibres, Charles Griffino Co. Ltd. London.

Semester-I**Subject Code 115PD47****Programme Design and Evaluation in Textile Clothing**

Theory : 2 Periods/wk (Credits 2)

Theory Paper : 35

Practical : 2 Periods/wk (Credits 1)

Th. Int.Asst.Mks. : 15

Pra.Int.Ass.Mks. – 25

Total Mks. : 75

Learning Objectives :- After completing this course students will be able to-

- understand the process of programme designing
- develop ability in planning programmes related to textile and clothing.

Theory**Unit-1 : Programme Planning - Meaning, and importance.**

- Pre-requisite of developing plan.
- Programme planning processes.

Implementation :-

- Aspects of Execution.
- Factors responsible for the successful conduction of a programme.

Unit-2 : Evaluation, Follow up and Documentation Evaluation

- Meaning and purpose of Evaluation.

- Types and tools of Evaluation.

Follow up

- Need for follow up.
- Methods of follow up

Documentation

- Need for reporting and recording.
- Aspects to be covered.

Unit-3 : Training Programme on Dyeing and Printing

- Developing skills
- Developing New Shades.
- Quality Control and Testing

Unit-4 : Skill development programme in-

- Embroidery techniques / Garment
- Designing / sewing techniques.

Unit-5 : Management Information System (MIS)

- Organization of exhibitions and fashion shows.

Practical -I :

1. Design consumer awareness/skill development/capacity building programme.
2. Implementation, Evaluation and followup of the programme.
3. Visit ongoing programmes.
4. Write reports of aforesaid programmes.

References :-

- 1) Albrechts, H. et. al. (1989). Rural Development Series Agricultural Extension Vol. I & II. Basic concepts and methods, Wiley Eastern Limited, New Delhi.
- 2) Chaubey, B.K. (1979). A Handbook of Extension Education, Jyoti Prakashan; Allahabad.
- 3) Dahama, O.P. and Bhatnagar, O.P. (1987). Education and Communication for development. Oxford and IBH Publishing Co., Pvt. Ltd.; New Delhi.
- 4) Extension Education in Community Development. (1961). Ministry of Food and Agriculture. Government of India, New Delhi.
- 5) Pankajam, G. (2000). Extension - Third Dimension of Education, Gyan Publishing House ; New Delhi.
- 6) Ray, G.L. (1999). Extension Communication and Management. Naya Prokashi; Calcutta.

- 7) Reddy, A. (1999). Extension Education, Sree Lakshmi Press, Bapatla.
- 8) Sandhu, A.S. (1994) Extension Programme Planning. Oxford & IBH Publishing Company Private Limited, New Delhi.
- 9) Singh, R. (1987) Textbook of Extension Education. Sahitya Kala Prakashan, Ludhiana.
- 10) Supe, S.V. (1982). Introduction to Extension Education. Oxford Publishers; New Delhi

Semester-I

Subject Code 114ED48

Entrepreneurship Development in Textile and Clothing

Theory : 3 Periods/wk (Credits 3)

Theory Paper : 45

Practical : 2 Periods/wk (Credits 1)

Th. Int. Asst. Mks. : 30

Practical Mks. : 20

Pra. Int. Ass. Mks. – 05

Total Mks. : 100

Learning Objectives :-

- To promote entrepreneurship skills among student.
- To understand the process and procedure of setting up small enterprises.
- To develop management skills for entrepreneurship developments.

Theory

- Unit-1 :**
- Entrepreneurship – Definition, concept and characteristics.
 - Government policies towards promotion of entrepreneurship.

Unit-2 : **Agencies for development of entrepreneurship. Role of SSI, MIDC and NSIC, Banks and voluntary organizations.**

- Personal Effectiveness – factors affecting entrepreneurs role, effective communication skill, achievement motivation, goal orientation psychological barriers to self employment, creativity, assertiveness and quick response.

Unit-3: **Importance of textile industry in Indian Economy** – problems and prospects of textile industry. National textile policy.

Unit-4: Principles of marketing and merchandising for the domestic and export market export policy of India.

Unit-5: Legislations – Licensing, registration, municipal laws, business ethics, income tax, labour law application. Consumer complaint redressal.

Practicals :-

(1) Related Experience :-

- Visit to small scale industry.
- Visit Agencies that finance SSI.

(2) Project :- Survey of local market to know needs of consumer –

- Formation of project proposal.
- Report on visits.

(3) Practical :- Preparation of Articles based on following-

Dyeing printing, embroidery, Garment manufacturing, soaps, detergents, stain removers.

Minimum 5 articles from the above are to be prepared and organise exhibition-cum-sale of the prepared products.

References :-

- (1) Akhauri, M.M.P. (1990), Entrepreneurship for Women in India, NIESBUD, New Delhi.
- (2) Patel, V.C. (1987), Women Entrepreneurship – Developing New Entrepreneurs, Ahmedabad EB11.
- (3) Hisrich, R.D. and Peters M.P. (1995), Entrepreneurship – Starting, developing and managing a new enterprise, INC USA.

Semester-I

Subject Code 111CA49

Computer Application in Textile & Clothing Statistics

Practical : 4 Periods/wk (Credits 2)

Practical Mks. : 35

Pra. Int. Ass. Mks. : 15

Total Mks. : 50

Learning Objectives :-

- After completing course students will be able to- understand use of computer in statistical analysis in Textile Statistics.
- develop skill of drafting text, tables, figure.

Practicals :

- (1) Computer Basics
 - 1.1 Computer Hardware and software.
 - 1.2 Input and out put devices.
 - 1.3 Basic Operations in data handling (copy, paste, prepare file / folder, burn CD's etc.)
- (2) MS Word
 - 2.1 Introducton to MS Word.
 - 2.2 Formatting text
 - 2.3 Drafting tables.
 - 2.4 Use for drafting text and reports.
- (3) MS Excel
 - 3.1 Introduction to MS Excel.
 - 3.2 Use for analysis of data in textiles.
 - 3.3 Use for statistical analysis in textiles.
Descriptive Statistics – Mean, standard deviation.
Correlation – Pearson correlation between two or more variables.
Parametric test – t test, z test, analysis of variance.
Non-parametric text – chi test.
- 3.4 Graphical Presentation – Graphs and bar diagrams.
- 3.5 Introduction to applicable statistical analysis softwares.

