

**DKTE Society's
TEXTILE & ENGINEERING INSTITUTE
Rajwada, Ichalkaranji 416115
(An Autonomous Institute)**

DEPARTMENT: TEXTILES

**CURRICULUM
B. Tech. Fashion Technology Program**

Final Year
With Effect From
2023 - 2024



**Final Year B. Tech Fashion Technology
Semester-I**

Sr. No.	Course Code	Course Title	Course Category	Teaching scheme				Course Credits
				L	T	P	Contact Hrs/wk	
1	TFL441	Garment Project Planning	HSMC	3			3	3
2	TFL442	Garment Construction - II	PCC	3			3	3
3	TFL443	Apparel Production Planning and Control	PCC	3			3	3
4	TFLOE2	Departmental Open Elective	OEC	3			3	3
5	TFLEL1	Elective - I	PEC	3			3	3
6	TFP452	Garment Project Planning Lab	HSMC			2	2	1
7	TFP453	Garment Construction - II Lab	PCC			2	2	1
8	TFD454	Project Phase - I	PST		4		4	4
		Total		15	4	4	23	21

Course Category	List of Departmental Open Electives
HSMC - Hum. & Social Sc., Mgt	TTL444 – Nonwoven Technology
BSC - Basic Science	TML445 - High Performance Fibers
ESC - Engineering Science	TPL446 - Maintenance Management in Textiles
PCC - Prof. Core Courses	TCL447 - Functional Finishes
PEC - Prof. Elect. Courses	List of Electives
OEC- Open Elct. Courses	TFL449 – Apparel and Fashion Business Management
MC - Mandatory Courses	TFL450 – Fashion Communication
PST - Project / Seminar / Ind. Training	TFL451 – Visual Merchandising

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VII) TFL 441: GARMENT PROJECT PLANNING		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To explain project planning. 2. To estimate the production capacity and machine requirement for the garment manufacturing processes. 3. To formulate the project report for the garment unit. 4. To describe the material handling and labour complements for the garment industry. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Describe project planning and describe the phases of capital budgeting process. 2. Estimate production capacity and machine requirement for the garment manufacturing. 3. Formulate the project report for the garment unit by doing techno-economic viability. 4. Explain the material handling, and labour complements for the garment units. 		
Course Contents		
Unit I	Project Planning	06 Hours
Introduction, Capital investment required for project, Phases of Capital Budgeting, Difficulties in Capital expenditure, Phases involved.		
Unit II	Selection of Machines	06 Hours
Selection of machines & machinery specifications required for the product in Shirts, trousers, knit goods, made-ups, suits, ladies dress material etc. material handling equipment and labour requirements in the apparel industry.		
Unit III	Planning, Layout and Logistics in Garment Manufacturing	06 Hours
Analyze of the planning, layout and logistics in garment manufacturing, Application of computers in preparing for the production of clothing, Risk Analysis, Optimization of planning, Layout optimization, Logistics in garment industry, symptoms of bad layout. Layout aspects of garment unit. 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.		
Unit IV	Civil/Building Construction	06 Hours
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, organogram of building construction, Team, Tenders & Contract.

Unit V	Formulation of a Project Report	06 Hours
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Assumptions, Machinery Organizations, Requirement of Miscellaneous Fixed Assets & Machinery Stores & Spares, Requirement & Calculations related to Electrical Power, Lighting, Water, Steam etc.

Unit VI	Techno-economic Viability	06 Hours
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Calculations of cost of project – Means of Finance – Estimates of sales & production – cost of production – working capital requirement – Profitability Projection – Breakeven point – Projected cash flow statements.

References Books:

1. Jacob Solinger., “Apparel Manufacturing Handbook ”, Vannostrand Reinhold Company (1980).
2. Gordana Colovic, “Management of Technology Systems in the Garment Industry”, Woodhead Publishing.
3. Bethel, Tann, Atwater and Rung, " Production Control ", McGraw Hill Book Co., New York, (1948).
4. Apple. J. M., “Plant Layout and Materials Handling ", The Ronald Press Co. New York (1950).
5. Project, Planning Analysis, Selection Implementation & Review by Prasanna Chandra, Tata McGraw Hill Publishing Co. Ltd.

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VII) TFL442: GARMENT CONSTRUCTION- II		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To describe importance of grain, Fit and pattern alteration. 2. To explain advanced draping, drafting and labeling of garments. 3. To explain quality aspects of garment. 4. To explain advanced tools of garment construction. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Describe importance of grain, Fit and pattern alteration. 2. Explain advanced draping, drafting and labeling of garments. 3. Explain quality aspects of garment. 4. Explain advanced tools of garment construction. 		
Course Contents		
Unit I	Fabric grain:	05 Hours
Importance of grain in fabric cutting & garment construction, various methods of straightening the grain & fabric ends for woven and knit fabrics. Material handling processes for various fabrics.		
Unit II	Fitting and pattern alteration:	08 Hours
Principles of good fit, Sequence of fitting Alterations to achieve a good fit, Fitting problems associated with various garments and solutions. General principles & importance of shortening, lengthening of blouse, increasing & decreasing of shoulder slope, increasing the depth and opening of necklines, altering sleeve cap, alternation of patterns for defective/ unusual figures.		
Unit III	Labeling of garments:	04 Hours
Introduction, importance, types of labels, American- ISO and other care labeling symbols and system.		
Unit IV	Garment construction :	08 Hours
Drafting- vest coat, jacket and jeans. Draping-Sleeve, flared and gored skirt, pants, collars, and dresses. Specialty Garment Construction: Construction procedure for: Firefighting suit, Floaters jacket, Space Suit etc. machinery and equipment required for the same.		
Unit V	Quality:	10 Hours
Definitions, Objective and subjective aspects of quality, 3D and Eight dimensions of Quality, QA and QC, Evolution of quality concepts: SQC, TQC, TQM, ISO 9000, Types of inspection, Statistical Sampling, AQL, 4 point and 10 point inspection, fabric defects and garment defects, factory evaluation, quality assurance in various departments, Quality improvement methodologies, Use of QC tools, Cost of quality		

conformance and non-conformance. Fabric and garment testing, role of different stake holders in quality of apparels, Quality Improvement case study.

Unit VI**Advance tools for Garment construction:****04 Hours**

Introduction, latest software programmes, attachments, features of modern garment construction machines. Case studies.

References Books:

1. Pattern making for fashion design by Helen Joseph Armstrong fifth edition, Pearson Education, Inc. ISBN-10: 0-13-606934-7
2. Pattern grading for women's clothes by Gerry Cooklin, Blackwell Publishing. ISBN 0-632-05692-4
3. Metric pattern cutting for women's wear by Winifred Aldrich, Blackwell Publishing. 5th edition, ISBN: 978-1-118-37205-0
4. Metric pattern cutting for men's wear by Winifred Aldrich, Blackwell Publishing. 5th edition, ISBN 978-81-265-3241-4
5. Draping for fashion design by Hilde Jaffe and NurieRelis, fourth edition, Pearson Education, Inc. ISBN 978-81-317-2696-9
6. Juran's Quality Handbook by Joseph M. Juran, Blanton Godfrey, Robert E. Hoogstoel, Edward G. Schilling, fifth edition, McGraw-Hill Companies, Inc. ISBN 0-07-034003-X

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VII) TFL443: APPAREL PRODUCTION PLANNING AND CONTROL		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To explain process management objectives and KPI of various departments. 2. To explain lean tools and their importance. 3. To explain the importance of cutting and planning of sewing line. 4. To describe operation breakdown and important maintenance activities. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Explain process management objectives and KPI of various departments. 2. Explain lean tools and their importance. 3. Explain the importance of cutting and planning of sewing line. 4. Describe operation breakdown and important maintenance activities. 		
Course Contents		
Unit I	Introduction to Process Management	06 Hours
Meaning of process management, Objective, Scope and approach to achieve maximum quality, production, productivity, efficiency with minimum of cost, Methodology adopted for the same. Various phases of process management, key variables of process management. KPI for various departments of Apparel Industry.		
Unit II	Lean manufacturing	06 Hours
Introduction, Definition, Types of wastages and its impact on organizational performance. Principles of lean, Traditional Vs lean manufacturing, Pull vs push system, Toyota production system, lean tools- 5 S, Kaizen, SMED, KANBAN, VSM, KPIs, PDCA, FMEA, JIT, Six sigma, ECSRA, Poka yoke, FMEA. Case studies of lean implementation.		
Unit III	Production Planning and Control	06 Hours
Introduction, Importance, lead time, PCD date, Various terms related to capacity – committed capacity, planned capacity, required capacity, potential capacity. Managing plant capacity, SAM calculations. Learning curve. Line balancing – Determination and allocation of manpower and machines for balanced production in existing plant for a given target.		
Unit IV	Cutting	06 Hours
Guidelines for bundle ticket design, functions of bundle tickets, bundle ticket control. Lay lot planning: Numerical exercises on lay lot planning to optimize cutting cost, bundling, ticketing and cutting room control formats.		

