## FINAL YEAR B.TEXT. (FASHION TECHNOLOGY) SEMESTER-I

<table>
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<th>SR. NO.</th>
<th>SUBJECTS</th>
<th>TEACHING SCHEME</th>
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L = LECTURES  
T = TUTORIALS  
TP = THEORY PAPER  
DR = DRAWING  
TW = TERM WORK  
PR = PRACTICALS  
OE = ORAL EXAMINATION  
PE = PRACTICAL EXAMINATION  

### LIST OF ELECTIVE-I

1. FASHION ACCESSORIES  
2. ADVANCED STYLING & FORCASTING  
3. TEXTILE PRODUCT ENGG.
## Final Year B.Text. (Fashion Technology) Semester-II

<table>
<thead>
<tr>
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<th>Subjects</th>
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<td>8.2</td>
<td>Import &amp; Export Management</td>
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<td>8.3</td>
<td>Apparel &amp; Fashion Business Management</td>
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<td>8.4</td>
<td>Smart Textiles &amp; Speciality Garments</td>
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L = Lectures  
T = Tutorials  
TP = Theory Paper  
DR = Drawing  
TW = Term Work  
PR = Practical  
OE = Oral Examination  
PE = Practical Examination  

**List of Elective-II**  
1. Fashion Communication  
2. Consumer Behaviour in Fashion Industry  
3. Operational Research
7.1 GARMENT PROJECT PLANNING & IMPLEMENTATION (FT)

Lectures - 4 hrs/week.
Theory Paper - 100 marks.
Term Work - 50 marks
Sub. Total - 150 marks

1) Project Planning:
   - Introduction, Capital investment required for project, Phases of Capital Budgeting, Difficulties in Capital expenditure, Phases involved.

2) Production Management analysis
   - Analysis of techniques for material utilization and cutting of raw materials for all types of sewn products principles and methods of costing, evaluation of equipment for examining, spreading, cutting, marking and ticketing - solution of production problems in spreading, cutting and cost control.

3) Machinery Specification, Selection & Calculation for No. of Machines:
   - Selection of machines & machinery specifications required for the product in Shirts, trousers, knit goods, made-ups, suits, ladies dress material etc.

4) Calculation for no. of machines in garment:
   - Preparation of organization for clothing industry, departments based on number of pieces and production of finished garment. Calculation regarding machinery, work allotment, production rates, amount of raw material required and no. of machinery required at different stages of garment manufacturing.

5) Plant & Machinery Layout:
   - Significance of the concept, objectives and principles of layouts, kinds of layouts and their comparisons, flow pattern, work station design, tools and devices of making layouts, use of Auto-Cad for layouts, storage space
requirements, plant layout procedure, factors influencing layouts, selection of
layout, effect of automation on plant layout, symptoms of bad layout. Layout
aspects of garment unit.

6) Site Selection:-

Selection of site for Garment industry, General location, Actual selection
of specific site, Calculation of spatial requirements, factors influencing site
selection, Climatic considerations, geo-technical report, bearing pressure etc.
General information about textile & garment manufacturing industry centers in
India.

7) Civil/Building Construction:-

Consideration in building design, size, shape and configuration of building.
Architectural & structural aspects of garment unit building. Building morphology,
General principles of building construction & building functions, Types of factory
buildings, Types of building construction. Material for construction with special
reference to walls, roofs, floors, false ceilings, fire resistance, sound proof, etc.
Colour schemes for buildings, interior & machinery in garment unit. Cost
considerations in building construction, Orgonogram of building construction,
Team, Tenders & Contracts.

8) Formulation of a Project Report for Garment Units:-

Assumptions, Machinery Organizations, Requirement of Miscellaneous
Fixed Assets & Machinery Stores & Spares, Requirement & Calculations related
to Electrical Power, Lighting, Water, Steam, Compressed Air, etc.

9) Materials Handling:-

Definition and importance of materials handling, functions and principles of
materials handling, material handling methods, engineering and economic
factors, relationship to plant layout, selection and type of material handling
equipments, study of different types of equipments used for materials handling in garment unit.

10) Labour Compliments: -
Types of labors required, labors compliment, labors and staff required for garment industry based on workload consideration.