References :-

- (1) Garrett, Henry E. (1971), Statistics in Psychology and Education, David Hanley and Co.
- (2) Edward, Experimental Design in Psychological Research.
- (3) Kerlinger, Foundation of Educational Research.
- (4) Literature of MSCIT.

Semester-II
Subject Code : 124FA50
Fashion and Apparel Design

Theory : 3 Periods/Wk (3 Credits)	Theory Paper	:45
Practical : 4 Periods/Wk (2 Credits)	Theory Internal	:30
	Practical	:35
	Practical Internal	:15
	Total Marks	:125

Objectives :

- To create awareness of fashion and apparel design as an art and science of visualizing, creating and developing fashions
- To Focus on design elements and principles, garment details on
- To develop and understand the principles of pattern making through flat pattern

Theory

- Unit 1:** History of fashion, concepts of fashion, factors influencing fashion
- Unit 2:**
- Classification of fashion
 - Designers – international and domestic
 - Fashion forecasting
 - Study of markets and segments
- Unit 3 :**
- Elements used in creating a design
 - Colour – its sensitivity and composition in dress
 - Components of fashion – Silhoutte, details, colour, fabric, texture, seams, trims
- Unit 4 :** Fabric types and their buying criteria for – woven, non woven, knitted and underlying fabrics
- Unit 5 :** Pattern making through flat pattern
- Pattern making terms
 - Anthropometric measurements, standard measurement chart and figure types
 - Understanding the commercial paper pattern
 - Layouts for cutting

Practicals

- 1) Fashion sketching – Basic figure drawing for women.
- 2) Sketching of different action croquis (front, back and side view)
- 3) Garment and garment details
- 4) Accessories
- 5) Designing through flat pattern – dart manipulation

References

- 1) J. Anderson Black, Mudge Garland, A History of Fashion, Orbis Publishing Ltd., London
- 2) Broucher Francois, A History of Costume in the West. Thames and Hudson
- 3) Sharon Lee Tete, Inside Fashion Design. Harper and Row Publishers, N. York
- 4) Kathryn Samuel, Life Styles, Fashion Styles. Orbis London
- 5) Carter E. (1977) The Changing World of fashion. G.P. Putnam's Sons, New York
- 6) Carr H. and Pomery J. (1992) Fashion Design and Product Development. Blackwell Scientific Publications, London, Edinburgh
- 7) Complete guide to sewing. Reader's Digest Association, New York
- 8) Creative Clothing Construction, Mc Graw Hill, 1973

Semester-II**Subject Code : 124TT51****Textile Testing and Quality Control**

Theory : 3 Periods/Wk (3 Credits)	Theory Paper	: 45
Practical : 4 Periods/Wk (2 Credits)	Theory Internal	: 30
	Practical	: 35
	Practical Internal	: 15
	Total Marks	: 125

Objectives :

- To acquaint the students about physical properties of textiles
- To familiarize students with various testing equipments
- To impart knowledge of various test methods applied to textiles in various stages
- To make them understand the quality control and standardisation

Theory**Unit 1 : Introduction to Textile Testing**

- Meaning, definition, need and importance.
- Properties of textiles at different stages of processing and their principles of measurement
- Fibres – length, fineness
- Yarn – Strength, evenness, openness, load elongation and crimp

Unit 2 : Fabrics – count, strength, elongation, shrinkage, thickness, crease recovery, stiffness, air permeability, drapability, flammability, repellency and colour fastness

- Unit 3 :**
- Concept of fabric faults related to stages of manufacture and the remedies
 - Garment finishing – colour fastness, shrinkage

Unit 4 : Concept of Statistical Quality Control

- Sampling
- Test methods used
- Tolerance limits, CV%

- Unit 5 :**
- Standardisation and quality control of textile products
 - Concept, need and importance
 - National and International organizations for standardization
 - Quality standards as applicable to various types of textiles (Garments, yardage, knits, woven, carpet, processing and dyeing)

Practicals

Physical testing of textiles using appropriate standardised procedures

- 1) Fibers – Length, diameter and fineness
- 2) Yarn – Count, heaviness, twist, crimp, strength
- 3) Fabric – Thread count, thickness, stiffness, crease recovery, bursting strength, drape tensile strength
- 4) Colour fastness tests to various agencies

References

- 1) Shenai V.A. (1984) Technology of Textile Processing, Vol. IX, Sevak Publication

- 2) Booth J.E. Principles of Textile Testing : Newness Butter Worth, London
- 3) Grover and Hambi. Handbook of Textile Testing and Quality control, Wiles
- 4) John H. Schinkle. Textile Testing, Brooklym, New York
- 5) ASTM and ISI Standards
- 6) ISI Specificaitons, BIS specifications
- 7) ASTM standards
- 8) Marsh J.T. (1979) An Introduction to Textile Finishing, B.L. Publications.

Semester-II

Subject Code : 123TC52

Textile Clothing and Human Psychology

Theory : 3 Periods/Wk (3 Credits)	Theory Paper	:45
Practical : 2 Periods/Wk (1 Credit)	Theory Internal	:30
	Practical Marks	:20
	Practical Internal	:05
	Total Marks	:100

Objectives : The aim of this course is

- To study the psychological effect of clothing on the individual in social situations
- To impart knowledge regarding the factors that affect making clothes for individual in terms of texture, fabric growth, development etc.