Unit V	Operation Sequence Development	06 Hours
Introduction, study of Garment breakdown with machine and attachment. thread consumption calculations of various products, study of work aids.		
Unit VI	Maintenance	06 Hours
Introduction, objectives, importance of maintenance management. Duties, functions and responsibilities of maintenance department, types of maintenance, TPM, maintenance cost, budget, replacement vs repair, Tribology practice, tero technology particles, classification of spares, Lubrication systems, role of lubricants.		
References Books:		
<ol style="list-style-type: none"> 1. Introduction to Clothing Production Management by A.J. Chuter (1995), John Wiley & Sons. ISBN: 0632039396 2. Materials Management in Clothing Production by David J. Tyler (1991), John Wiley & Sons. ISBN:0632028963. 3. Apparel Manufacturing Handbook: Analysis, Principles and Practice by Jacob Solinger (1981), Van Nostrand Reinhold Company. ISBN: 0442219040. 4. Production Planning & Control by Sammel Eliou (1993), Wiley Eastern Pvt. Ltd 5. Apparel Manufacturing: Sewn Product Analysis by Grace I. Kunz and Ruth E. Glock (2004), Prentice Hall. ISBN: 0131119826. 6. Quality management handbook for the apparel industry by P.V.Mehta. New age international publication. ISBN:9788122434286 		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VII) TFLDOE-TTL444: NONWOVEN TECHNOLOGY		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To understand the concept of Nonwoven Textiles 2. To describe the stages of nonwoven fabric manufacturing 3. To illustrate the scope and merits of nonwovens in different applications 4. To analyze and identify the Nonwoven products 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Explain basic terms in nonwovens, classification and market potential of nonwoven 2. Describe web formation methods like dry laid and spun laid and its process parameter 3. Identify and describe various methods of web bonding and its process parameters 4. Identify the suitability of the nonwoven technology for various applications 		
Course Contents		
Unit I	Introduction of Nonwoven	04 Hours
Historical background of nonwovens, non-woven definition, stages in non-woven manufacturing. Web Forming Techniques: carding, air laid, wet process, polymer extrusion. Comparison.		
Unit II	Classification of Nonwoven	03 Hours
Classification of nonwoven – On the basis of use, on the basis of manufacturing process, on the basis of web formation, on the basis of bonding.		
Unit III	Web forming Techniques	09 Hours
Dry laid webs – fibre selection, fibre preparation, web formation, layering, Wet laid nonwoven – Raw materials, production process, special features of the wet laid process and its product. Spun bonded and Melt blown webs.		
Unit IV	Mechanical Bonding Techniques	10 Hours
Mechanically bonded webs – needle punched nonwovens, Application of needle punching, stitch bonded nonwovens, applications. Hydro entangled nonwovens – Bonding process, water system, filtration system, web drying, properties of spun laced webs, applications.		
Unit V	Thermal Bonding Technique	06 Hours
Thermally bonded nonwovens – binder, binding fibres, binding powder, binding webs, methods of thermal bonding – Hot calendaring, belt calendaring, oven bonding, ultrasonic bonding, radiant heat bonding. Applications.		

Unit VI	Chemical Bonding Technique	04 Hours
Chemically bonded nonwoven – Latex binder, other types of nonwoven binders, formulation, order of formulation, bonding technology. Application of chemical bonded nonwovens.		
References Books:		
<ol style="list-style-type: none"> 1. Non-Woven – Process, Structure, Properties and Applications, T. Karthik, Prabha Karan C & R. Rathinamoorthy, Woodhead Publishing India Pvt. Ltd., 2016. 2. Handbook of Nonwovens, 1st Edition By: S Russell, Woodhead Publishing 2007 3. Nonwoven Fabrics: Raw Materials, Manufacture, Applications, Characteristics, Testing Processes, Prof. Dr. Wilhelm Albrecht, Prof. Dr.-Ing. Hilmar Fuchs, Dr.-Ing. Walter Kittelmann, WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim, 2003 4. Nonwovens Technology Market & Product Potential, Proceedings of the Seminar IIT New Delhi, 2007 5. NPTEL Study material on Nonwoven Technology by Dipyan Das 6. Nonwovens: Monogram by BTRA 7. Nonwovens BY DR.P.K. Banerjee 8. Manual of Nonwovens by Krcma 		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VII) TFLDOE-TML445: HIGH PERFORMANCE FIBERS		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To describe the concept of high performance fibres 2. To explain the manufacturing process of commonly used high performance fibres 3. To explain structure and properties of commonly used high performance fibres 4. To explain the applications of high performance fibres 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Understand concept of high performance fibres 2. Understand manufacturing process of commonly used high performance fibres 3. Analyse structure and properties of commonly used high performance fibres 4. Apply high performance fibres for various products 		
Course Contents		
Unit I	Introduction to high performance fibres	06 Hours
<ul style="list-style-type: none"> • Concept and requirements of high performance fibres. Comparison of regular fibres with high performance fibres. 		
Unit II	Carbon Fibres	06 Hours
<ul style="list-style-type: none"> • Introduction to PAN and pitch based carbon fibres – their production, properties and applications. 		
Unit III	High molecular weight polyethylene fibres. & Fully aromatic polyester fibres	06 Hours
<ul style="list-style-type: none"> • Introduction, manufacture, fibre characteristics and applications of high molecular weight polyethylene fibres. • Fibre manufacture, properties and applications of fully aromatic polyester fibres 		
Unit IV	High temperature resistant fibres	06 Hours
<ul style="list-style-type: none"> • Manufacture, fibre characteristics and applications of PBI, PBO, and other high temperature resistant fibres 		
Unit V	Aramid Fibres	06 Hours
<ul style="list-style-type: none"> • Introduction, polymer preparation, spinning of fibres, structure and properties and applications of meta and para aramid fibres 		
Unit VI	Inorganic Fibres	06Hours
<ul style="list-style-type: none"> • Glass fibre manufacture, Glass fibre composition, properties and applications • Types of ceramic fibres, their production, characteristics and applications 		

References Books:

1. High Performance Fibres, Edited by J. W. S. Hearle, Published by wood head publishing Ltd., England in association with Textile Institute Manchester
2. Hand book of Fibres Science and Technology, High Technology Fibres, Edited by Manachem Lewin and Jack Preston.
3. New fibers. T. Hongu and G. O. Phillips Ellis Horwood Ltd, Chichester
4. Kevlar aramid fiber. By H.H. Yang. John Wiley and Sons, Chichester, New York,
5. High-Performance and Specialty Fibers, Editors: Technology, Japan, Society of Fiber Science & (Ed.)

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester–VII) TFLDOE-TPL446: MAINTENANCE MANAGEMENT IN TEXTILES		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25Marks ISE: 15Marks SEE: 60Marks
Course Objectives: <ol style="list-style-type: none"> 1. To explain management concept applied to maintenance of machines, basic functions, methodology and application to planned maintenance, condition-based maintenance. 2. To describe management functions planning, scheduling, organizing, controlling, budgeting, record keeping related to machine maintenance. 3. Explain way to enumerate indices related to machine downtime, utilization, spare part management and inventory. 4. To teach uses of value analysis, value engineering, machine replacement, modernization decisions to improve profitability of company using maintenance management. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. explain maintenance management, basic functions, methodology and application to planned maintenance, condition-based maintenance. 2. understand and describe management functions planning, scheduling, organizing, controlling, budgeting, record keeping related to machine maintenance. 3. calculate and use indices related to machine downtime, utilization, spare part management and inventory control. 4. use of value analysis, value engineering, machine replacement, modernization decisions to improve profitability of company using maintenance management. 		
Course Contents		
Unit I	Introduction	05 Hours
Basic concept of maintenance management its role in profitability of company, planned maintenance and breakdown maintenance & economic aspects, subclasses of planned maintenance, Mechanism of planned maintenance optimum planned maintenance, Computer applications in maintenance management.		
Unit II	Condition based maintenance	07Hours(5+2)
Condition based maintenance – Importance, subjective & objective inspections, types of condition monitoring techniques, Detailed study of (NDT) non-destructive testing, performance evaluation, debris analysis, dynamic analysis. Equipment Replacement – Need for replacement, Selection of appropriate alternative of replacement.		
Unit III	Performance Evaluation and Inventory Control	08Hours(3+5)
Performance Evaluation of maintenance function – Control – Methods of control and use of various indices. Spare parts management – Importance & means of inventory control.		