11) Techno-economic Viability:

REFERENCE BOOKS :-
11. Norms for Process Parameters, Productivity etc. NITRA.
12. Trade Literature of Different Machinery Manufacturers.
7.2 INDUSTRIAL ECONOMICS & COSTING OF APPAREL PRODUCTS (FT)

Lectures - 4 hrs/week.
Theory Paper - 100 marks.
Sub. Total - 100 marks


2) Human Wants – Consumption and standard of living – Demand analysis- consumers surplus – Demand and law of Demand – Elasticity of demand.


REFERENCE BOOKS:-

1) Basic Economics by James A. Dgal, Nicholas Karatjas,
2) Applied Economics by Derek T Lobley,
3) Macro Economic Theory by M.C. Vaish,
4) Principles of Economics by D.N. Dwived.
5) Economics Analysis, Decision Making & Policy by George Leland Bach.
7) Contemporary Economics by Milton H.
7.3 ADVANCED GARMENT CONSTRUCTION (FT)

Lectures - 4 hrs/week.
Practical - 3 hrs/week
Theory Paper - 100 marks.
Term work - 50 marks.
Practical Exam - 50 marks
Sub. Total - 200 marks


2. Laying the pattern on fabric, marking, cutting, stay stitching, garment fitting & assembling.

3. Creating styles through dart manipulation - drafting & draping technique, introduction to fullness.


7. Creating variety through surfacing trimmings- bias trimmings, ric-rac, ruffles, embroidery, smocking, faggoting, lace, appliqué, scalloped edging, decorative fastenings

8. Constructional & design features of modern laying m/c., cutting equipment, fusing equipments, sewing machines & finishing equipment.

LIST OF EXPERIMENTS

1. Construction of Ladies Salwar
2. Construction of Ladies Kameez
3. Construction of Ladies Blouse
4. Construction of ladies trouser by draping method
5. Construction of men’s casual shirt
6. Construction of men’s jeans / shorts
7. Construction of children’s night dress
8. Construction of baby’s waistline frock
9. Construction of ladies single piece party wear

REFERENCE BOOKS :-

1. Mary Mathews, Practical clothing construction-II, “Designing, drafting & tailoring.”
2. Natalia bray, "Metric pattern cutting"
3. Metric Pattern Cutting for children’s wear Winifred Aldrich
4. Patternmaking for Fashion Designers Lori A . Knowles
5. Flat Pattern Design Nora M. MacDonald
6. “Dress Pattern Designing” Natalie Bray
1. Introduction to computer
Introduction to computer - concepts of CAD / CAM. CAM in Garment Manufacturing. Complete pattern design system in preparation for grading, marker making and pattern manipulation.

2. Computerized production pattern making
Computerized production pattern making - Hardware, software and system programming to produce a sample production pattern. Computer aided manipulation of pattern pieces to create individual styles. Operation of garment CAD software. Computer application in sewing embroidery and garment design computer aided color matching- Computer used for purchase, inventory control and sales, computerization in quality control and production control.

3. Computer aided production planning in Garment Manufacturing
Introduction to finite scheduling concept and fast react software. Creating product and order planning, updating. Eliminate late deliveries - General set up, allowances and matrices - Analyzing loan balancing in different departments - control mechanisms - critical path and time tables.

4. CAM
Computer controlled machinery for garment manufacturing - automated layout planning by various techniques - Algorithm for computer production garment parts - intelligent systems - 3D scanning technology. Use of microcomputers for
production control in garment industry. Imaging techniques for various designs. Development of robotics for CAM.

5. Management Information System in garments Industry
EDI in garment technology. Concept of Enterprise Resource Planning (ERP) and computerization in exports/ documentation.

LIST OF EXPERIMENTS :-
3. Developing design, pattern and marker plan for a Ladies top – using corduroy fabric of 44" & 52" width. Calculate the marker efficiency and develop a lay lot plan.
5. Developing design, pattern and marker plan for a Ladies Skirt – using plaid fabric of 38" & 60" width. Calculate the marker efficiency. Develop a lay lot plan
6. Developing design, pattern and marker plan for a Men’s Full arm shirt using a checks fabric of 52" B & 60" width. Calculate the marker efficiency. Develop a lay lot plan
7. Design a ladies party wear including accessories and develop a 3 D visual merchandise window display
8. Design a Men’s Formal wear including accessories and develop a 3 D visual merchandise window display
9. Design a Children wear including accessories and develop a 3 D visual merchandise window display
10. Design a sari border / curtain for printing.
REFERENCE BOOKS:-

FINAL YEAR B.TEXT. - SEMESTER – I
7.5 FASHION ACCESSORIES (FT) (ELECTIVE-I)

Lectures - 3 hrs/week.
Theory Paper - 100 marks.
Sub. Total - 100 marks

1. Introduction to accessory -definition, history and classification.

2. Accessory types. Head gears, footwear. bows, ties and belts, hand bags, and gloves and Mitts, Scarves, stoles and stacking, Sun glasses, Umbrellas

3. Materials and processes. Materials required material sourcing, design development and production, Eco-standards followed during the process.