Theory

Unit 1 : Origin of clothing

- Variations in costumes due to material aspects and climate.
- Religious influence on costume
- Influence of events of the world
- Clothing symbols

Unit 2 : Essentials of clothing

- Importance of clothing
- Psychological aspects of clothing

Unit 3 : Individual clothing

- Factors to be considered while selecting and making individual garments

Unit 4 : Clothing budget and Wardrobe planning

- Clothing and family budget
- Individual clothing budget and wardrobe planning

Unit 5 : Socialisation and development of the self

- Social norms
- Attitudes and value formation
- Individuality and conformity
- Person and group identification

Practicals

Study of clothing trends among college going boys and girls.

References

- (1) Back C. Robert (1986), Psychological factors at work, Recognition and Control, ILO, Geneva, Occupational Saftey and Health Series No.56.
- (2) Back C. Rober (1986), Apply Psychology understanding people, Prentice Hall Englewoods Cliffs, New Jersey.
- (3) Morgan C.T., King R.A., Robinson N.M. (1979), Introduction to Psychology, Tata McGraw Hill Publishing Co., New Delhi.
- (4) Kolf D. (1984), Experimental Learning – Experiences as the source of learning and development.
- (5) Chauhan S.S. (1984), Advaned Educational Psychology, Vikas, New Delhi.
- (6) Gagne R.M. (1978), The conditions of learning, Molt and Rinehart, New York.
- (7) Bigge M.L. (1982), Learning Theories for Teachers, Harper & Row, New York.

Semester-II

Subject Code : 125CA53

Communication Approaches in Textiles and Clothing

Theory : 3 Periods/Wk (3 Credits)	Theory Paper	:45
Practical : 2 Periods/Wk (1 Credit)	Theory Internal	:30
	Practical Internal	:25
	Total Marks	:100

Objectives :

- To develop understanding regarding vital aspect of communication and various audio visual media/mass media and their use

- To become familiar with important communication programmes.
- To develop skills to prepare and use communication tools.

Theory

Unit 1 : Introduction to Communication

- 1.1 Concept of communication, aims and objectives
- 1.2 Importance and need for communication in textiles and clothing
- 1.3 Factors influencing clothing and fashion

Unit 2 : Themes and messages for textiles and clothing

- 2.1 Themes in textiles and clothing
- 2.2 Messages in fashion clothing
- 2.3 Themes and messages for different target groups
- 2.4 Fashion designer, merchandiser
- 2.5 Government and non government organizations and consumers

Unit 3 : Fashion and Communication Process

Written communication – Fashion writing, creative writing, writing management and advertising, public relations and media ethics

Unit 4 : Visual Communication

- 4.1 Visual merchandising and display
- 4.2 Fashion photograph
- 4.3 Fashion shows and multimedia

Unit 5 : Approaches in Textiles and Clothing

- 5.1 Traditional approaches
- 5.2 Presentation of traditional approaches
- 5.3 Modern approaches
- 5.4 Presentation of modern approaches

Practicals

- 1) Study of existing approaches in textiles and clothing market
- 2) Identifying themes in Textiles and Clothing and prepare, present and evaluate the following tools (any four) Poster, Banners, Slogans, Charts, flash cards, Leaflets, Educational games, Transparencies, CD, Script for radio and TV.

References

- 1) Maan, Gurmeet Singh (1987) The Story of Mass Communication : An Indian Perspective. New Delhi, Harnam Publishers.
- 2) Tiwari I.P. (1987) Communication Technology and Development. New Delhi, Ministry of Information and Broadcasting.
- 3) Sharma S.C. (1987) Media Communication and Development. Jaipur, Rawat Publishers.
- 4) Hartman, Paul and others (1986) The Mass Media and the Village Life : An Indian Study. New Delhi, Sage Publication.
- 5) Melkote S.R. (1991) Communication for Development in Third World : Theory and Practice. New Delhi, Sage.
- 6) Bhatnagar S. and Satyapal A. (eds.) (1988) education and Communication Technology : Perspective, Planning and Implementation. New Delhi.
- 7) Joshi P.C. (1989) Culture Communication and Social Change. New Delhi, Vikas Publications.
- 8) Shrivastava K.M. (1992) Media Issues, New Delhi Sterling Pub.
- 9) Bergin F. (1976) Practical Communication, London, Pitman
- 10) MEDIA (1984) Education, Paris, UNESCO

Semester-II

Subject code : 124RM54

Research Methods in Textiles & Clothing

Theory : 3 Periods/Wk (3 Credits)	Theory Paper	:45
Practical : 2 Periods/Wk (1 Credits)	Theory Internal	:30
	Practical Marks	:20
	Practical Internal	:05
	Total Marks	:100

Objectives : After completion of course students will be enable to-

- know importance of research in textiles and clothing
- understand the types, tools applicable to research problem
- develop skills of preparing out line of research work

Theory

Unit 1 : Foundation of Scientific Research

- 1.1 Research – meaning and definition
- 1.2 Need of research in textiles and clothing

- 1.3 Research process
- Selection and formulation of research problem
 - Specifying objectives
 - Formulating hypothesis
 - Deciding variables

Unit 2 : Design Strategies in Research

- 2.1 Descriptive studies
- Correlation studies
 - Case studies
 - Cross sectional/Survey
- 2.2 Analytical studies
- Observational studies
 - Cohort studies
 - Cross sectional studies/Survey

Unit 3 : Methods of Sampling

- 3.1 Characteristics of good sampling
- 3.2 Probability or random sampling
- 3.3 Non probability sampling

Unit 4 : Research Tools

- 4.1 Levels of data measurements and characteristics of good measurement
- 4.2 Types of tools and their uses
- Questionnaire
 - Schedule
 - Rating scale
 - Attitude scale
 - Interview – structured and unstructured
 - Observation – participant and non participant
- 4.3 Concept of data
- Types of Data – Qualitative and Quantitative data
 - Analysis of Data – Qualitative and Quantitative data analysis