Unit IV	Failure Analysis and Planning	08Hours(4+4)
Failure Analysis – Classification of failures, method of failure analysis, use of trouble shooting charts & other techniques. Planning , scheduling, maintenance organization, performance evaluation of maintenance function, PERT, CPM and other techniques for planning.		
Unit V	Value Analysis and Lubrication Management	06Hours(3+3)
Value Analysis & value Engineering – concept and techniques of value analysis & value engineering Lubrication management – Importance, measures for economy in lubrication management.		
Unit VI	Maintenance Budgeting	05 Hours
Maintenance budgeting – Methods of budgeting, selective budgeting control, techno economics of maintenance.		
References Books:		
1. Maintenance Management volumes 1 to 21, by IMME Delhi. 2. Maintenance Management, SITRA Publication.		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VII) TFLDOE- TCL447: FUNCTIONAL FINISHES		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To describe the mechanism and chemistry of functional finishes. 2. To select the proper functional finish based on end use application. 3. To apply various functional finishes used for textiles finishing. 4. To evaluate the functional finishes applied on textiles. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Describe the mechanism and chemistry of functional finishes. 2. Select the proper functional finish based on end use application. 3. Apply various functional finishes used for textiles finishing. 4. Evaluate the functional finishes applied on textiles. 		
Course Contents		
Unit I	Introduction to Functional Finishes	06 Hours
Objects, types of functional finishing, methods employed for the application of functional finishes on textile materials - irradiation of high energy, coating, insolubilisation or deposition, microencapsulation, polymerisation, cross-linking and resin treatment, covalent formation and ion-exchange/chelation.		
Unit II	Wrinkle Resistance Finish	09 Hours
Mechanism of creasing and resin finishing, Types of resin finishing, concept of Anticrease, wash-n-wear and Durable Press, Role of catalysts in resin finishing, Concept of deferred cure and post cure. Limitations of resin finishing causes of strength loss of resin finished fabric. Various approaches towards reducing the strength loss of resin finished goods. Low and ultra-low formaldehyde resins. Evaluation of Resin Finishing.		
Unit III	Antimicrobial Finish	07 Hours
Object, requirements, types of antimicrobial finishing. Mechanism of antimicrobial finishing, Desirable properties of a good antimicrobial finishes, various antimicrobial finishes for cotton, wool, silk. Mildew-proof and rot proof finishing, Evaluation of antimicrobial finishes.		
Unit IV	Flame Retardant Finish	07 Hours
Concept of flameproof and flame retardancy. Limiting oxygen Index and its importance, Thermal behaviour of textile fibres. Concept of solid phase and Gas phase flame retardant. Classification of flame-retardants. Mechanism of the mode of action of flame retardant. Factors affecting flame retardancy. Essential requirements of a good flame retardant. Evaluation of flame-retardant finish.		

Unit V	Repellent Finish	05 Hours
Introduction, Mechanisms of repellency, chemistry of repellency, Evaluation of textiles treated with repellent finishes		
Unit VI	Soil Release Finish	05 Hours
Type of soils, mechanism of soil impingement and soil retention. Mechanism of soil release. Soil release finishing of synthetics & its blends, Evaluation of soil release finishing.		
References Books:		
<ol style="list-style-type: none"> 1. Chemical Finishing of Textiles by W. D. Schindler and P. J. Hauser, Woodhead Publishing Ltd., Cambridge England, 1st Edition 2004, ISBN 1 85573 905 4 2. Functional Finishes for Textiles, Improving Comfort, Performance and Protection, Edited by Roshan Paul, Woodhead Publishing Series in Textiles: Number 156, 2015, ISBN 978-0-85709-839-9. 3. Chemistry & Technology of Fabric Preparation & Finishing, by Dr. Charles Tomasino, Department of Textile Engineering, Chemistry and Science College of Textiles, North Carolina State University, 1992. 4. Principles of Textile Finishing, by Asim Kumar Roy Choudhury, 2017 Elsevier Ltd., ISBN: 978-0-08-100646-7. 5. Textile Finishing, Edited by Derek Heywood, Published by the Society of Dyers and Colourists, UK, 2003, ISBN: 9780901956811 6. Advances in Functional Finishing of Textiles, by Mohammad Shahid and Ravindra Adivarekar, Springer Nature Singapore Pte Ltd. 2020, https://doi.org/10.1007/978-981-15-3669-4 7. Textile Finishing-Recent Developments and Future Trends Edited by K.L. Mittal and Thomas Bahners, John Wiley & Sons, Inc., USA, 2017, ISBN 978-1-119-42676-9 8. Functional Textiles and Clothing, edited by Abhijit Majumdar, Deepti Gupta, Sanjay Gupta, Springer Nature Singapore Pte Ltd. 2019, ISBN 978-981-13-7720-4, https://doi.org/10.1007/978-981-13-7721-1 		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VII) TFLEL1-TFL449: APPAREL AND FASHION BUSINESS MANAGEMENT		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To explain fashion marketing its scope, nature, importance and functions. 2. To distinguish between different types of market structure. 3. To explain advertising, trade fairs and fashion shows and marketing research. 4. To explain pricing policies, sales forecasting methods, product mix, product life cycle and branding concepts. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Explain fashion marketing its scope, nature, importance and functions. 2. Distinguish different types of market structure. 3. Explain the concept of advertising, trade fairs and fashion shows and marketing research. 4. Understand sales forecasting methods, product mix, product life cycle and branding concepts. 		
Course Contents		
Unit I	Definition of Marketing	06 Hours
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.		
Unit II	Market Structure & Marketing Strategy	06 Hours
Porters Generic Strategies, -Buyers Behavior-Buying Motive Explanation of Motivation-Marketing Segmentation of Different Basics. -Definition And Types of Channels- Channel Policy- Selection Criteria- Whole Sellers Retailers and Middle Men and Their Functions - Buying Office, Buying Agency.		
Unit III	Marketing Research	06 Hours
Introduction-Definition, nature & Scope –An Aid to Rational Decision-Market Research Methodology – Market Research Process – Implementation - Practical Case Studies in Fashion Marketing.		
Unit IV	Branding	06 Hours
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).		

