

**B. Sc. (Honors) (F.T) – FASHION
AND APPAREL
TECHNOLOGY**

FASHION AND APPAREL TECHNOLOGY

Course Code	Course	Credits	Course
SEMESTER I			
FAT 1101C01	Basics of Clothing and Design	04 (1+3)	Core
FAT 1102C02	Basic Pattern Making	04 (0+4)	Core
ENG 1128F04	English for Communication	04 (4+0)	Foundation
FAT 1103F01	Textile Basics	04 (3+1)	Foundation
FAT 1104F02	Creative Thinking	04 (2+2)	Foundation
FAT 1105F03	Computer Application	04 (1+3)	Foundation
FAT 1106I01	Fashion Styling	02 (2+0)	Elective Interdisciplinary
	Total	26	
SEMESTER II			
FAT 1201C01	Sewing Fundamentals	04 (1+3)	Core
FAT 1202C02	Introduction to Apparel Industry	03 (3+0)	Core
FAT 1203C03	Structural Textile Design	06 (3+3)	Core
FAT 1204C04	Advanced Pattern Making	04 (0+4)	Core
FAT 1205F01	Understanding Apparel Market	04 (2+2)	Foundation
FAT 1206E01	Newer Materials for Fashion	02 (2+0)	Elective
FAT 1207I02	Entrepreneur Development	02 (2+0)	Elective Interdisciplinary
	Total	25	
SEMESTER III			
FGT 1301C01	Anthropometrics and Sizing	05 (1+4)	Core
FGT 1302C02	Kid's & Women's Wear	04 (0+4)	Core
FGT 1303C03	Garment Production and Machinery	04 (3+1)	Core
FGT 1304C04	Textile Testing	04 (2+2)	Core
FGT 1305C05	Fabric Processing and Finishing	04 (2+2)	Core
FGT 1306E02	Fashion Branding	02 (2+0)	Elective
FGT 1307I03	Shop Floor Management	02 (2+0)	Elective Interdisciplinary
	Total	25	

Course Code	Course	Credits	Course
SEMESTER IV			
FGT 1401C01	Men's Wear	04 (0+4)	Core
FGT 1402C02	Computer Aided Pattern Designing & Development	05 (1+4)	Core
FGT 1403C03	Plant Layout in Apparel Industry	05 (2+3)	Core
FGT 1404C04	Cost Analysis	02 (2+0)	Core
FGT 1405C05	Finishing and Packaging Technology	04 (3+1)	Core
FGT 1406I04	Accessory Design	02 (0+2)	Elective Interdisciplinary
	Total	22	
SEMESTER V			
FGT 1501C01	Apparel Standards and Quality Control	04 (4+0)	Core
FGT 1502C02	Internship	12 (0+12)	Core
FGT 1503C03	Product Development	06 (2+4)	Core
FGT 1504C04	Lean Management	02 (1+1)	Core
	Total	24	
SEMESTER VI			
FGT 1601C01	Principles of Management and Marketing	04 (4+0)	Core
FGT 1602C02	Seminar	03 (3+0)	Core
FGT 1603C03	Industrial Engineering	03 (2+1)	Core
FGT 1604C04	Logistics & Supply Chain Management	03 (3+0)	Core
FGT 1605C05	Entrepreneurial Skills	04 (3+1)	Core
FGT 1606C06	International Trade Practices	02 (2+0)	Core
FGT 1607C07	Apparel Merchandising & Retailing	03 (2+1)	Core
	Total	22	

SEMESTER I

FASHION AND APPAREL TECHNOLOGY

 <p>THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA सत्यं त्रिवं सुन्दरम्</p>	The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology	Academic Year	2019-20
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B.Sc. (Garment Technology): Honors Programme

Year	I	Core / Elective / Foundation FGT 1101C01: Basics of Clothing and Design	Credits / Hours per week	04 (1+3) / 07
Semester	I	Year of Introduction: 2014 Year of Syllabus Revision: 2018	Maximum Marks / Grade	O (10 point scale)
Mode of Transaction		Lectures and Practical		

Course Outcome (CO) FGT 1101C01

- CO1 To introduce the basic concepts of clothing construction and design skills
- CO2 To understand individuality in clothing, grooming and self-care
- CO3 To understand flat sketching through 8-head and 10-head theory
- CO4 To enable in making appropriate selection of clothing styles
- CO5 To demonstrate fabric preparation for sewing
- CO6 To give hands on training of basic hand and machine stitches