Unit 5 : Statistical Testing of Hypothesis

- 5.1 Application of parametric tests
- r test

- t tests
- Z test
- F test
- ANOVA

5.2 Application of non parametric tests

- Chi square test
- Spearman's Rank correlation

Practicals

- 1) List research areas in textiles and clothing
- 2) Prepare synopsis/outline of dissertation work
 - Select problem for dissertation from literature research, experiences of guide, teachers, and experiment/pilot study.
 - Find out key words, their meaning and definitions from dictionary and encyclopedias.
 - Design conceptual model of the study.
 - Collect review on selected variables from national and international journals and prepare note cards and reference cards (follow the rules of scientific writing)
 - Decide and prepare tools of measurement of variables
 - Specify objectives
 - Frame hypothesis
 - Select locale of the study
 - Decide sample size and sampling techniques
 - Decide applicable statistical tests
- 3) Conduct pilot study for calculating validity, reliability and usability of the tools.
- 4) Prepare master table for analysis
- 5) Prepare time schedule and note down facilities required for dissertation work.

References

- 1) Van Maanen (1983) *Qualitative Methodology*. Sage Publication
- 2) Sumati Mulay and Sabarathanam V.E. (1980) *Research Methods in Extension Education*. New Delhi, Sole Selling Agents, MANASHYAN, 32.
- 3) Bryman A. and Cramer D. (1994) *Quantitative Data Analysis for Social Scientist*

- 4) Aravindra Chandra and Saxena T.P. Style Manual for Writing : Thesis, Dissertations and Papers in Social Sciences. New Delhi, Metropolitan Book Co. Pvt. Ltd.
 - 5) Kerlinger, Foundation of Educational Research
 - 6) Ingle P.O. Scientific Report Writing. Nagpur, Sarla P. Ingle
- (Note : The syllabi for General Interest Course shall be as per Science faculty.)

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Syllabus Prescribed for M.Sc. (Home Science) (Textile & Clothing)
Semester-III & Semester-IV
(Implemented from the Academic Session 2011-12)

Semester-III
Subject Code : 234PM55
Pattern Making

Practical : 6 Periods/wk (Credits 3)	Practical Marks : 50
	Pra.Int.Marks : 25
	Total Marks : 75

Objectives :-

- (1) To enable the students to make sketch / photograph.
- (2) To enable the students to obtain perfect fit and harmony between fabric and design of the garment.

Practicals :

- (1) Introduction to draping and silhouette of the individual – Dress form, elements of fabric – Woven, knitted.
- (2) Development of the ladies block of crotch line garment by drafting and draping (short, Bermudas, trouser etc.)
- (3) Development of pattern with variation in-
 - One piece dresses.
 - Two piece dresses.
 - Dartless dresses.
 (Incorporating various, collars, sleeves, yokes, necklines, pockets and plackets etc)
- (4) Draping of bodice block and skirt block and their variations.
 - Draping of assymetrical designs and preparing patterns.
- (5) Pattern markings, pattern envelope and guide sheet.

References :-

- (1) Pamela C. Stinger, pattern drafting for dress making.
- (2) Sheldon Maratha Gene – Design through drafting USA. Burges Publishing Co.
- (3) Pepin Harriet – Modern Pattern Design, New York.
- (4) Crawford C.A. – The Art of Fashion Draping, Fair Child Publication, New York.

- (5) Hillhouse M.S. and Mansfield E.A. – Dress Design – Draping & flat pattern, London.

Semester-III
Subject Code : 234FI56
Fashion Illustration

Practical : 6 Periods/wk (Credits 3) Practical Marks : 50
 Pra.Int.Marks : 25
 Total Marks : 75

Objectives :- After completion of the course students will be able to develop skill of sketching and rendering.

Practicals :-

- (1) Sketching of different action croqui (based on the basic figure learnt earlier).
- (2) Garments and Garment details –
 - Necklines and collars.
 - Skirts and pants.
 - Blouses, coats and jackets.
 - Drawstring and fastenings.
 - Tassels and tucks.
 - Frills, fringes and gathers, cowls and cascades.
 - Hemlines and insertions.
 - Lacing, macrames, and patch work.
 - Pleats, quilting and ties.
 - Shirring, smocking and zips.
 - Yokes and underskirts.
- (3) Sketching of Accessories –
 - Hats and head gears.
 - Footwear
 - Bags and purses
 - Jewellery
- (4) Basic rendering techniques –
 - Colour matching using different mediums.
 - Stripes
 - Checks, gingham and plaids.
 - Patterns and textures.

- Reducing a print.
 - Shading.
- (5) Theme Rendering : Developing a line of garments based on a theme (any one of the following) –
- Beach wear
 - Cocktail wear
 - Swim wear
 - Evening wear
 - Casual wear
 - Ramp wear
 - Sports wear
 - Executive wear
 - Night wear
 - Traditional Indian Costume.

References :-

- (1) Abling Bina, Fashion Sketch Book, Fairchild Publishers, New York.
- (2) Mckelvey Kathryn, illustrating Fashion, Blackwell Science, Munslow Janire.
- (3) Seaman Julian, Professional Fashion Illustration, B.T.Batsford Ltd., London.
- (4) Ireland Patrick John, Fashion Illustration, B.T.Batsferd Ltd.London.
- (5) Alen Anne Seaman Julian. Fashion Drawing. The Basic Principles, B.T.Batsford Ltd., London.

Semester-III
234ELI57 : Elective-I
Subject Code 234ELL1
Historic Costume

Theory : 3 Periods/Wk (Credits 3)	Theory Marks :	45
Practical : 2 Periods/Wk (Credits 1)	Internal Marks:	30
	Practical Marks:	20
	Pract. Int. Marks:	05
	Total Marks:	100

Objective –

- (1) To acquaint students the prevailing designs of costume worn by people of different countries during different periods.
- (2) To develop sensitivity and understanding towards historic silhouettes and designs.