Unit V	Pricing	06 Hours
Pricing Policies, Meaning to Seller and Buyer price- -Objective Factors Influencing Price Decisions- Competitors Reaction to Price-Multi Product Pricing Distribution Cost Analysis- Management of Physical Distribution Marketing Risks.		
Unit VI	Advertising	06 Hours
Purpose-Budget Selecting Media- Criteria for Advertisement- Visual Merchandising, Visual Merchandising Techniques- Display - Types of Displays - Trade Fair Participation-Conducting Fashion Show- Fashion Show Norms.		
References Books:		
<ol style="list-style-type: none"> 1. Marketing Management by Philip Kotler and Kevin Lane Keller (2005), Prentice Hall. ISBN: 0131457578. 2. Principles of Marketing by S.A. Sherlekar and K. Nirmala Prasad (2010), Himalaya Pub. House. ISBN: 1282813366. 3. Marketing Management by S.A. Sherlekar and E. Gordon (2010), Himalaya Pub. House. ISBN: 128281236X. 4. Marketing Fashion: Portfolio Series by Harriet Posner (2011), Laurence King Publishing. ISBN: 1856697231. 5. Fashion Marketing & Merchandising by Mary G. Wolfe (2008), Goodheart-Willcox Pub. ISBN: 1590709209. 6. Fashion Brands: Branding Style from Armani to Zara by Mark Tungate (2012), Kogan Page. ISBN: 0749464461. 7. The End of Fashion: How Marketing Changed the Clothing Business Forever by Teri Agins (2000), William Morrow Paperbacks. ISBN: 0060958200. 8. Fashion Branding Unraveled by Kaled K. Hameide (2011), Fairchild Books. ISBN: 1563678748. 		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VII) TFLEL1-TFL450: FASHION COMMUNICATION		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. Explain fashion journalism, fashion communication and promotion. 2. Explain salient features, advantages and limitations of various types of advertisement media used for fashion promotion. 3. Discuss various components of visual merchandising in fashion retailing. 4. Describe fashion dress as non-verbal communication. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Explain fashion journalism, fashion communication and promotion. 2. Explain salient features, advantages and limitations of various types of advertisement media used for fashion promotion. 3. Discuss various components of visual merchandising in fashion retailing. 4. Describe fashion dress as non-verbal communication. 		
Course Contents		
Unit I	Advertising and promotion	06 Hours
Meaning of mass communication and mass media. Product and corporate advertisement. Existing and new product advertisement. Print Media: Newspapers, magazines, brochures, handbills, newsletters, and hoardings. Broadcasting media.: Radio and TV. New age media: SMS, Email, Websites, advertisements on social media platforms.		
Unit II	Fashion Journalism	06 Hours
National and international fashion magazines. Typical contents of a fashion magazine. Roles and responsibilities of fashion journalists. Roles and responsibilities of fashion editor. Writing fashion news and features. Reporting the catwalk, Reporting the trends. Digital and social media. Fashion blogging. Fashion journalism and PR. Laws and ethics in fashion journalism.		
Unit III	Fashion Photography & Modelling	06 Hours
Roles and responsibilities of fashion photographers. Types of fashion photography. Photography equipment: Camera - Point & shoot, and DSLR Camera - Advantages and limitations. Optical and digital zoom, Image stabilization, Menu and controls, Raw photos and compressions. Camera accessories: Backup batteries, Tripod, Memory card, Flash, etc. Natural lighting and artificial lighting. Digital photo editing techniques: White balance, exposure, noise reduction, lens correction, filters, framing, refinements, resizing, sharpening, custom brushes, dodge and burn, clone stamp, frequency separation, colour balance, highlights, layer masks, and blending modes. Fashion modelling: Meaning. Requirements. Types: Editorial, Runway, Catalog, Showroom, Lingerie, Fit n fitness, Body part modelling, etc.		

Unit IV	Digital Fashion Communication	06 Hours
UI/UX design tools for Customer analysis, UI prototyping, Interactivity, graphic development, Competitor analysis, and Content development. 2D animation and motion graphics. 3D e-commerce platforms. Web design.		
Unit V	Visual Merchandising	06 Hours
Definition. Importance of VM. Roles and responsibilities of visual merchandiser. Components of VM: Layout, Merchandising, Display and Graphics. Effective display techniques. Principles of VM. Colour blocking. Colour and size blocking. Focal points. Store Image Mix: Elements of image mix, Fixtures, Sound & Music, Odour, Visuals, and Lighting. Window display.		
Unit VI	Virtual reality in Fashion Retailing	06 Hours
Try on: Pre-requisites for garment mapping: Equipment requirements, Input image requirements, Garment quality specifications, Asset preparation, Avatar quality specifications, Pose and background, Camera and lighting settings. Garment mapping process. Open Cart. Uploading try-on images. Tailor-i. Q3D.		
References Books:		
<ol style="list-style-type: none"> 1. Visual Merchandising for Fashion by Sarah Bailey and Jonathan Baker (2014), A&C Black. ISBN: 2940496129. 2. Fashion Writing and Criticism: History, Theory, Practice by Peter McNeil Sanda Miller (2014), Bloomsbury Publishing. ISBN: 9780857854711. 3. Fashion Journalism by Julie Bradford (2014), Routledge. ISBN: 1136475354. 4. Store Design and Visual Merchandising: Creating Store Space That Encourages Buying by Claus Ebster and Marion Garaus (2011), Business Expert Press. ISBN: 160649094X. 5. Visual Merchandising by Swati Bhalla and Anuraag S.(2010), Tata McGraw-Hill Education. ISBN: 1259081826. 6. Fashion Photography: A Complete Guide to the Tools and Techniques of the Trade by Bruce Smith (2008), Amphoto Books. ISBN: 081742721X. 7. Manual of Outdoor Photography by Michael Freeman (1983), Ziff Davis World. ISBN: 0871651122. 8. Lighting Techniques for Fashion and Glamour Photography: For Digital and Film Photographers by Stephen A. Dantzig (2005), Amherst Media. ISBN: 1584281472. 		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VII) TFLEL1-TFL451: VISUAL MERCHANDISING		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. Explain meaning and importance of Visual Merchandising. 2. Explain concept of merchandise mix. 3. Explain store management, design, layout and image. 4. Explain non-store merchandising. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Explain the meaning and importance of Visual Merchandising. 2. Explain the concept of merchandise mix. 3. Explain store management, design, and layout. 4. Explain non-store merchandising. 		
Course Contents		
Unit I	Introduction to Visual Merchandising	06 Hours
Introduction, Objectives, Concept of Visual Merchandising, Objectives of Visual Merchandising, Growth of Visual Merchandising, Visual Merchandising in India, Scope of visual merchandising in India, Visual Merchandising as a Support for Positioning Strategy, Prospects of Visual Merchandising, Challenges in Visual Merchandising. The common challenges, Ways to overcome the visual merchandising challenges.		
Unit II	The Merchandising Mix	06 Hours
Introduction, Objectives, Concept of Merchandise Mix, Merchandise line, The Assortment of Products, Assortment strategy, Merchandise Mix of Show Off, Role of a merchandiser, Other Atmospherics in Merchandising, Colour scheme, Lighting.		
Unit III	Store Management in Merchandising	06 Hours
Introduction, Objectives, Types of Stores, Location of a Store, Types of retail locations, Planning a Store Layout, Various Types of Store Layouts, Grid layout, Forced-path layout, Free-form layout, Boutique layout, Combined layout, Store Space Allocation, Heads of space allocation in a store, Managing Customer Navigation in a Store, General Rules of Customer Traffic in a Store, The Loop for Guiding the Shoppers through a Store.		
Unit IV	Store Design and Display	06 Hours
Introduction, Objectives, Concept of Store Design and Display, Objectives of store design, Purpose and importance of display, Rules of display planning, Display Settings, Store Design, Exterior of a store, Interior of a store, Window displays, Merchandise Presentation Strategies, Colour blocking, Other techniques of merchandise placement, Physical materials used to support the display, Components of display, Some Useful Display Fixtures, Shelves, Gondolas, Round racks, Four ways, Saccades and fixation, Replenishes,		

Planogramming. Managing communication through Graphics and Signage.

Unit V	Store Image & Security	06 Hours
Introduction, Objectives, Concept of Image Mix, Elements of Image Mix, Merchandise, Fixtures, Sound/Music, Odour, Visuals, Employees, Elements that Levy Negative Impact on Shoppers, Change of Image, Security Issues.		
Unit VI	The Present and Future of Visual Merchandising	06 Hours
Introduction, Objectives, Visual Merchandising at Different Stores, Apparel store, Furniture store, Gift store, Future Prospects of Visual Merchandising. Non-Store Retail Merchandising, Television retailing/home shopping, Internet retailing/online shopping, Catalogue Management, Product Presentation in Non-Store Retail Merchandising.		
References Books:		
<ol style="list-style-type: none"> 1. Visual Merchandising for Fashion by Sarah Bailey and Jonathan Baker (2014), A&C Black. ISBN: 2940496129. 2. Fashion Marketing Communications by Gaynor Lea-Greenwood (2012), John Wiley & Sons. ISBN: 1118496167. 3. Visual Merchandising by Swati Bhalla and Anuraag S.(2010), Tata McGraw-Hill Education. ISBN: 1259081826. 4. Store Design and Visual Merchandising: Creating Store Space That Encourages Buying by Claus Ebster and Marion Garaus (2011), Business Expert Press. ISBN: 160649094X. 5. Fashion Marketing by Mike Easey (2009), John Wiley & Sons. ISBN: 1444309560. 6. Fashion Marketing Communications by Gaynor Lea-Greenwood (2012), John Wiley & Sons. ISBN: 1118496167. 		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VII) TFP452: GARMENT PROJECT PLANNING LAB		
Lab Scheme: Practicals: 02 Hrs/Week	Credits 01	Evaluation Scheme: CIE: 50 Marks
List of Experiments		
1.	Study for Selection of the product, operation breakdown and machine requirement	
2.	Study of different norms of garment industry	
3.	Study of Machinery selection and specification for particular product	
4.	Study of Machinery requirement according to production capacity	
5.	Study of Interdepartmental relationship chart for the apparel industry.	
6.	Study of Final Layout of apparel manufacturing industry.	
7.	Study for Area calculation for different departments of garment industry.	
8.	Study for site selection for the apparel industry	
9.	Study for Construction of building of garment industry.	
10.	Study of material handling equipment in apparel industry	
11.	Study for Estimation of labour compliment in apparel industry	
12.	Formulation of project report for knit goods	

Submission – Completed Journal.