5. Jewellery design and production. Types of Jewellery- Traditional Jewellery, Earrings, necklaces and bangles, Rings, pedants, bracelets and anklets. Textures and finishes given for the jewellary.

6. Introduction to gems, basic qualities of gems,

7. Travel accessories – kits, bags, trolley, suitcase

8. Seasons and fashion accessories

REFERENCE BOOKS :-

5. Gavin Waddell, “How fashion works”, Blackwell Publishing
8. Dr. M.S. Sheshadri, “Apparel Marketing and Merchandising”
7.5 ADVANCED STYLING & FORECASTING (FT) (ELECTIVE-I)

Lectures   -  3 hrs/week.
Theory Paper - 100 marks.
Sub. Total   -  100 marks

1. Fabric styling
   Exploration and use of the different fabrics and related materials for the research purpose (Students shall collect sheer fabrics, coarse fabrics, prints, embroidery materials, threads, ribbons etc and prepare swatches using controlled crushing, systematic folding, smocking, tucking, cording, patchwork, quilting etc. for research purposes)

2. Style lines in garments
   - Classic princess
   - Armhole princess
   - Panel style line

3. Fashion Styling
   Fashion styling for co-ordination, Typography and Design

4. Draping
   Introduction, Terminology, Dummy preparation, Muslin preparation
   Basic Bodice Block-Front, Back

5. Introduction to forecasting
6. Research Process in Forecasting
Market research – Consumer research, shopping, sales records, Primary sources, Secondary sources, Tertiary sources, Tracking sales, Competition, Demographics, Value & life style, Publication, Forecasting services, Plethora influences, Observation posts, The new technology, Fashion of involvement, New uses of products, related industries, networking

7. Processes of Reporting
Reporting – qualitative content, quantitative content, evaluating the collections

8. Process of implementation
Leadership theme, Strategic planning, Specialty stores.

REFERENCE BOOKS :-
1. Rita Prerna, “Fashion Forecasting- A mystery or a Method?”, Fair Child Publications
2. Beyond Design Sandra Keiser & Myrna B. Garner
3. Fashion Forecasting by Evelyn L. Brannon.
4. Fashion Forecasting by Janainc Munslow & Kathryn Mckelvcy.
1) An Overview of Textiles & Textile design from Fiber to product, finished purchase in the global textile & clothing industries, Textile materials, processes & products, Textile organization, Categorizing textiles. Scope of product development, dimensions and objectives.

2) Selection of right materials and shaping them to meet the needs of function and aesthetic within the limitation of the available means of production. Knowledge of products and their behavior. Product design, specification and evaluation (for import substitution & export stimulation).

3) Managing Product Development Process and Projects :-

Product design specifications, concept generation and selection, embodiment design, design review and release, design changes and improvements. Product development process, the role and nature of design, project plan, types of design, organization, information and literature search, patents, standards & codes.

4) Market Research & Customer requirement analysis:-

The product life cycle, product position & benchmark analysis, market estimates, market segmentation & product diversification, lead-user analysis, customer requirement analysis.
5) Product Appraisal: -
   Functional analysis, manufacturing analysis, economical analysis, aesthetic and ergonomic considerations, environment & safety, installation, service & maintenance, design theory & methodology.

6) Integration of performance & aesthetics in the manufacture of textile products.

7) Textile Designers: -
   The diversity of textile design & textile designers, timing in the textile & clothing industries, printed & constructed textiles. The activities of a textile designer, how design work is done, Range planning, Range development, Range presentation. The Principles and Elements of Textile Design, inspiration for textile design pattern.

8) Commercial Aspects of Design : -
   The organization & functions of a retail business, different types of retail structures, Merchandise, information generations.

9) Simulation of Specified properties or structure leading to the design: -
   Scope & objectives, special yarns, woven fabrics, knitted fabrics, non-woven fabrics, Simulation of material texture by using Computer graphics

10) Some studies on the design of yarns & fabrics: -
    Survey of earlier work, design based on structure & material properties, designing & using databases, a concept of overall designing procedure.