Course Content**Theory :**

- Unit 1 :**
- 1.1 Clothing - origins and functions.
 - 1.2 Costume in ancient civilization.
 - 1.3 Emphasize of an fabric, garment features, use of colour, decoration and accessories.
 - 1.4 Indian and Egyptian.

Unit 2 : Ancient costumes.

- 2.1 Greek
- 2.2 Roman

Unit 3: Medieval costume of court, appear class aznd peasant during 12th to 17th Century - French

Unit 4: Costumes of China and Japan

Unit 5: Growth and development of Indian Costume from ancient to 20th century.

Practicals

- 1) Preparation of an album of costumes of different countries of different periods.
- 2) Visit to a museum to study costumes.

Reference-

- (1) J Underson Black, Muidge Garland, A History of Fashion, Orbits Publishing limited, London.
- (2) Boucher Francois, A History of Costume in the West, Themes and Hudson.
- (3) R. Turner Wilcox, The Dictionary of costume, B.T. Bats Ford Ltd.

Semester-III**234ELI57 : Elective-I****Subject Code : 234 ELL.2****Dying and Printing**

Theory : 3 Hrs/Wk (Credits 3)	Theory Marks :	45
Practical : 2 Hrs/Wk (Credits 1)	Internal Marks:	30
	Practical Marks:	20
	Pract. Int. Marks:	05
	Total Marks:	100

Objectives :

- (1) To impart the knowledge about preparation of fabric for dying & Printing.
- (2) To understand the theory of dyeing in relation to various classes of dyes.
- (3) To inculcate awareness of the different methods of printing and appreciate the technical advantages of each.
- (4) To develop technical competency in printing with different dyes on different fabrics.

Course Content**Theory :**

Unit 1 : **Preparation of fabric for dyeing and printing.**

- 1.1 Scouring, Bleaching, Designing.
- 1.2 Reagents used and their application.
- 1.3 Specific preparatory steps for cotton wool, silk and man made fibers.

Unit 2: Equipments used at cottage and industrial level for yarn, fabric and piece goods.

- Unit 3 :**
- 3.1 Dye - Classification, definition components.
 - 3.2 Colour and Chemical constitution of dyes.
 - 3.3 Dyeing defects and remedies.
 - 3.4 Dyeing auxillaries and their uses.

Unit 4 : Printing - Introduction to printing.

- 4.1 Printing paste, thickening agents and auxillaries for printing, and their suitability to various classes of dyes and fibres.

4.2 Preparation of printing paste for different dyes and different fibers.

Unit 5 : Styles of printing -

5.1 Direct, Dyed, dyed, resist or reserved style, discharged style and raised style.

5.2 Finishing and after treatments of printed goods.

Practicals -

- (1) Preparation of fabric for dyeing and printing.
- (2) Dyeing of fabric with different classes of dyes.
- (3) M : L. Conc., temp, levelling / exhausting agents.
- (4) Dyeing with natural dyes.
- (5) Printing, discharge, resist style, direct style.
- (6) Finishing of printed goods.

References -

- (1) V.A. Shonai, Chemistry of dyes and principles of dyeing, 1987, Seval Prakashan Mumbai.
- (2) R.S. Prayag, Technology of textile printing - Noyes data Corp.
- (3) M.L. Gulrajani & Deepti Gupta - 1990.
- (4) Natural dyes and their application to textiles.
- (5) ASTM and ISI Stds.
- (6) K. Venkatrama, 1970, Chemistry of Synthetic dyes Part I and Part II.
- (7) V.A. Shenai 1977 Technology of Printing Technology of textile processing Vol. IV. Sevak Publication.
- (8) V.A. Shenai 1999 - AZo dyes, facts and figures Sevak Pub. Mumbai.

Semester-III

234ELI57 : Elective-I

Subject Code : 234ELI.3

Fashion Making and Merchandising

Theory : 3 Periods/wk (Credits 3)	Theory Marks	: 45
Practical : 2 Periods/wk (Credits 1)	Th.Int.Ass,Marks	: 30
	Practical Marks	: 20
	Practical Int.Mks.	: 05
	Total Marks	: 100

Objectives :-

- (1) To impart knowledge regarding the marketing environment and the prevalent merchandising practices.
- (2) To guide the process of product development towards the market needs.

Course Content

Theory :

Unit-1 : Marketing and Merchandising :-

Core concepts, marketing mix and marketing environment. Marketing and merchandising environment of India.

Unit-2: Market segmentation, targeting and positioning (STP) concepts and methods of market segmentation, need for positioning, positioning through various means, formulation of positioning map.

Unit-3: Product in relation to fashion, classification of fashion, product life cycle, the process of product development, the making of brand, branding strategies, brand mgt. and brand image building.

Unit-4 : 4.1 Promotion and Distribution :- Role of promotion, methods of promotion – advertising, sales promotion, personal selling.
4.2 Designing and manufacturing of different methods of promotion and their employment in relation to cost effectiveness and product life cycle.

Unit-5 : Pricing, principles and methods of pricing.

Practicals :-

Outline merchandising – Strategies for a product launch for a specified product launch for a specified market segment giving details of the marketing mix and STP approach.

Semester III
234ELII58 : Elective-II

Subject Code : 234ELII.1
Eco Textiles and Environment

Theory : 3 Periods/Wk (Credits 3)	Theory marks	45
Practical : 4 Periods/Wk (Credits 2)	Theory internal marks	30
	Practical marks	35
	Practical internal marks	15
	Total -	125

Objective -

- (1) To acquaint the students about the quality of various textile items as per international standard. ISO 9000 for exporting to the European and other sophisticated global market.
- (2) To create awareness about the toxic and harmful substances being used in textile processing and need to avoid them.
- (3) To acquire knowledge on Eco-auditing. Eco-labelling and Eco-friendly management.