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VII) TFP453: GARMENT CONSTRUCTION-II LAB		
Teaching Scheme: Practical: 02 Hrs /Week	Credits 01	Evaluation Scheme: CIE: 50 Marks SEE: 50 Marks
List of Experiments		
1	Pattern making of men's / women's jeans.	
2	Construction of layout of men's / women's jeans.	
3	Stitching of men's / women's jeans.	
4	Study of Operation breakdown of jeans.	
5	Pattern making of men's / women's vest-coat.	
6	Construction of layout of men's / women's vest-coat.	
7	Stitching of men's / women's vest-coat.	
8	Study of Operation breakdown of vest-coat.	
9	Draping of flounces and peplum.	
10	Draping of different types of skirt.	
11	Block development of trouser by draping method.	
12	Pattern alteration of various body defects.	

Submission – Completed Journal.

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VII) TFD454: PROJECT PHASE- I		
Teaching Scheme: Tutorial: 04 Hrs/Week	Credits 04	Evaluation Scheme: CIE: 50 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To assist the students in identifying problem, searching relevant literature. 2. To guide the students in preparation of plan of work. 3. To encourage, promote and assist the students at various stages. 4. To encourage them to work in group. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Identify problem, Prepare Literature Review, Prepare and submit Plan of work 2. Timely submit Literature Review based on problem identified and plan of work. 3. Make availability and testing of raw materials, designing of product, initial trials, etc. 4. Work in team 		
Course Contents		
Selection of Topic and Registration		
Students based on their interest and availability of resources select the topic in one of the following area- <ol style="list-style-type: none"> i. Process optimization. ii. Product Development. iii. Fabrication. iv. Software in textiles. Students should submit the registration form to dissertation committee filling all the details.		
Literature review		
Literature related to topic selected should be searched from Reputed Research Journals, Books, and internet. Literature review should be prepared as per the standard format.		
Plan of work		
Proposed plan of work in consultation with guide should be prepared. Plan of work consists of <div> <input type="checkbox"/> Raw Material details. <input type="checkbox"/> Methodology to be adopted. </div> <input type="checkbox"/> Testing to be carried out.		
Submission of Literature review and plan of work		
Spiral bound copy of Introduction, Literature review and plan of work as per the standard format should be submitted to dissertation committee.		
Evaluation of Plan of work		
Students should present all above details of project work in front of project evaluation committee. If any recommendations are suggested by committee, those should be implemented and resubmitted.		
Continuous Internal Evaluation (CIE)		
Term work marks are allotted by continuous monitoring of the progress in the work and submission of spiral bound copy.		

Submission

1. Spiral copy of Introduction, literature review and plan of work, duly signed by all team members and Guide.

**Final Year B. Tech Fashion Technology
Semester-II**

Sr. No.	Course Code	Course Title	Course Category	Teaching scheme				Course Credits
				L	T	P	Contact Hrs/wk	
1	TFL461	Apparel Finishing And Care	PCC	3			3	3
2	TFL462	Apparel Export Management	HSMC	3			3	3
3	TFLEL2	Elective - II	PEC	3			3	3
4	TFLEL3	Elective - III	PEC	3			3	3
5	TFD469	Project Phase - II	PST		5		5	5
6	TFD470	Internship- II **	PST					3
7	TFP471	Apparel Finishing And Care Lab	PCC			2	2	1
		Total		12	5	2	19	21

Course Category	List of Electives - TFLEL2
HSMC - Hum. & Social Sc., Mgt	TFL463 - Fashion Retail Management
BSC - Basic Science	TFL464 - Sustainable Textiles in Fashion
ESC - Engineering Science	TFL465 - Quality Assurance in Garment
PCC - Prof. Core Courses	
PEC - Prof. Elect. Courses	List of Electives - TFLEL3
OEC- Open Elct. Courses	TFL466 - Smart Textiles and Specialty Garments
MC - Mandatory Courses	TFL467 - Consumer Behavior in Fashion Industry
PST - Project / Seminar / Ind. Training	TFL468 - Fashion Photography

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VIII) TFL461: APPAREL FINISHING AND CARE		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. Ability to describe working principle & procedure of machines used in garment processing industry. 2. Ability to apply the various finishes on garments. 3. Ability to evaluate the impact of chemical processing parameters on garments. 4. Ability to assess the impact of garment processing parameters on garments. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. describe working principle & procedure of machines used in garment processing industry. 2. apply the various finishes on garments. 3. assess the impact of garment processing parameters on garments. 4. evaluate the impact of chemical processing parameters on garments. 		
Course Contents		
Unit I	Apparel Finishing	08 Hours
Objects of finishing, classification of finishes, Difference between pre-garment stage and readymade garment stage finishing, Finishing machinery such as stenter, compressive shrinkage range, calendar. Concept of garment finishing, Garment processing machines - drum washing machine, hydro extractor, tumble drier		
Unit II	Finishes for Garments	09 Hours
Resin Finish, Antimicrobial finish, Flame Retardant finish, various softening and stiffening treatments, Water repellent finish, Bio-polishing, weight reduction of polyester		
Unit III	Wash Down Effects on Denim	05 Hours
Objects of wash down effects on denim, Regular wash, Stone Wash, Enzyme Wash, Combined enzyme and stone wash, Acid wash, Grinding, 2d and 3d Whiskering, Ozone Fading, Laser Treatment, etc.		
Unit IV	Concept of Clothing Care	07 Hours
Introduction to laundry process, Laundering and dry-cleaning process for garment, various laundry agents like soap, detergent, bleaching agent, optical whitening agents, stiffeners and softeners. Nature and classification of stains, principle and classification of stain removals, Common stains and their removal.		
Unit V	Dyes and Pigments	08 Hours
Dye / Fiber interaction, Behaviour of dyes and pigments during use and laundering, Grey-scales, Importance and measurement of colour fastness to various agencies like washing, rubbing, light, perspiration, bleaching, dry cleaning, sublimation, acids and alkalis. Measurement of colour and colour		

difference

Unit VI	Care Labels	03 Hours
Introduction, voluntary and mandatory care label, Care label symbols, Various systems of care label, Instructions for washing, bleaching, drying, ironing, dry cleaning, and placement of care label.		
References Books:		
<ol style="list-style-type: none"> 1. Textile Finishing, edited by Derek Heywood, Society of Dyers and Colourists 2. Garment Finishing and Care Labelling by S.S. Satsangi, Usha Publishers,53-B/AC-IV, Shalimar Bagh, New Delhi. 3. Know All About Denim by Dinkar Mahajan Publishers Private Limited, Ahmadabad. 4. Denim - Manufacture, Finishing and Applications, Edited by Roshan Paul, Woodhead Publishing Series in Textiles 5. Fabric Care by Noemia D' Souza, New Age International Publications 6. Stain Removing Techniques by S. S. Satsangi, Usha Publishers,53-B/AC-IV, Shalimar Bagh, New Delhi. 7. AATCC Technical Manual 2007 8. Introduction to Clothing Production Management, by Chutler A J, Blackwell science, UK, 1998 		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VIII) TFL462: APPAREL EXPORT MANAGEMENT		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To explain international trade, exchange rate determination WTO & Trade liberalization. 2. To explain international marketing and foreign trade policies 3. To explain and identify firm establishment process and foreign trade documents. 4. To understand the import procedure, shipment and customs procedure. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Understand international trade, exchange rate determination WTO & Trade liberalization. 2. Understand international marketing and forging trade policies. 3. Understand and identify the firm establishment process and foreign trade documents. 4. Understand the import procedure and shipment and customs procedure. 		
Course Contents		
Unit I	Introduction to international trade:	06 Hours
Introduction, trade policy, foreign trade, simplification of documentation, The emerging global scenario-The business of international trade- Trade barriers- Foreign exchange-Exchange rate determination (Spot & forward), the euro dollar market-WTO- Trade liberalization.		
Unit II	International marketing:	07 Hours
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 pre-shipment inspection.		
Unit III	Foreign trade:	05 Hours
Foreign trade control and Exim policy, Export Promotions, Export & Import procedures. Major problem of India's export sector.		
Unit IV	Export Preliminaries:	05 Hours
Introduction, Establishment a business firm, importer exporter code number, Alignment documentation system, commercial documents, Regulatory documents.		
Unit V	Foreign Trade Documents:	08 Hours
Need, rationale and types of documents relating to goods – invoice, packing list, certificate of origin. Documents relating to shipments – mate receipt, shipping bill, certificate of measurement, bill of lading, air way bill. Documents relating to payment – letter of credit, bill of exchange, letter of hypothecation, bank certificate for payment. Document relating to inspection – certificate of inspection – gsp and other forms.		