11) Case Studies –
REFERENCE BOOKS :-


3) The Economics of Technological Change, Textile Progress by M.A. Hann & K.C. Jackson, Vol.11, No.3 The Textile Inst. Publisher.

4) Textiles by S.J. Kadolph, Anna L. Langford Prentice Hall Publication.


7.6 PROCESS MANAGEMENT IN APPAREL & FASHION INDUSTRY (FT)

Lectures - 4 hrs/week.
Theory Paper - 100 marks.
Sub. Total - 100 marks

1. INTRODUCTION TO PROCESS MANAGEMENT:

Functional versus Processing Management, road map for process management, Selection of processes, Organize the process team, the planning phase of process management, define current process, Discover Customer needs & process flowcharts, Establish process measurements, Analyze process data, Design (Redesign) the process, Transferring & managing the process, impact of process Management, Key variables for process control. Control parameters, apparel production parameters, planning and lead-time. Product development: Steps from prototype to production model, Importance of pre-production activities; Introduction to timetable concepts. Product data management: Understanding and interpretation of specification sheet.

2. OPERATION SEQUENCE DEVELOPMENT

Garment breakdown with machine and attachment details, development of production grid for garment construction, development of production flowchart.

3. BUNDLE TICKETS

Guidelines for bundle ticket design, functions of bundle tickets, bundle ticket control. Different manufacturing systems: Make through and Assembly line manufacturing - advantages and disadvantages. Lay lot planning: Numerical exercises on lay lot planning to optimize cutting cost, bundling, ticketing and cutting room control formats.
4. PRODUCTION PLANNING AND CONTROL
Capacity calculation for cutting, sewing and finishing. Determination of machine requirements for new factory. Line balancing: Determination and allocation of manpower and machine for balanced production in existing plant for a given target.

5. QUALITY IN PRODUCT DEVELOPMENT

Tolerance and quality standard for fabrics, processing, cutting, stitching in garment industry, tolerances and quality standard for finished garments. Quality control system and standards for packing and packed goods, warehousing & shipping - cost of quality conformance- cost of non-conformance.

REFERENCE BOOKS :-
5. Sammel Eliou, “Production Planning & Control”, Wiley Eastern Pvt. Ltd..
6. Ruth E. Glock “ Apparel M anufacturing”,
FINNAL YEAR B.TEXT. - SEMESTER - I

7.7 SEMINAR-I (FT)

<table>
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**Topic:-**

In the beginning of the semester, every student individually will be assigned a seminar topic in the emerging / perspective field in the areas of Fashion Technology such as Garment/ Fashions, cutting, sewing, finishing, testing, garment processing, designs using softwares, merchandising, ornamentation technique etc.

**Seminar Preparation & Presentation:-**

Students will collect the information on the given subjects & submit the report both soft & hard copy on the dates specified by the concerned faculty. The seminar report will be of minimum 15 pages. The spacing between the lines will be 1.5. The font size will be 12 point with New Times Roman. The list of reference must be given at the end of seminar report. The list of reference should be written as per the Textile Research Journal format.

**Term Work Marks:-**

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<td>25 Marks</td>
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**FINAL YEAR B.TEXT. - SEMESTER - I**

7.8 INPLANT TRAINING-II (FT)

Term Work - 50 Marks.
Total - 50 Marks

**Objective:**
To provide an opportunity to observe industrial activities & gather related technical and non technical information about industry working.

**Training Period:**
One Month after completion of second semester of Third year B.Text.FT

**Industry:**
Training with a boutique/ domestic garment production house for minimum of 4 weeks/ one month.

**Observations:**
Observe working of industry & collect data as per guidelines in the manual study machineries/ systems-/ practices.

During this period, students are required to study the layout, structure, process flow, Types of fabric, Types of Garment, Machinery Working & specification, layout, humidification, air supply system, material handling systems, inspection techniques, in-house quality practices, packing system for local & export market, industrial practices, supply chain management, retailing, branding & the other relevant data and information.