Course Content**Theory :**

- Unit 1:** Germ Ban, Indian ban, Banned dyes. Eco-parameters, Eco-friendly textiles.
Oeko-Tex standard 100.
- Unit 2:** Sensitizing Dyestuffs – Allergenic Dyes, Careinogenic amines, harmful dyes viz. Disperse, Ao, acid, direct (commercial name and C.I. number). Texting of banned azo dyes.
- Unit 3:** Red listed chemicals as per Eco-specification. Testing of textile and auxiliaries, effluent discharge.
- Unit 4:** Testing facilities, Government and Private laboratories, testing methods, sources of contamination of harmful chemicals in textiles.
- Unit 5:** Eco-management for textile industry, and global scenario, eco-mark and environment friendly textiles.

Practicals :-

- (1) Visit to Government and Private eco-testing laboratories.
- (2) Survey report of dyeing units using eco norms.

References :-

- (1) Shenai V.A. (1997) Ecology and Textiles, Sevak Publications, Mumbai.
- (2) Shenai V.A. (1998) Toxicity of dyes and intermediates, Sevak Publications, Mumbai.
- (3) Lever Kusen (1998) : German Legislation on Azo Dyes – Dystar, Testilarben Germany.
- (4) The Society of Dyers and Colourists and the American Association of Textile Chemists and Colorists, “Colour Index/Colour Index International”, Vol. 1-9.
- (5) The Dystuff Manufacturers Association of India (1996). Directory of Safe Dyes conforming to German Consumer Goods Ordinances.
- (6) Shenai V.A. (1999), Azo Dyes – Facts & Figures, Sevak Publications, Mumbai.

Semester III
234ELII58 : Elective-II

Subject Code : 234ELII.2
Advanced Apparel Construction

Theory : 3 Periods/Wk (Credits 3)	Theory marks	- 45
Practical : 4 Periods/Wk (Credits 2)	Theory internal marks	- 30
	Practical marks	- 35
	Practical internal marks	- 15
	Total -	-125

Objective -

- (1) To develop skills in pattern making.
- (2) To create awareness of quality assurance norms and evaluating quality in apparel.

Course Content**Theory :****Unit 1 : Introduction to Grading :**

- Terminology
- Grading Methods.
- Procedure for grading blocks to various sizes.

Unit 2 : Clothing for people with special needs :

- Maternity and lactation period.

- Old age
- Physically challenged.

Unit 3 : Evaluating the quality of apparel.

- Identification of the components of apparel.
- Fibre content, shaping devices, pockets, necklines, hem treatments & decorative details.

Unit 4 : Standards for evaluating the various components.

Unit 5: Detailed study of industrial machines and equipment used for :

- Cutting
- Finishing
- Sewing
- Embellishment.

Practical :-

- (1) Designing through flat pattern.
- (2) Development of variation in sleeves.
- (3) Development of variation in collars : Role over collar, collar with bodice.
- (4) Necklines and facings.
- (5) Development of slopers for skirt variations :
Low and high waist.
A line, flared, circular, pleated, yoked with gadget / pepulum.
Skirt Band – Separate band, faced waist line.
- (6) Designing, drafting and construction of skirts.

References :-

- (1) Stampler, Sharp & donnell : Evaluating Apparel, Quality – Fairchild Publications. New York.
- (2) Natalie Bray Dress Fitting, Published by Blackwell Science Ltd.
- (3) Margolis Design Your Own Dress Pattern, Published by Double Day and co-Inc, New York.
- (4) Pattern grading for children's A women's / men's clothes technology of sizing Gerry Co & Lin, Oxford B.S.P. Professional Books London.

Semester III

234ELII58 : Elective-II

Subject Code : 234ELII.3

Historic Textiles

Theory : 3 Periods/Wk (Credits 3)	Theory Marks :	45
Practical : 4 Periods/Wk (Credits 2)	Theory Internal Marks:	30
	Practical Marks:	35
	Pract. Int. Marks:	15
	Total Marks:	125

Objectives—

- (1) To gain knowledge of the significant developments in production of textiles.
- (2) To assess similarities and dissimilarities in different, Civilizations in terms of Fibre production, ornamentation & uses.
- (3) To study textiles of historical significance which influenced on cultures and civilizations.

Course Content

Theory :

Unit 1: Importance of textiles in historical perspective - corly fibers and their products their use in early civilizations - India, China and Egypt.

Unit 2: Development of embroideries from ancient times- India, and China - techniques, designs and usage.

Unit 3: Historical textiles of special significances - Carpets and tapestries of India, Spain and Italy.

Unit 4: Brocades, Laces and Shawls of India

Project :

1. Preparation of port Folio of designs of different textiles.
2. Prepare and present term paper on any one or two areas.

References-

1. Lewis Ethel Romance of Textiles
2. Hozrey Janet - (1996) Traditional Textiles of Central Asia - Thames & Hudson, London.
3. Horris Jenifer (1993) Textiles 5000 years, Henry and Brans Inc. New York.

4. Gillow John zand Sentence Brgan (1999) World Textiles, Thames & Hudson, London.
5. Paine Shaila (1990) Embroidered Textiles, Traditions, Thames & Hudson, London.

Semester-III

234ELIII59 : Elective-III

Subject Code : 234ELIII.1

Knitting Technology

Theory : 3 Periods/Wk (Credits 3)	Theory Marks	:45
Practical : 2 Periods/Wk (Credit 1)	Theory Int.Marks	:30
	Practical Marks	:20
	Pract. Int. Marks	:05
	Total Marks	:100

Objectives-

- (1) To gain experience in hand Knitting and machine knitting.
- (2) To know about Indian knitting Industry.
- (3) To develop an understanding of the various knitting structures.

Course Content

Theory :

- Unit 1 :**
- 1.1 Introduction to knitting - definition, basic structural terms, and principles of knitting technology. Difference between Knits and woven.
 - 1.2 Development of knitting from hand knitting to machine knitting.
- Unit 2 :**
- 2.1 Basic mechanical principles of knitting technology, elements of knitted loop structure, Four primary base structures (Plain, Rib, interlock, Purl)
 - 2.2 Indian Knitting industry - Past and present.
- Unit 3 :**
- 3.1 Warp and Weft Knitting -terms and definitions. Composition of weft and Warp Knitting, classification of warp Knitting machines and Weft Knitting machines.
 - 3.2 Weft Knitting - Basic structures designing of Weft, Knit structures, needle and yarn selection for weft knitting.