Unit VI	Shipment and Customs:	08 Hours
Pre-Shipment Inspection and Quality Control. Shipment of Goods and Port Procedures – Customs Clearance Post Shipment: Formalities and Procedures – Claiming Duty Drawback and Other Benefits – Role of Clearing and Forwarding agents. Incoterms, Shipment containers.		
References Books:		
<ol style="list-style-type: none"> 1. Export Import procedure, C. Rama Gopal, New age international publication, New Delhi 2. International trade and Export management – Himalaya Publication, Mumbai (1998) Francis Cherunilam. 3. Input-output norms [duty exemption schemes] 2004-09 (vol.2), Centax publication New Delhi. R.K. Jain. 4. Hand Book of Import And Export Procedures - Paras Ram 5. Govt. Of India: Hand Book of Import and Export Procedures. 6. Export Import: Procedure and Documentation, Madhurima Lal, Sultan Chand & Sons publication, ISBN-10. 		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VIII) TFLEL2- TFL463: FASHION RETAIL MANAGEMENT		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To describe retail industry and the retailing environment. 2. To develop competence in Retail Planning, Implementation and Management. 3. To describe retail buyers and merchandisers, store operations, supply chain management. 4. To classify trends in fashion retailing. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Describe retail industry and the retail environment. 2. Develop competency in retail planning, implementation and management. 3. Describe retail buyers and merchandisers, store operations, supply chain management. 4. Classify trends in fashion retailing. 		
Course Contents		
Unit I	Principles of retailing	06 Hours
The history of retail, Understanding the difference between retailing and the retailer, Classification of retailers, On-site vs. off-site retailing, Multichannel retail approaches.		
Unit II	Consumer buying behavior	06 Hours
Consumer behavior, Consumer demographics, Site selection and store location, Emerging domestic and international markets. Factors affecting consumer behaviour. Effect of consumer behaviour on marketing strategies.		
Unit III	Retail Corporate Offices	06 Hours
Corporate offices and their role, Strategic planning; Supporting store teams, Ethics and corporate, Social responsibility, HRM, Importance & Motivation, Issues associated with HRM. Customer Relationship Management: CRM defined, Process Collection and evaluation of customer data..		
Unit IV	Planning Merchandise assortment and pricing	06 Hours
Process, Buying plans, Assortment planning. Retail Pricing strategies: Setting Retail Prices, Price adjustments, Pricing Strategies & Services. Buying Systems: Process, Buying plans, Assortment planning OTB, preparation.		
Unit V	Store Management	06 Hours
Types and methods, Store management and the back of house, Employee management, Store logistics, Merchandise controls and loss prevention. Manpower, infrastructure in retail.		

Unit VI	Trends in Retailing	06 Hours
E-commerce and the online shopper, Mobile retail, pop-up, and concept shops, Retailer and designer collaborations, Technology in the retail sector.		
References Books:		
<ol style="list-style-type: none"> 1. Retailing Management by William, Davidson, Daniel J. Sweeney. John Wiley & Sons publication. ISBN: 978-0471850946 2. Retailing Management by Michael Levy, Barton Weitz and Dhruv Grewal 9th edition McGraw-Hill Education publication. ISBN: 978-0078028991 3. Fundamentals of Retail Management by Arupghosh, Neha Publishers & Distributors, ISBN: 9789381422465 4. Retail Management by Gibson G. Vedamani, Jaico Publishing House. 4th edition ISBN: 978-8179921517 5. Retail Management by Chetanbajaj, RajnishTuli, NidhiVarma and Srivastava, Oxford publication. 2nd edition. ISBN: 978-0198061151 6. Retail Management by S.C. Bhatia Atlantic publication, ISBN: 9788126909827 		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VIII) TFLEL2-TFL464: SUSTAINABLE TEXTILES IN FASHION		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To explain concept of sustainability. 2. To explain innovation in sustainability. 3. To explain emerging sustainable issues. 4. To explain key solutions for sustainability issues. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Explain concept of sustainability. 2. Explain innovation in sustainability. 3. Explain emerging sustainable issues. 4. Explain key solutions for sustainability issues. 		
Course Contents		
Unit I	Introduction to Sustainability	06 Hours
Sustainability – Introduction, Need and concept of sustainability, Social, environmental and economic sustainability concepts. Material diversity – Different fibres and their impact on sustainability. Fast fashion vs slow fashion.		
Unit II	Sustainability Innovation	06 Hours
Technology based innovation, innovation driven by legislation, best practices in fibre and fabric processing, spinning, weaving and knitting, fabric finishing, bleaching, dyeing, printing, material stocks and flows, regulating negative feedback loops, driving positive feedback loops, information flows, the rules of the system, the power of self-organization.		
Unit III	Emerging Sustainable Issues	06 Hours
Innovations to reduce the impact of the use phase. Process focus - more efficient laundering practices. Product focus - designing fabrics and garments that cause less impact after laundering. Consumer focus – designing clean clothes.		
Unit IV	Reuse, Recycling and Zero waste	06 Hours
Introduction to textile waste, waste management strategies, reuse of goods, repair and reconditioning of goods, recycling of goods, design of recycling and disassembly. Critique of waste management strategies. Industrial ecology.		

Unit V	Fashion, Needs and Consumption	06 Hours
Value free fashion, fashion and clothes, a new fashion ethics, reversing the escalators of consumption. Locally made & globally relevant fashion, local wisdom, distinctiveness, lightweight materials and structure, speed and rhythms in nature and culture.		
Unit VI	User maker	06 Hours
Passive fashion, new models of action, open-source design, participatory design and designers, reform, different case studies.		
References Books:		
<ol style="list-style-type: none"> 1. Sustainable Fashion & Textiles by Kate Fletcher, Earthscan in the UK and USA, 2008, ISBN 978-1-84407-463-1 2. The Future of Fashion: Understanding Sustainability in the Fashion Industry by Tyler Little, New Degree Press, 2018, ISBN 978-1641371407. 3. Sustainability and Social Change in Fashion by Leslie Davis Burns, Fairchild Books, 2019, ISBN 978-1501334061. 4. Accelerating Sustainability in Fashion, Clothing and Textiles by Martin Charter, Routledge Publications, 2023, ISBN 978-1032225197 		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VIII) TFLEL2-TFL465: QUALITY ASSURANCE IN GARMENT		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To explain quality aspects of garment. 2. To explain international care labelling system. 3. To explain various types of garment inspection and defects. 4. To describe various tools used for quality management. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Explain quality aspects of garment. 2. explain international care labelling system 3. Explain various types of garment inspection and defects. 4. Describe various tools used for quality management. 		
Course Contents		
Unit I	Introduction to Quality Assurance	06 Hours
Definition and meaning of Quality, Importance of quality, Eight dimensions of Quality, Organization for quality, Concepts of TQM, Evolution of quality concepts. Job profiles for quality department their roles and responsibilities.		
Unit II	Apparel Sizing and Labelling	07 Hours
Meaning of Apparel sizing and Care labels. Different care label systems- American/ISO/Japan/Canada, Eco labels. IPQC, ASTM, BIS, AATCC, BS in the apparel industry. Product safety.		
Unit III	Garment Inspection	06 Hours
Types of inspection, inspecting garments using spec sheets, different zones, AQL system. Fabric defects and garment defects, Fabric inspection systems. 10/12 parameter report, Protocol for apparel Testing. Third party inspection and agencies.		
Unit IV	Standard Operating Procedures	07 Hours
SOP for in-plant inspection, new supplier, products. SOP of quality assurance programs in different departments.		
Unit V	Tools for Quality Management	08 Hours
QC tools, ISO, Kaizen, TQM, Quality circles, 3D, Lean-5s, six sigma, traffic light system. Cost of quality. Cost of quality conformance and non-conformance. Case studies.		