Unit No.	Topic	Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Introduction to design concept: Design: it's meaning, types and importance; Elements of design: color, texture, line, shape, pattern, space, form, plane, volume and light; Basic principles of design and the concept of composition: balance, proportion, rhythm, emphasis and harmony	10	20	1, 2	CO1	PSO1	SD	G	G ES
2	Individuality in clothing and design: Grooming and care of self; Good taste in design: its importance and expression	5	10	1, 2	CO2	PSO1			
3	Practical: Flat sketching: 8-head theory, 10-head theory; Sketching design details (basic necklines, sleeves, hemlines, collars, pockets); Children clothing	26	20	2, 3	CO3	PSO1 PSO2			

	(basic frocks, shirts, shorts); Women's clothing (basics tops, skirts, dresses, trousers, jackets); Men's clothing (basic shirt, trousers, jackets)							
4	Practical: Basics of design and its application: Identify, describe and experience the elements of design and discuss how these are a part of our daily lives ; Review the elements and principles of design in two dimensional and three dimensional design; Describe the similarities and differences in contemporary design / period design among cultures; Create a design composition emphasizing a design principle	19	15	2, 3	CO4	PSO1 PSO2		
5	Practical: Introduction to sewing machine, preparation of fabric before cutting: Parts of sewing machine and its operation; Common stitching problems and solution; Fabric grain; Method of cutting the fabric; Checking fabric design; Straightening of fabric; Shrinking of cottons; Types of needles; Planning lay out and calculation of fabric	19	15	2, 3	CO5	PSO1 PSO2 PSO3		
6	Practical: Basic hand and machine stitches: Hand stitches: running stitch/basting, bast stitch, whip stitch, blanket stitch, slip stitch, blind hemming, lock stitch, tailors stitch, blind catch stitch; Machine seams: plain seam, pinked seam, flat seam, lapped seam, top stitched plain seam, flat fell seam, French seam, bias bound seam, overcast seam, self-bound	26	20	2, 3	CO6	PSO1 PSO2 PSO3		

Reference Books

1.	Bennett, J. G. (2012). <i>Design Fundamentals for New Media - 2nd Edition</i> . New York: Cengage Learning.
2.	Bhatia, R., & Arora, C. (1999). <i>Introduction to Clothing and Textile</i> . Clothing and Textile Dept., Faculty of Home Science, The M.S. University of Baroda.
3.	Carson, B. (1969). <i>How You Look and Dress</i> . New Delhi: Tata McGraw-Hill Publishing Company Ltd.
4.	Craig, H. T., & Rush, C. D. (1946). <i>Clothes with Character</i> . Boston: Health & Company.
5.	Goldstein, H. (2012). <i>Art in everyday life</i> . New Delhi: Tata McGraw-Hill Publishing Company Ltd.
6.	Kiper, A. (2011). <i>Fashion Illustration: Inspiration and Technique</i> . Devon: David & Charles Publishers Ltd.
7.	Lauer, D. A., & Pentak, S. (2007). <i>Design Basics - 7th Edition</i> . New York: Cengage Learning.
8.	Moulton, B. (1968). <i>Simplified Tailoring</i> . London: BT Batsford Ltd.
9.	Thomas, A. J. (1996). <i>Art of Sewing</i> . New Delhi: UBJ Publication Ltd.
10.	Pandit, S. & Tarplay, E. (1975). <i>Grooming Selection and Care of Clothes</i> . Clothing and Textile Dept., Faculty of Home Science, The M.S. University of Baroda.
11.	Pentak, S., Roth, R., & Lauer D. A. (2012). <i>Design Basics: 2D and 3D - 8th Edition</i> . New York: Cengage Learning.
12.	Scott, R. G. (1980). <i>Design fundamentals</i> . Florida: R. E. Krieger Pub. Co.
13.	Skull, J. <i>Key terms in Art Craft and Design</i> . Australia: Elbrook Press.
14.	Smuthi, G. J. (2002). <i>Elements of Fashion And Apparel Design</i> . New Delhi: New Age International Pvt. Ltd.
15.	Termes, P. E. (2014). <i>Fashion Illustration: Step by Step</i> . Spain: Konemann Publications.