**Training Report:**

Report should have Title on cover of Report as per Format
Report should be prepared as per following sequence-
1 Page Certificate from Institute as per Format
II Page Acknowledgement

III Page Programme of Training

III Page Introduction of Industry

IV Page Index with Page Numbers

V Page Plant/Dept. Layout

VI Page Organization Structure

VII Page Department wise / product wise report: Report should be based on Own Observations made, data collected during implant training (i.e. Study of Machinery, Actual Production & Efficiency. Production Control, Modern Developments in machines/ Process. Flow Chart of processes, speed of important plants, labour Allocation, Maintenance Practices, supply systems, retailing systems, branding, marketing, Process control & Quality control Activities etc roles and responsibilities of various workers/ Technical staffs.

Special study: Mini project undertaken, costing, production planning & control, Target achievement, Information regarding humidification plant, Utility, electrical supply, store. purchase, Marketing, sales, samples, Layout of Mill etc.

Assessment:

Viva-voce to be conducted in the first semester of final year B. Text. Term work Marks are assigned on the basis of student’s performance in viva-voce, conducted by internal & external examiners from related field.
FINAL YEAR B.TEXT. - SEMESTER - II

8.1 CLOTHING CARE & SCIENCE (FT)

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<tr>
<td>Term Work</td>
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<tr>
<td>Practical Exam.</td>
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<td>Sub. Total</td>
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1. Concept of woven and knit clothing care: essential and desirable properties of clothing, introduction to laundry process, Characteristics of various textile fibers, identification of fibers, laundry process for garment made from fibers like cotton, wool, silk, polyester and blends.


3. Detergents: Classification and function of soap and detergents. Composition of commercial detergents. Properties and application of various laundry agents like bleaching, optical whitening agents, stiffeners, softeners.


5. Laundry: household and commercial laundry equipments like washing machine, ironing. Function of commercial laundry like hostel, hospital, hotel.

6. Dry cleaning: Objective, Solvents used and their properties, dry cleaning equipment.

7. Dyes and pigments: Dye / Fiber interaction, behavior dyes and pigments during use and laundering. Importance and measurement of color fastness to various agencies like washing, rubbing, light, perspiration, bleaching and sublimation.
8. Environmental aspects, reasons and principle of Eco-testing like banned
dyes, formaldehyde, PCP, pesticides, heavy metals, their eco-norms and
eco-label.

9. Measurement of color and terms like depth, K/S, tone, color difference

10. Care Labels: importance of care label. Various systems of care labeling,
    instructions for washing, drying, ironing, dry cleaning and bleaching.

11. Fabric properties for woven and knit clothing: concept, Significance,
    importance and evaluation of dimensional stability, Serviceability, drape,
    pilling, abrasion, crease, thickness, surface property and texture., low
    stress mechanical properties and tailor ability. Fabric properties and
    making up process, fabric buckling and formability. Finishes used to
    improve these properties and to be taken during use and laundering.

12. Comfort properties of garment: thermal, permeability to air, moisture and
    light, water absorbency, wicking and retention.

13. Quality parameters for assessing sew ability: seam strength, seam pucker,
    seam slippage, needle cutting and seam appearance.

14. Fabric quality and apparel industry: fabric evaluation for total acceptable
    products, fabric inspection, final inspection of finished garments, wool
    mark product specifications.

15. Importance and testing of accessories like button, sliders and
    ornamentation.

LIST OF EXPERIMENTS :-

1. Identification of fibers from various garments.
2. Measurement of color and color difference using CCM.
3. Evaluation of color fastness to rubbing and sublimation.
4. Evaluation of color fastness to perspiration.
5. Evaluation of dimensional stability to washing and dry heat.
8. Evaluation of needle cutting index.
10. Evaluation of dimensional and functional properties finished suiting.

REFERENCE BOOKS :-

2. D. Naomi, ‘Fabric Care’,
3. Testing and quality management by V.K Khotari.
4. Textile fibers yarns and fabrics – Kaswel E. R
5. Physical testing of textiles by B.P Saville
7. Pradip V Mehta, Quality Control in Apparel Industry, NIFT pub., New Delhi, 2001
11. Ruth E C, Apparel Manufacturing & Sewn Product Analysis., Pradip V Mehta,

FINAL YEAR B.TEXT. - SEMESTER – II

8.2 IMPORT & EXPORT MANAGEMENT (FT)
Lectures - 4 hrs/week.
Theory Paper - 100 marks.
Term Work - 50 marks
Sub. Total - 150 marks

1. Introduction to international trade.
   The emerging global scenario-The business of international trade- Trade barriers- Foreign exchange-The euro dollar market-WTO- Trade liberalization.