Unit VI	Quality Improvement	05 Hours
Data collection and analysis, root cause, Quality improvement tools, Fabric and garment testing, Quality Improvement case study. Role of different stake holders in quality of apparel.		
References Books:		
<ol style="list-style-type: none"> 1. Introduction to quality control, Pradip V. Mehta, ASCQ quality Press, Marcel Dekker Inc, New York, 1992. 2. Juran's Quality Handbook by Joseph M. Juran, Blanton Godfrey, Robert E. Hoogstoel, Edward G. Schilling, fifth edition, McGraw-Hill Companies, Inc. ISBN 0-07-034003-X 3. Managing Quality in the Apparel Industry. Pradip V Mehata. New age International publication. 4. Quality characterization of apparel by Dr Subrata Das. Woodhead Publication India Pvt. Ltd. New Delhi. 5. An Introduction to Quality Assurance for retailers. Pradip V Mehata. New age International publication. 6. Quality Management in Apparel Industry. B. Purushothama. Indian society for technical education project, Bangalore. 		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VIII) TFLEL3-TFL466: SMART TEXTILES AND SPECIALTY GARMENTS		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To explain fabric requirements for home textiles. 2. To explain fabric requirements for medical textiles. 3. To explain comfort requirements for specialty clothing 4. To explain engineering of various types of functional garments. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Explain fabric requirements for home textiles. 2. Explain fabric requirements for medical textiles. 3. Explain comfort requirements for specialty clothing. 4. Explain engineering of specialty clothing. 		
Course Contents		
Unit I	Home Textiles	06 Hours
Definition and meaning. Classification of home textiles. Textile floor coverings. Upholstery fabrics. Window Textiles. Bed textiles. Bathroom Textiles. Table textiles. Kitchen textiles.		
Unit II	Medical Textiles	06 Hours
Definition and meaning. Classification of medical textiles. Sutures, Sanitary napkins, diapers, surgical dressings, healthcare textiles, medical implants like cardiovascular implants, soft tissue implants, orthopedic implants and extra corporeal devices. Scope of medical textiles in India.		
Unit III	Functional Clothing	06 Hours
Definition, Classification: Protective functional – Environmental hazard protective, Biological, chemical and radiation hazard protective, Injury protective. Medical functional – Therapeutic and rehabilitative protective, Bio-sensing protective, Wearable electronics for health care. Sports functional, Vanity functional – Body shaping, Support and contouring for enhancing appearance. Clothing for special needs – Enabling clothing for elderly, infants and disabled. Requirements from functional clothing: physiological, biomechanical, biomechanical, ergonomics, psychological.		
Unit IV	Engineering of Specialty Clothing	06 Hours
Engineering of functional clothing: User, Material and Design considerations. Role of fibre, yarn and fabric parameters on functional attributes of functional clothing. Process of material selection. Clothing design: pattern engineering, assembling of garment components. Testing of clothing for functionality. Various principles of fit: functional ease, movement analysis, prototype testing, etc.		

Unit V	Protective Clothing	06 Hours
Short term and long-term survival, military protective clothing, physical, environmental, camouflage and battlefield requirements for military clothing, principles of ballistic protection, technical fibres and fabrics for ballistic protection, ballistic vests and helmets, protection against fire, protection against extreme weather conditions. Space garments.		
Unit VI	Sports Clothing	06 Hours
User activities, environment and requirements, Material requirements for the design of performance sportswear, high performance fibres and fabrics for sportswear, physiological comfort in sportswear, and protection in sports.		
References Books:		
<ol style="list-style-type: none"> 1. Textiles in sport by R Shishoo, 5th edition Shishoo Woodhead Publication. ISBN: 978-1855739222 2. Handbook of Technical Textiles by A.R. Horrocks and S.C. Anand, 2nd edition. Woodhead Publishing Ltd. ISBN: 978-1782424581 3. Intelligent Textiles and Clothing by H. Mattila Woodhead Publishing Ltd ISBN-13: 978-1845690052 4. Textiles for Industrial Applications by R. Senthil Kumar, CRC publication. ISBN-13: 978-1466566491 5. Medical and Hygiene Textile Production: A Handbook by Allison Mathews and Martin Hardingham, Practical Action publication, ISBN: 978-1853392115 6. Techno Textiles 2: Revolutionary Fabrics for Fashion and Design by Sarah E. Braddock C. ISBN: 978-0500286845 7. Geotextiles by N. W. M. John, Blackie publication, ISBN: 9780412013515 8. Handbook of Industrial Textiles, by Sabit Adanur Wellington Sears publication ISBN-13: 978-1566763400 		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VIII) TFLEL3-TFL467: CONSUMER BEHAVIOUR IN FASHION INDUSTRY		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To explain rationale for studying consumer behaviour. 2. To explain various factors influencing consumer behavior. 3. To explain consumer decision processes. 4. To explain lifestyle segmentation. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Discuss the rationale for studying consumer behaviour. 2. Analyze various factors influencing consumer behavior. 3. Explain consumer decision processes. 4. Analyse lifestyle segmentation from a marketing point of view. 		
Course Contents		
Unit I	Consumer Behaviour	06 Hours
Consumer behaviour: Definition and meaning. Reasons for studying consumer behaviour. Applying consumer behaviour knowledge. Factors affecting consumer behaviour. Consumer behaviour and market segmentation: Geographic, Demographic, Psychographics, Sociocultural, Hybrid segmentation. Consumer decision making process: Problem recognition and Purchasing Behaviour, and Hierarchy of effects. Consumer research: Process, Primary and secondary data collection. Data analysis.		
Unit II	Individual Determinants	06 Hours
Individual determinants: Motivation and involvement, Attitudes, Personality and self-concept, Learning and memory, and Information Processing. Perception, Exposure, Attention, and Interpretation. Misinterpretation of marketing messages. Personality: Trait theory, Types of behaviour, Emotions and marketing strategy. Self-concept: Actual self, Ideal self, Social self, Ideal social self, situational self. The relationship between self-concept and brand image influences.		
Unit III	Family Buying Influences	06 Hours
Family life cycle and consumption pattern. Buying roles of family members. Types of family: Nuclear and joint family. Family buying influences: Reciprocal influences, Inter-generation influences. Family as a decision-making unit. Family decision stages. Marketing strategy for family decision making.		
Unit IV	Cultural and Generation Effects	06 Hours
Culture and sub-culture: Characteristics of culture, Components of culture, Function of culture, Variation in cultural values, Meaning of sub-culture, Sub-culture in India. Cultural variations in verbal and nonverbal communications. Marketing implications. Purchase behaviour of Baby boomers. Generation X, Generation Y and Generation Z.		