 <p>The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology</p>	<p>Academic Year</p>			<p>2019-20</p>
	<p>B.Sc. (Garment Technology): Honors Programme</p>			

Year	I	Core / Elective / Foundation FGT 1102C02: Basic Pattern Making	Credits / Hours per week	04 (0+4) / 08
Semester	I	Year of Introduction: 2018 Year of Syllabus Revision: -	Maximum Marks / Grade	O (10 point scale)
Mode of Transaction		Practical		

Course Outcome (CO) FGT 1102C02

- CO1 To introduce the basic concepts of anthropometry and its application
- CO2 To understand and draw the basic bodice and concepts of fit and darts
- CO3 To demonstrate dart manipulation through flat pattern method
- CO4 To understand the various parameters of fit and fall of basic skirt
- CO5 To stitch an upper garment and a skirt considering different constructional aspects

Unit No.	Topic	Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Practical: Introduction to anthropometry: Body shape analysis; Landmarks on body and corresponding ones on dress forms; Terminology; Standard measurement techniques and its importance in fit: conventional and new; New methods used in anthropometric studies: advantages and limitations; Importance of pattern making in quality of a garment; Body dimensions in Indian context; Application of anthropometric studies in apparel industries	18	15	2, 3, 4	CO1	PSO1 PSO2	SD	G	G ES
2	Practical: Bodice block: Concept of fit: darted/dart less block; Basic bodice block; Truing of darts/seams/curves/notches/slits and its significance; Concepts of seam allowance and production patterns	24	20	2, 3, 4	CO2	PSO1 PSO2			

3	Practical: Dart manipulation - flat pattern method Dart manipulation techniques: pivot, slash and spread, darts in tucks/gathers; darts into panels: princess lines/style lines not passing through apex point; Principle of fullness: importance of balancing of patterns and notches and its importance; Quality defect identification and remedies at pattern stage	24	20	2, 3, 4	CO3	PSO1 PSO2		
4	Practical: Skirt Basic skirt block; various silhouette of skirts and their differences; Concept of panels/pleats; Various parameters controlling fit and fall of skirts	24	20	2, 3, 4	CO4	PSO1 PSO2		
5	Practical: Construction of garment: Upper garment (any one); Skirt (any one); Different constructional aspects: garment finishing (neckline, armhole, waistbands, facings)	30	25	2, 3, 4, 6	CO5	PSO1 PSO2		

Reference Books

1.	Al-Haboui, M. H. (1992). <i>Anthropometry for a Mix of Different Populations</i> . Amsterdam: Applied Ergonomics, Elsevier.
2.	Annis, J. F. (1978). <i>Variability in Human Body Size- Anthropometric Source Book</i> . Washington DC: NASA Reference Publication.
3.	Aldrich, W. (2015). <i>Metric Pattern Cutting for Women's Wear - 6th Edition</i> . New York: Wiley-VCH GmbH & Co.
4.	Armstrong, H. J. (2009). <i>Pattern making for Fashion design – 5th Edition</i> . Noida: Harper Collins Publishers India.
5.	Basia, S. (2010). <i>Technical Drawing for Fashion</i> . London: Laurence King Publishing.
6.	Holzman, D. C. (1996). <i>Fewer Sizes Fit All</i> . Technology Review. Discussion of Paal's method of creating an optimized sizing system based on anthropometric data.
7.	Hudson, P. B. (1979). <i>Generating Patterns</i> . Bobbin. 20(8).
8.	Peterson, E. A. (1980). <i>Standardization of industrial garment fit: Is it feasible? Is it necessary? Is it desirable?</i> London: Industrial Launderer.
9.	Reich, N., & Goldserry, E. (1993). <i>Development of body measurement tables for women 55 and older and the relationship to ready-to-wear garment size</i> . (Research Technical Report Number PCN 33-000006-18, ISR 06). Philadelphia: American Society for Testing and Materials/Institute for Standards Research.
10.	Shoben, M. M., & Ward, J. P. (1990). <i>Pattern Cutting and Making Up – Revised Edition</i> . Oxford: Butterworth Heinmann.
11.	Singh, D., & Young, R. K. (1995). <i>Body weight, waist-to-hip ratio, breasts and hips: roles in judgments of female attractiveness and desirability for relationships</i> . Ethology and Sociobiology.
12.	Stoudt, H. W. (1981). <i>The Anthropometry of the Elderly</i> . Human Factors, 23(1).
13.	Suhner, I. A. (2012). <i>Technical Drawing for Fashion Design: Garment Source Book</i> . Netherlands: The Pepin Press.
14.	Zarapkar, K. R. (2008). <i>Zarapkar System of Cutting</i> . Mumbai: Navneet Publication (India) Ltd.