2. International marketing
   Introduction- International marketing channels-Market selection and market profiling-Product strategies- Promotion strategies-Export pricing-Export finance- Export risk insurance-Export packaging and labeling- Quality control and pershipment inspection

3. Foreign trade
   Foreign trade control and-Exim policy-Export promotions-Export procedures and documents- Major problem of India’s export sector

4. Firm Establishment

Certificate For Payment – Document Relating To Inspection – Certificate Of Inspection – Gsp And Other Forms.

6. Import Procedure:
Import License – Procedure For Import License – Import Trade Control Regulation Procedure – Special Schemes – Replenishment License – Advance License – Split Up License – Spares For After Sales Service License – Code Number – Bill Of Entry

7. Shipment And Customs:

REFERENCE BOOKS:
4. Hand Book Of Import And Export Procedures - Paras Ram
5. Govt. Of India : Hand Book Of Import And Export Procedures.
8. CBI Booklets – Netherland
9. ECGC Services And Guidelines
10. AEPC Booklets
8.3 APPAREL & FASHION BUSINESS MANAGEMENT (FT)

Lectures - 4hrs/week.
Theory Paper - 100 marks.
Sub. Total - 150 marks

1. Definition Of Marketing-Marketing Management-Marketing Concept-
   Meaning Importance Of Marketing In Developing Countries-Consumer
   Concept- Difference Between Agricultural Industrial And Consumer Goods
   – Function Of Marketing-Marketing Environment-Various Environmental
   Factors Affecting Marketing Function - Marketing Of Fashion Products –
   Importance Of Fashion Marketing

2. Buyers Behavior-Buying Motive Explanation Of Motivation-Marketing
   Segmentation Of Different Basics. Marketing Strategy-Market Structure-
   Definition And Types Of Channels- Channel Policy- Selection Criteria-
   Whole Sellers Retailers And Middle Men And Their Functions - Buying
   Office, Buying Agency.

3. Introduction-Definition Of Marketing Research- Nature & Scope –An Aid
   To Rational Decision-Market Research Methodology – Market Research
   Process – Implementation - Practical Case Studies In Fashion Marketing.

4. Sales Forecasting-Various Method Of Sales Functioning-Product Policy-
   Product Life Cycle- Product Mix- Modification And Elimination-Brand
   Policy-Packing Promotions Strategy- Selling And Salesmen Ship-Steps In
   Selling - Brand – Branding – Meaning & Definition – Selecting a Brand
   Name – Characteristics Of A ‘Good Brand’ Types Of Brands. Brand –
   Positioning – Types Of Positioning – Various Positioning Strategies –
   Need For “Made In India Label” (Common – Brand)


REFERENCE BOOKS:
1. Marketing Management - Philip Kotler
2. Marketing Management – Sharlekar
3. Fashion Marketing – Mike Easey(Ed), Blackwell Science
4. Marketing Management - Rajan Nair
8.4 SMART TEXTILES & SPECIALITY GARMENTS (FT)

<table>
<thead>
<tr>
<th>Lectures</th>
<th>4 hrs/week.</th>
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<tr>
<td>Theory Paper</td>
<td>100 marks</td>
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<tr>
<td>Term Work</td>
<td>50 marks</td>
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<tr>
<td>Sub. Total</td>
<td>150 marks</td>
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1. **The Future of Fibers and Fabrics** – Micro fibers and its applications, marketing, micro-encapsulation, Regenerated Fabrics, New flexibles- Metallics, Non- Wovens, Foams and rubbers, Glass and Fiber Optics- Ecological Concerns

2. **SEWING THREAD**: Properties – manufacture of cotton, viscose, polyester, nylon and polypropylene Threads.  
   **Glass threads**: Manufacture of glass filament and staple fibre – manufacture of staple fibre yarn – properties and application of filament and staple fibre yarns.  
   **Asbestos Thread**: Manufacturing process – properties and application of asbestos yarn.  
   ULTRA HIGH MODULUS FIBRE – carbon fibres – Aramid and related fibres

   **Belts**: Conveyor belts – physical and mechanical properties – construction of belts – manufacture of conveyor belts – power transmission belts. **Hose**: Construction and application

4. **FILTER FABRICS**: General consideration of filtration of solids from liquids, solid from gases, solids from solids, liquid from liquids, liquids from gases and gases from gases.
Nonwoven filtration: Filtration in paper, cotton textile industry and viscose manufacturing industry – Cigarette filters

5. **FUNCTIONAL FABRICS:** Fire protection – thermal and electrical insulation – base cloth commonly used- material – coating techniques – waterproof fabrics – gauze fabrics, parachute fabrics.