Unit V	Social Class and Social Groups	06 Hours
<p>Social class: Definition and meaning, Buying patterns of upper class, middle class and lower class. Marketing strategies for social classes. Social groups: Levels of group involvement, Classification of groups, Reference groups and their influences. Opinion leaders: Characteristics of opinion leaders. Role played by opinion leaders in information transmission.</p>		
Unit VI	Lifestyle Segmentation	06 Hours
<p>Characteristics of lifestyle. Values and lifestyle segments (VALS): Need driven, Outer directed, Inner directed, and Integrated consumers. Survivors, Sustainers, Belongers, Emulators, Achievers, Experimentals, and Societally conscious consumers. Orientation based consumers: Principle oriented, Status oriented, and Action oriented. VALS 2 segments: Strugglers, Makers, Strivers, Believers, Experiencers, Achievers, Fulfilled, Actualizers. Differentiated marketing mix. Counter segmentation.</p>		
References Books:		
<ol style="list-style-type: none"> 1. Consumer Behavior in Fashion by Michael R. and Nancy Rabolt (2008), Prentice Hall. ISBN:0131714740. 2. Consumer Behavior in Fashion by Michael R. Solomon (2013), Cram. ISBN: 9780131714748. 3. The Psychology of Fashion by Michael R. Solomon (1985), Lexington Books. ISBN: 0669091286. 4. Fashion and the Consumer by Jennifer Yurchisin and Kim K. P. Johnson (2010), Bloomsbury Academic. ISBN: 184520798X. 5. Fashion Branding and Consumer Behaviors by Tsan-Ming Choi (2014), Springer-Verlag. ISBN: 9781493902767. 		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VIII) TFLEL3-TFL468: FASHION PHOTOGRAPHY		
Teaching Scheme: Lectures: 03 Hrs/Week	Credits 03	Evaluation Scheme: MSE: 25 Marks ISE: 15 Marks SEE: 60 Marks
Course Objectives: <ol style="list-style-type: none"> 1. Explain importance of colour in photography. 2. Explain various tools and techniques used in fashion photography. 3. Explain differences between photography in natural light and artificial light. 4. Explain how to edit photos using photo editing tools. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Appraise importance of colour in photography. 2. Explain various tools and techniques used in fashion photography. 3. Differentiate between photography in natural light and artificial light. 4. Explain various photo editing tools. 		
Course Contents		
Unit I	Color and Photography	06 Hours
Introduction, History, Composition, Time chart – Color pertaining to slide photography; the colors of light, the balance of color, forming images, color vision, color psychology, color description – color temperature, wave lengths, focusing distances.		
Unit II	Equipment and Darkroom Techniques	06 Hours
Cameras, system camera, lenses, filters, light meters-their care & maintenance, supports and lights, darkroom layout and equipment- wet areas, dry areas; timers-interval, accumulative; processors- small tank, large tank, drum, automatic. Chemicals – Kodak, Beseler, Uni-color, Ilford; processes – E-4, E-6, commercial, processing slides, mounting slides, printing slides, projectors and viewing – slide critique, slide presentations, audio visual designs; identifying and correcting faults, slide storage, terms and identifications.		
Unit III	Study of Natural Light	06 Hours
Sun, Skies, Water, backlighting in direct light, Indirect and reflected light, Diffused light, Early morning, Mid-day, Dusk, Night, Spring, Summer, Autumn, Winter. Adverse conditions – Taking advantages of poor light, Mist and fog, Rain, Storms, Snow and cold, Heat, Underwater photography.		
Unit IV	Study of Artificial Light	06 Hours
Tungsten, Flash, Mixing tungsten and flash, Mixing flash and daylight, Mixing daylight and tungsten with flash, Tungsten and flash as complete sources, Florescent, mercury vapor and mixed sources, Oil lamps, torchlight and matches, Alternative lighting.		

Unit V	Subject Lighting	06 Hours
Portraits, Groups, Nudes, Fashion and beauty, Children, Still life, Architecture, Architecture detail, Interiors, Animals, Indoor sports, Outdoor sports, Copying slide. Color Materials and Methods – color process, choosing color slide films – Daylight, Tungsten 3200 & 3400 degrees, Infrared, Slide copy film, Selecting the exposure, Exposure variations, altering the image in the studio, using lenses, using filters.		
Unit VI	Digital Photo Editing	06 Hours
White balance, exposure, noise reduction, lens correction, filters, framing, refinements, resizing, sharpening, custom brushes, dodge and burn, clone stamp, frequency separation, colour balance, highlights, layer masks, and blending modes.		
References Books:		
<ol style="list-style-type: none"> 1. Fashion Photography: A Complete Guide to the Tools and Techniques of the Trade by Bruce Smith (2008), Amphoto Books. ISBN: 081742721X. 2. Canon Eos 40d Guide to Digital Photography by David D. Busch (2007), Delmar Cengage Learning. ISBN: 1598635107. 3. John Hedgecoe's Complete Guide to Photography by John Hedgecoe (1995), Sterling. ISBN: 0806984279. 4. Manual of Outdoor Photography by Michael Freeman (1983), Ziff Davis World. ISBN: 0871651122. 5. Lighting Techniques for Fashion and Glamour Photography: For Digital and Film Photographers by Stephen A. Dantzig (2005), Amherst Media. ISBN: 1584281472. 6. Unseen Vogue by Hachette UK (2004), Little Brown. ISBN: 0316727660. 		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VIII) TFD469: PROJECT PHASE-II		
Teaching Scheme: Tutorial: 05 Hrs/Week	Credits 05	Evaluation Scheme: CIE: 50 Marks SEE: 50 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To guide the students in their experiment work as per the plan of work. 2. To teach various tools of testing and analyze the test results. 3. To get the report prepared in the form of thesis as per the prescribed format. 4. To encourage them to work in group. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Carry the experiment work as per the plan of work. 2. Use various tools of testing and analyze the test results. 3. Write the thesis as per the prescribed format. 4. Work in a group. 		
Course Contents		
	Experimentation work	
Students should start their experimental work as per the approved plan of work in consultation with Guide.		
	Progress Evaluation	
Dissertation committee evaluates the progress in project and confirm the work as per the approved plan of work.as per the standard format.		
	Report Writing	
After completion of work, students should prepare the report as per the standard format and guidelines in consultation with guide.		
	Submission of Final Report	
Two bound copies of the report duly signed by Project Guide, Head of The Department and Principal along with a soft copy in the form of a CD should be submitted to Dissertation committee.		
	Continuous Internal Evaluation (CIE)	
Term work marks will be allotted by continuous monitoring of the progress in the work and submission of final report.		
	Semester End Evaluation (SEE)	
Students have to present their work in front of Internal and External examiner. Examiners assess the project work and allocate the marks.		

Submission

1. Two hard bound copies of final thesis duly signed by all the team members, Guide, HOD, and Director along with one soft copy.

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VIII) TFD470: INTERNSHIP-II		
Teaching Scheme: Training Period four weeks during Winter vacation	Credits 03	Evaluation Scheme: CIE: 50 Marks SEE: -- Marks Total: 50 Marks
Course Objectives: <ol style="list-style-type: none"> 1. To expose the students to the industrial practice, environment its work culture and industrial practices. 2. To expose the students to machineries, processes and modern tools used in industries. 3. To develop understanding of techniques like Production Planning, Quality Assurance, Maintenance practices, Environment and Pollution Control, Management Information System. 4. To provide hands-on training on machineries and equipments. 		
Course Outcomes: At the end of the course, students will be able to <ol style="list-style-type: none"> 1. Understand the industrial, environment, work culture and industrial practices. 2. Understand the machineries, processes and modern tools used in industries. 3. Reproduce the techniques like Production Planning, Quality Assurance, Students will be able to maintenance practices, Environment and Pollution Control, Management Information System. 4. Acquire skills and techniques to work in industries. 		
Course Contents		
Unit I	Training	
Training in Spinning, Weaving, Knitting, Machinery Manufacturing, Yarn, Fabric, Garment Chemical Processing, Machinery Manufacturing, Erection and Commissioning, Garment Manufacturing, Synthetics Fibre and Yarn Manufacturing, Technical Textiles, Non-Wovens, R & D Lab, Marketing etc. for study of: Process Flow Chart, Visit to various departments and study of machineries, Important adjustments and settings, Speed of Important Parts, Modern Developments in machines/process, Chemicals, Dyes used for carrying out various process, Process parameters and effect on quality of product, Actual Production and Efficiency, Production Planning and Control, Maintenance Practices, Maintenance tools and gauges, Maintenance schedule, Study of lubrications, Process Control and Quality Control activities, Roles and responsibilities of various categories of workers/technical staffs, Labour allocation, Lay-out of the unit.		
Unit II	Special Studies	
Management information systems, Waste study, Costing, Production planning and control, Target achievement, Information regarding humidification plant, Utility, Electrical supply, Store, purchase, Marketing, Sales, Samples, Lay-out of Plant.		

Unit III	Project	
Objectives, Procedures, Observations, Analysis and conclusion of the project carried out.		
References Books:		
Specific guideline points given in Daily Diary.		

DKTES Textile and Engineering Institute, Ichalkaranji Final Year B. Tech. Fashion Technology (Semester – VIII) TFP471: APPAREL FINISHING AND CARE LAB		
Teaching Scheme: Practical: 02 Hrs /Week	Credits 01	Evaluation Scheme: CIE: 50 Marks SEE: 50 Marks
List of Experiments		
1	Application and evaluation of resin finishing of garment.	
2	Application and evaluation of soft and stiff finish.	
3	Bio-polishing treatment on garment.	
4	Desizing of denim fabric.	
5	Application of Stone wash and Acid wash effect on denim garment.	
6	To identify various types of stains and removal of various Stains from garments	
7	Evaluation of colour fastness to Rubbing and Sublimation	
8	Evaluation of colour fastness to Washing	
9	Evaluation of colour fastness to Perspiration	
10	Evaluation of colour fastness to Bleach with Hypochlorite and Peroxide	
11	Evaluation of colour fastness to Acids and Alkalis	
12	Measurement of Colour and Colour Difference using CCM	

Submission – Completed Journal.