- 3.3 Warp Knitting - Basic warp Knit structures, and their representation, patterning mechanisms for warp knit designs, yarn warp knits.

Unit 4: Tricat and Raschel Knits - Principles, machines and production methods.

- The structure of Flat Knitting machine -
- Needle bed assembly.
- The carriage
- Yarn Feeding
- Needle brushes
- Fabric take-down

Unit 5 : 5.1 Manual operation of Flat Knitting machine and circular knitting machine.

- 5.2 Knitted structures, structured Knits, jacquard Knitting. Basic principle and stitches and their application.

Practicals -

- 1) Making knitted samples with four basic stitches (plain, Rib, Purl and Interlock)
- 2) Learning to operate Flat Knitting machine and circular knitting machines.
- 3) Analysis and testing of knitted samples
- 4) Yarn calculation for weft and warp knits.
- 5) Visits to different knitting units.

References

- 1) David J.Spencer- Knitting Technology, Pergeman Press, U.K.
- 2) Prof. D.B. Algaonkar - Knitting Technology, University Publishing Co-operation, Bombay.
- 3) Dr. Samuel Roz - Flat Knitting Technology, Germany,
- 4) Terry Brockenbary - Knitted clothing Technology - Blackwell Science

Semester-III
234ELIII59 : Elective-III
Subject Code : 234ELIII.2
Fashion Communication

Theory : 3 Periods/Wk (Credits 3)	Theory Marks	: 45
Practical : 2 Periods/Wk (Credit 1)	Theory Int.Marks	: 30
	Practical Marks	: 20
	Pract. Int. Marks	: 05
	Total Marks	: 100

Objectives - To enable the students to critically appreciate and understand the intricacies of the fashion industry and to impart skill of communication comprising of visualization and illustration.

Course Content

Theory :

Unit 1 : Fashion and the Communication Process.

Meaning of Fashion : Communication Process. The theories of fashion adoption, need for promotion of fashion, need for the communication process.

Unit 2 : Written Communication : Fashion writing, creative writing, reporting features, editing and printing techniques, image management and advertising, public relations, press laws and media ethics.

Unit 3 : Visual Communication : Visual merchandising and display, fashion photographs, fashion shows and multimedia.

Unit 4 : Communication in Practice : Scripting shows, conducting interviews, reporting events, fashion critics, planning PR campaigns, formulating case studies.

Unit 5 : Designing Catalogues and Brochures, layouts for stands in exhibitions. Visualization of decor and ambience, preparing short films and audio visuals, choreography of fashion event.

Practicals :-

- (1) Preparation of advertisement.
- (2) Preparation of part flies for visual communication.

- (3) Preparation of catalogue and broucher for any one fashion product range.

References :-

- (1) Farbey, A.D. : How to Produce Successful Advertising, Kogan Page India Pvt.Ltd.
- (2) Jethwaney J.N. (1999) : Advertising, Phoenix Publishing House, Pvt.Ltd.
- (3) Roundy N. and Mair, D. (1985): Strategies for Technical Communication. Little Brown and Company, Boston, Toronto.

Journals :-

- (1) A & M – Advertising and marketing – Journal
- (2) clothesline.
- (3) Clothern.com

Semester-III
234ELIII59 : Elective-III
Subject Code : 234ELIII.3
Textile Industry in India

Theory : 3 Periods/Wk (Credits 3)	Theory Marks :	45
Practical : 2 Periods/Wk (Credit 1)	Theory Internal Marks:	30
	Practical Marks:	20
	Pract. Int. Marks:	05
	Total Marks:	100

Objectives - The aim of this paper is to acquaint the students with the multifaceted profile of the textile industry of India, the economic and policy regulations within which the industry is operating.

Course Content

Theory :

Unit 1: 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.

- Unit 2:** National textile policy 2001, 2010- change in focus over the year in terms of objectives function, ability, regulatory mechanisms.
- Unit 3:** Foreign trade policy - The mechanism of MFA - History and current status.
- Unit 4:** The textile & clothing industry - in relation to production and consumption pattern, locale, employment potential.
- Unit 5:** Research and development- problems and prospects. Approval industry.

Practicals

1. Visit to textile and Apparel Industry
2. To study problems of local garment industry.

References -

- 1) Mishra and Puri, Indian Economy-Himalaya Pub. House.
- 2) National textile policy 1986 - 2001
- 3) Economic Surveys, Govt. of India.
- 4) Industry published journals, news letters from SASMIRA, WWEPC.
- 5) Journals, - Clothes line, Business India, Business today.

Syllabus Prescribed for M.Sc. (Home Science) (Textile and Clothing)

Semester-IV

Semester-IV

Subject Code : 244CT60

Current Trends in Textile Clothing

Theory : 3 Periods /Wk (Credits 3)	Theory marks	- 45
Practical : 4 Periods /Wk (Credits 2)	Theory internal marks	- 30
	Practical internal marks	- 50
	Total -	-125

Objective - To create awareness regarding current trends, issues and researches related to Textile and Fashion Designing.

Course Content

Theory :

Unit 1: Current trends researches in textile designing.

- Unit 2:** Current trend researches in fashion designing.
- Unit 3:** 3.1 Current trend in Fashion Communication and Marketing.
3.2 Websites on Textile and Fashion Designing
- Unit 4:** Current garment production industries in India and abroad.
- Unit 5 :** 5.1 Textile testing and quality control.
5.2 National textile policy
5.3 Foreign trade policy.

Practicals :-

Presentations on assigned topics covered under theory through various means of communication.