7. **GEO TEXTILES:** Geo Textiles functions – raw material – woven, non-woven, and knitted geo textiles, Three-Dimensional Textiles and Performs – Application of geo textiles for drainage application, separation application, soil reinforcement and filtration and erosion control.

8. **Electronic Textiles:** CAD, Design and virtual reality, the Cyborg, design in the cyborg age, Adapting to the environment

**REFERENCE BOOKS : -**
1. Floyd. K.L. and Taylor, H.M., Industrial Applications of Textiles,
7. Sarah E.Braddock and Marie O’Mahony, “Techno Textiles- Revolutionary Fabrics for fashion and design
FINAL YEAR B.TEXT. SEMESTER-II
8.5 FASHION COMMUNICATION (FT) ELECTIVE-II

Lectures - 3 hrs/week
Theory Paper- 100 marks
Sub. total - 100 marks

1. **Introduction**: Fashion – a cultural perspective, the relativity of meanings, the individual, diversity

2. **The body in cultural context**: age and body image, sex and body image

3. **Dress as Nonverbal Communication**: Structure of dress communication systems- channels of transmission, Grammar, elements of dress signs, context of use, the present day cultural moment

4. **Dress in Human Interaction**: Multiple Identities, Rituals Identities and rich meanings, costume histories, Learning and producing the meanings of dress- association, production, involvement of perceivers, media and marketers in it, Impact of meanings- Dress as facilitator, Creativity and fun of expressions, Stereotypes, dress as a therapy or escape

5. **Appearance for Gender and Sexuality**: The sexual identity kit, Cross dressing, dress and gender- a historical perspective

6. **Individuality**: Individual level- Conformity and Individuality, Non-conformity, Group level- Dress and Group Identity, Societal level- school uniforms, Cultural level- collectivism and individualism

7. **Dress in workplace**: Dress and human interaction at work, Research on Dress in workplace, dress and ascribed roles, Dress and specific occupations, Societal implications of casual dress- casual dress from multiple perspectives

8. **Dress from infancy to Adolescence**: Childhood- physical co-ordination, cognitive development and symbol usage, socialization, appearance concerns, Adolescence- physical changes, cognitive and socio motional development

9. **Dressing throughout adulthood**: Early adulthood, Middle adulthood, Late adulthood, The flow of self history
10. **Race, Ethnicity, and Class:** Race and appearance, Ethnicity and appearance, Social class and Appearance

11. **Fashion as social process:** Cultural system, Fashion system, Negotiation with others, Negotiation with self

12. **Dress and World Religions:** Ideology and dress, Religion, Dress and Religious Fundamentalism, Dress modesty and Sexuality, Religious dress and social change

13. **Dress and Social Change:** Innovation, Powerful influences, Conflict, Capitalism

14. **Future Trends:** Trends in ethnicity and cultural images of Attractiveness- True equality, White Supremacist Takeover, White backlash, Influence of Aging Population on Concepts of Beauty- the fashionable, aged baby boomer, old is out, Diversity among Older segments, Technology and the Consumer- customization and multiple modes of access, Environmental Concerns, On to the Future

**REFERENCE BOOKS:**

2. Barnard M., “Fashion as communication”
3. McCracken G., “Culture and consumption”
5. Berger, A.A. “ Signs in Contemporary Culture”
7. Davis F. “ Fashion, culture and identity”
FINAL YEAR B.TEXT. - SEMESTER – II

8.5 CONSUMER BEHAVIOUR IN FASHION INDUSTRY (FT) (ELECTIVE-II)

Lectures - 3 hrs/week.
Theory Paper - 100 marks.
Sub. Total - 100 marks


4. Information Processing: Issues In Information Processing, Retention, Limited and Extensive Information Processing, Issues in Involvement Theory, The Elaboration Likelihood Model, Measures of Consumers Learning,

Culture and Advertising, Content Analysis, Consumer Fieldwork, Value Measurement Instruments, Value Measurement Survey Instruments.

6. Organizing for Advertising and Promotion: Objectives of Advertising, Advertising Functions, Appeal Advertising, Role of Advertising Agencies and Other Marketing Communications Organizations. 4 Types of Market Structure, Elements of the marketing communications mix, major objectives of marketing communications, Reminding, Value Adding, advertising strategy, Advertising Campaign, developing an advertising campaign.