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	<p>B.Sc. (Garment Technology): Honors Programme</p>		

Year	I	Core / Elective / Foundation ENG 1105F01: English for Communication	Credits / Hours per week	04 (4+0) / 04
Semester	I	Year of Introduction: 2014 Year of Syllabus Revision: 2018	Maximum Marks / Grade	O (10 point scale)
Mode of Transaction		Lectures		

Course Outcome (CO) ENG 1105F01

- CO1 To impart a reasonable command over English in terms of acquiring effectiveness while speaking
- CO2 To enhance vocabulary to fluently express in English language
- CO3 To develop soft skills for public speaking, presentation and group discussions
- CO4 To teach learning techniques for effective technical writing
- CO5 To understand the sound of words through phonetics

Unit No.	Topic	Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Introduction to communication: Listening vs. hearing; How to be a good listener; Reading of prose (short stories); Skimming and scanning	12	20	2, 3	CO1	PSO1	SD	G	HV PE
2	Vocabulary building: Using the dictionary and thesaurus; Changing words from one form to another; Prefixes and suffixes, synonyms and antonyms; Coping with unfamiliar words; Commonly confused words	12	20	2, 3	CO2	PSO1			
3	Soft skills: Group discussion; Public speaking; Presentation skills; Conversation, dialogues and debates	12	20	2, 3	CO3	PSO1			
4	Writing skills:	18	30	2, 3	CO4	PSO1			

	Paragraph writing; Creative writing (writing stories from outlines); Introduction to research paper and dissertation; Writing reports; Letter writing; Résumé and CV							
5	Phonetics: Learning the sound of words; Reading a dictionary; Identifying and reading phonemes	6	10	2, 3	CO5	PSO1		

Reference Books

1.	Inthira, S.R. & Saraswathi, V. (2007). <i>Enrich Your English Book – I Communication skills</i> . London: Oxford University Press.
2.	Raman, M. & Sharma, S. (2011). <i>Technical Communication – Principles and Practice – Second ed.</i> London: Oxford University Press.
3.	Kumar, S. & Pushplata. (2011). <i>Communication Skills – First ed.</i> London: Oxford University Press.
4.	The Oxford Essential Dictionary: American Edition, New York: Oxford University Press.

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Year	I	Core / Elective / Foundation FGT 1103F02: Textile Basics	Credits / Hours per week	04 (3+1) / 05
Semester	I	Year of Introduction: 2014 Year of Syllabus Revision: 2018	Maximum Marks / Grade	O (10 point scale)
Mode of Transaction		Lectures and Practical		

Course Outcome (CO) FGT 1103F02

- CO1 To understand the basic terminologies related to textiles and their classification
- CO2 To impart basic understanding of fibres, their properties and end use applications
- CO3 To enlighten about the different yarns used in apparel manufacturing
- CO4 To build an ability to select fabrics for different end uses based on their properties
- CO5 To impart practical knowledge of fibre and fabric identification

Unit No.	Topic	Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Introduction to textiles and its classification: Key terms related to fibres, yarns and fabrics; Classification of fibres and their end uses	6	10	1, 2	CO1	PSO1	SD	G	ES
2	Properties of textile fibres – natural and manmade: Introduction to textile fibres; Properties of fibres; Comparison of natural fibres with man-made fibres	12	20	1, 2	CO2	PSO1			
3	Yarn classification and manufacture: Classification of yarn; yarn types and function; yarn numbering system	12	20	1, 2, 3	CO3	PSO1			
4	Fabric manufacture: Weaving: introduction to weaving, types of weaves and applications; Knitting: introduction to knitting, warp knitting and	15	25	1, 2	CO4	PSO1			

	weft knitting; Nonwoven: introduction to nonwoven, types and applications of nonwovens							
5	Practical: Identification and application of fabrics: Identification of textile fibres; Non-technical test: feeling test, burning test; Technical test: microscope test and chemical test.	30	25	2, 3, 4	CO5	PSO1		