References :-

- (1) National Textile Policy 1986, 2000.
- (2) Mishra & Puri, Indian Economy, Himalaya Pub.Hosue.
- (3) Journals – Cloth elseve, Business India, Business today.
- (4) News Papers – Economics Times, Financial Experts and Apparel on line.
- (5) Industry Published Journals / News letters from SASMIRA, WWEPC, HHEC.
- (6) Economic Surveys, Govt. of India.

Semester IV

Subject Code : 244TF61

CAD in Textile and Fashion

Theory : 2 Periods/Wk (Credits 2)	Theory marks	- 35
Practical : 6 Periods/Wk (Credits 3)	Theory internal marks	- 15
	Practical marks	- 50
	Practical internal marks	- 25
	Total -	-125

Objective - To enable students -

- (1) to develop different types of weaves, making punch cards from the graphs.
- (2) to learn scanning of already printed fabrics and the process of printing out colour separation.
- (3) to work on Computer for fashion illustration.

Course Content**Theory :**

- Unit 1:** Basic Softwares : Corel Draw, a vector based software (latest version) – Module-I.
- Unit 2:** Adobe Photoshop, a bitmap based software (latest version) - Module-II.
- Unit 3:** Design studio, design Jazquard, design desk pro.
- Unit 4:** Pattern developing.
- Unit 5:** Grading and marketing.

Practicals :-

- (1) Create different types of yarn & weaves.
- (2) Punch cards from the graphs.
- (3) Stimulation of various yarns and weaving them on the monitor to get different fabrics with specified end use.
- (4) Setting designs in different repeats & colour combination.
- (5) Fitting the repeat according to the method and application of printing. (Roller, Screen, Block.)
- (6) To draw basic silhouettes & proportions of the fashion figures, construct styles of designs.
- (7) Alteration & modification of the available design and confirm it to professional standards.
- (8) Explore colour application & creation.
- (9) Learning the Techniques, materials and methods of using colour for various effects.
- (10) Convert vector based images into a bitmap based one and apply various effects & filters & develop & nurture one's creative powers.
- (11) With the use of Bitmap based dropping software learning different tools required for photo realistic draping of garment.
- (12) Learning to apply & change the fabric texture.
- (13) Explore various approaches to creation & colour application.
- (14) Creating colour ways, new designs and textures by using available effects like embossing, blurring, transparent & translucent.
- (15) Making special sheets and drafting out patterns for college going girls.
- (16) Putting dart, adding seam allowances and making the layout.

References :

- (1) Veisinet D.D. (1987) : Computer Aided drafting & design : Concept and application.
- (2) Fujii D. Colour with style, Graphic Sha Publishing Company Limited.
- (3) Winifred A. (1990) : Metric Pattern Cutting for mens wear. Including Unisex, casual clothes & computer.
- (4) Corklin P.G. (1990) : Pattern Grading for Women's Clothes. The Technology of Sizing, BSP Professional Books, Oxford.
- (5) Aldrich W. (1994) : CAD in Clothing and Textiles, Blackwell Science Ltd.
- (6) Computers in the world of textiles. Papers presented at the annual world Conference, September, 26-29, 1984, Hongkong.

Semester IV**Subject Code : 244SW62****Scientific Writing**

Theory : 3 Periods/Wk (Credits 3)	Theory marks	- 45
Practical : 4 Periods/Wk (Credits 2)	Theory internal marks	- 30
	Practical internal marks	- 50
	Total -	-125

Objectives - After completing course students will be able to understand national / international standards of scientific writing and develop skill of writing research reports.

Course Content**Theory :**

- Unit 1:** Introduction to Scientific Writing
- 1.1 Meaning, definition
 - 1.2 Characteristics and Principles
 - 1.3 Types of report
 - 1.4 Format of report
 - 1.5 National and international standards
 - 1.6 Lay out of thesis / dissertation :-
Preliminaries, Text, End Matter

- Unit 2 :** Writing preliminaries
- 2.1 Title page, Title of dissertation / thesis.
 - 2.2 Certificates : Declaration by students certificate of guide
 - 2.3 Acknowledgement
 - 2.4 Table of content - list of Table, list of Figure
 - 2.5 Glossary / Abbreviation / Acronym
- Unit 3 :** Writing Text / Main Body
- 3.1 Writing introduction
 - 3.2 Writing Review of Literature
 - 3.3 Writing Methodology Material and Methods
 - 3.4 Writing Results
 - 3.5 Writing Discussion
 - 3.6 Writing Summary, Conclusion and Implication
- Unit 4 :** Writing End Matter
- 4.1 Writing References / Literature cited
 - Books
 - Journal / Periodical
 - Websites
 - Magazines, newspaper
 - 4.2 Appendices
- Unit 5 :** General Guidelines
- 5.1 · Size of paper, margin, font type and size
 - Headings and Subheadings
 - Number of chapters and pagination
 - Punctuations.
 - 5.2 Evaluating structure of dissertation / thesis

Practicals :

1. Use of Library -
Get acquainted with the-
 - Type of Library (Traditional, modern, digital, virtual)
 - Services provided by Libraries
 - Various sources (Printed and electronic)
 - Technical work (classification, cataloguing)
 - Information retrieval (i.e. OPAC, WEBOPAC, SOUL, Library Portal, e-books etc.)

2. Practice of writing references on reference cards and notes on note cards from different sources.
3. Review, understand and critically evaluate.
 - Thesis
 - Dissertation
 - Abstract

References :

- 1) Arvindra Chandra and T.P. Saxena, 1979. Style manual for writing Thesis, Dissertation and papers in Social Sciences, New Delhi, Metropolitan Book Co. Pvt. Ltd.,
- 2) Ingle, P.O. 2002. Scientific and Technical Report writing, Nagpur, Sarala Ingle.
- 3) Kothari, C.R. 1996. Research Methodology - Methods and Techniques, New Delhi. Vishwa Prakashan.
- 4) Best John W. and Kahn James V., 1989. Research in Education, New Delhi, Prentice Hall of India Private Limited.