REFERENCE BOOKS:

2. Forecasting by Rita Prerna
3. Consumer Behavior – Buying, having and being by Michel R. Solomen.
FINAL YEAR B.TEXT. - SEMESTER – II

8.5 OPERATIONAL RESEARCH (FT) (ELECTIVE-II)

Lectures - 3 hrs / week.
Theory Paper - 100 marks.
Sub. Total - 100 marks

Human Resource Development

Plant Engineering & Line Balancing

Work Study

Production and Productivity
Production Planning and Control
Function, Qualitative and Quantitative Analysis Of Production - Coordinating Departmental Activities - Basic Production Systems - Evaluating And Choosing The System - Flow Process And Charts For Garment - Scheduling Calculations - Assigning Operators Optimally – Setting Up Complete Balanced Production Lines To Produce Given Amount Of Garments

REFERENCE BOOKS : -
1. Technology Of Clothing Manufacture – Carr & Latham
2. Apparel Manufacturers Handbook – Jacob Solinger
3. Introduction To Clothing Manufacture – Gerry Cooklin
4. Introduction To Production Management – A. J. Chuter
5. Personal Management And Industrial Relations – Tripathi
6. Industrial Engineering And Management – OP. Khanna
8.6 SEMINAR-II (FT)

Lectures - 2 hrs/week.
Term work - 50 marks.
Sub. Total - 50 marks

Topic:-
In the beginning of the semester, every student individually will be assigned a seminar topic in the emerging / perspective field in the areas of Fashion Technology such as Garment/ Fashions, cutting, sewing, finishing, testing, garment processing, designs using softwares, merchandising, ornamentation technique etc.

Seminar Preparation & Presentation:-
Students will collect the information on the given subjects & submit the report both soft & hard copy on the dates specified by the concerned faculty. The seminar report will be of minimum 15 pages. The spacing between the lines will be 1.5. The font size will be 12 point with New Times Roman. The list of reference must be given at the end of seminar report. The list of reference should be written as per the Textile/Garment/Fashion/Retail/ Research Journal format.

Term Work Marks:-
Seminar report - 25 Marks
Presentation - 25 Marks
FINAL YEAR B.TEXT. - SEMESTER – II

8.7 DISSERTATION (FT)

Duration - 6 hrs / Week.
Term Work - 50 Marks.
Oral Exam - 100 Marks
Subject Total - 150 Marks

OBJECTIVE:-

To provide an opportunity to students to work on any topic / problem / experiment selected by them and to encourage them to think independently of their own, students are assigned dissertations. Project may be taken up by an individual or in a group.

TOPICS: - Project work shall be based on any of the following topics.

1) Fabrication of models / products, testing set up or setting up of an experimentation unit / apparatus / small equipment individually or in a group.

2) Extensive numerical analysis of some problem may be carried out using computer.

3) A report on the complete design, process charts, costing of a product / machine prototype.

4) Experimental verification on principles used in Textiles /Apparels/Fashion.

5) Design of equipment / project, gadget devices and its fabrication.

6) Extensive survey of industrial practices.

7) Working on industrial problems & remedial measures.

FORMAT OF THE PROJECT REPORT:-

The project report should be typed with double spacing on demy – size bond paper and in neatly bound form. The total number of typed pages should not be more than 70 pages and not less than 25 pages. The project report should be written in the following format.
1) Title Sheet
2) Certificate
3) Acknowledgement
4) Content
5) Abstract
6) List of figures / photographs / graphs / tables (apprising of illustrative matter such as the photographs, figures, tables and other data from handbook etc must be acknowledged on the appropriate pages of the report).
7) Introduction
8) Literature survey / Theory
9) Design / Experiment / Fabrication / Production / Actual work carried out of the same.
10) Observations / Results.
11) Discussion of results and conclusion
12) References: These references should be given in the standard format as that of international technical journals.
13) Annexure, apparatus etc if any.

Two copies of report should be submitted to the institute / department and one to the Library and one should remain with every student in a group.

Assessment of Dissertation Work:-

Term work of 50 marks is assigned for dissertation work. A dissertation committee will observe the progress of the work, arrange two presentations and based on the performance, term work marks will be assigned.

Oral Examination:-

One internal and one external examiner from industry / research organization / academia in each of the textiles / Garment / Fashion/Retailing/branding disciplines will be conducting oral examination.