Reference Books

1.	Ajgaonkar, D. B. (1998). <i>Principles of Knitting</i> . California: Universal Publishing Corporation.
2.	Albrecht, W., Fuchs, H., & Kittelmann, W. (2003). <i>Nonwoven Fabrics</i> . New Jersey: Wiley-VCH GmbH & Co.
3.	Archibald, J. H. (1975). <i>The Standard Handbook of Textiles</i> . New Jersey: Wiley-VCH GmbH & Co.
4.	Gohl, E., & Vilensky, L. (1993). <i>Textile Science: An Explanation to Fiber Properties</i> . Melbourne: Longman Cheshire.
5.	Gokerneshan, N. (2004). <i>Fabric Structure and Design</i> . New Delhi: New Age International Pvt. Ltd.
6.	Goswami, B. C. (2004). <i>Textile Sizing</i> . New York: Marcel Dekker Inc.
7.	Grosicki, Z. J. (1921). <i>Watson's Textile Design and Colour</i> . New Delhi: Woodhead Publishing Ltd.
8.	Horrocks, A. R. & Anand, S. C. (2000). <i>Handbook of Technical Textiles</i> . New Delhi: Woodhead Publishing Ltd.
9.	Kadolph, S. J. & Langford, A. L. (2006). <i>Textiles – 10th Edition</i> . New Jersey: Prentice Hall.
10.	Lawrence, C. (2003). <i>Fundamentals of Spun Yarn Technology</i> . New York: CRC Press LLC.
11.	Marjory, L. J. (1977). <i>Introductory Textile Science - 3rd Edition</i> . Canada: Holt, Rinehart and Winston.
12.	Nisbet, H. (1919). <i>Grammar of Textile Design</i> . London: Greenwood & Sons.
13.	Saville, B. P. (2000). <i>Physical Testing of Textiles</i> . New York: CRC Press LLC.
14.	Spencer, D. J. (2001). <i>Knitting Technology: A Comprehensive Handbook and Practical Guide</i> . New Delhi: Woodhead Publishing Ltd., 2001.
15.	Stout, E. (1960). <i>Introduction to Textiles</i> . New York: Wiley-VCH GmbH & Co.
16.	Talukdar, M. K. (1998). <i>Weaving: Machines, Mechanisms, Management</i> . Ahmedabad: Mahajan Publishers.
17.	Tortora, P. G. (1992). <i>Understanding Textiles - 4th Edition</i> . Ahmedabad: Macmillan India Ltd.

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	<p>B.Sc. (Garment Technology): Honors Programme</p>			

Year	I	Core / Elective / Foundation FGT 1104F03: Creative Thinking	Credits / Hours per week	04 (2+2) / 06
Semester	I	Year of Introduction: 2014 Year of Syllabus Revision: 2018	Maximum Marks / Grade	O (10 point scale)
Mode of Transaction		Lectures and Practical		

Course Outcome (CO) FGT 1104F03

- CO1 To introduce the basic concepts of thinking and creativity
- CO2 To impart basic understanding of the tools required for creative thinking
- CO3 To enhance problem solving ability through creative process
- CO4 To enable students to develop distinguished approach towards environment and hence helping derive inspirations through creative expressions
- CO5 To demonstrate product designing through creative expression

Unit No.	Topic	Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Introduction to thinking and creativity: Defining thinking and creativity; Elements and principles of thinking and creativity; Forms of thinking and creativity; Roots of creativity: biological, mental, social, spiritual	6	15	1, 2	CO1	PSO1	SD	G	ES HV
2	Creativity tool kit and process: Tools and techniques of creativity: linear, intuitive and group; Blocks to creativity: perceptual, cultural and environmental, emotional, intellectual; Lateral thinking: principles, uses and training	12	20	1, 2	CO2	PSO1			
3	Creative process: Steps to creative process; specific needs and demands of consumers; Study of different fabric textures in relation to end	12	20	1, 2, 3	CO3	PSO1			

	use; Creative solutions to address emergence of problems and issues arising in the garment unit; Designing for optimum utilization of damaged/seconds fabric after processes; Creative presentation of rejected products; Creative solutions to recycle/reduce/reuse waste from cutting and production departments of the garment unit; Innovative ideas to product designing: spools, bobbins, fasteners, trims, fabrics and like; Accessory design: coordinated accessories: neckties, bags, hats, jewellery							
4	Practical: Creative expression – through illustrations: Using different forms of perspective to show the illusion of depth on a two-dimensional surface; Illustrating folds of different types of fabric with pencil sketching with respect to light source	30	25	2, 3, 4	CO4	PSO1		
5	Practical: Creative expression: Create a series of artworks that express a personal statement demonstrating skill in applying the elements of art and the principles of design; Accessory designing: coordinated accessories; Product designing: utilizing spools, bobbins, fasteners, trims, fabrics.	30	25	2, 3, 4	CO5	PSO1		

Reference Books

1.	Adair, J. (2009). The Art of Creative Thinking: How to Be Innovative and Develop Great Ideas, Edition reprint. UK: Kogan Page Publishers.
2.	Balaram, S. (2011). Thinking Design, National Institute of Design. New Delhi: Sage Publications.
3.	Brown, S. (2013). Refashioned: Cutting Edge Clothing from Upcycled Material. UK: Laurence King Publishing Ltd.
4.	Bubonia, J. E. (2014). Apparel Production Terms and Processes. New York: Bloomsbury.
5.	Carr, H. and Latham, B. (2008). Technology of Clothing Manufacture. Edited by David J. Tyler, 4th ed. Oxford: Blackwell.
6.	Clive Hallet, Amanda Johnston. (2010). Fabric for Fashion- a comprehensive guide to natural fibers. London: Laurence King Publishing Ltd.
7.	Guy, C., Bill, L. (2007). The Creative Thinking Plan: How to Generate Ideas and Solve Problems in Your Work and Life, Edition revised. Great Britain: Financial Times/Prentice Hall.
8.	Jennings, T. (2011). Creativity in fashion design- An inspiration workbook. USA: Fairchild Books.
9.	Lau, J. Y. F. (2011). An Introduction to Critical Thinking and Creativity: Think More, Think Better. New Jersey: John Wiley & Sons.
10.	O'Day, R. (2010). Creative Thinking, Edition reprint. US: Kessinger Publishing.
11.	Worsely, H. (2011). 100 Ideas that changed fashion. London: Laurence King Publishing Ltd.
12.	The ICFAI University (2004). Creativity, Hyderabad: ICFAI University.
13.	http://www.brainstorming.co.uk/tutorials/creativethinking.html

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B.Sc. (Garment Technology): Honors Programme

Year	I	Core / Elective / Foundation FGT 1105F04: Computer Application	Credits / Hours per week	04 (1+3) / 07
Semester	I	Year of Introduction: 2014 Year of Syllabus Revision: 2018	Maximum Marks / Grade	O (10 point scale)
Mode of Transaction		Lectures and Practical		

Course Outcome (CO) FGT 1105F04

- CO1 To study in brief about Microsoft Office components like word, excel and powerpoint
- CO2 To understand the basic tools and techniques of CorelDraw and Adobe Illustrator
- CO3 To impart basic knowledge of tools and techniques of Adobe Photoshop
- CO4 To demonstrate the uses of Microsoft Office components in making documents, presentations and spreadsheets
- CO5 To apply CorelDraw and Illustrator in designing basic garment, patterns and technical drawings
- CO6 To practically use Adobe Photoshop in mood board designing and creating special image effects

Unit No.	Topic	Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Basics of MS Office: Brief history of MS Office; Shortcut keys for different functions in word, power point and excel.	5	10	1, 2	CO1	PSO1	SD	G	ES
2	Fundamentals and uses of CorelDraw/Illustrator: Introduction to tools and techniques of CorelDraw/Illustrator; Uses of CorelDraw/Illustrator	5	10	1, 2	CO2	PSO1			
3	Fundamentals and uses of Photoshop: Introduction to tools and techniques of Photoshop; Uses of Photoshop	5	10	1, 2	CO3	PSO1			
4	Practical: Introduction to MS Office:	12	10	2, 3, 5	CO4	PSO1 PSO4			

	Basics of MS Word: edit, format, save word documents in different formats including pictures, smart arts, charts and related functions; Using PowerPoint to prepare the presentation slides for given topic; Basics of MS Excel: different formulas and short keys for excel sheet; Creating specification sheet.							
5	Practical: Introduction to CorelDraw/Illustrator: Basics; Creating artwork using CorelDraw tools and techniques; Logo designing and creating visiting card; Creating chest print for T-Shirt; Technical drawing: creating garment library; Logo design and creating visiting card	39	30	2, 3, 5	CO5	PSO1 PSO4		
6	Practical: Introduction to Adobe Photoshop: Basics; Creating a magazine cover; Creating mood boards for the theme based projects	39	30	2, 3, 5	CO6	PSO1		
Reference Books								
1.	Centner, M., & Vereker, F. (2011). <i>Fashion Designers Handbook for Adobe Illustrator - 2nd Edition</i> . London: John Wiley & Sons.							
2.	Matthews, M., & Matthews, C. B. (2013). <i>CorelDraw X6 (Version 16) Official Guide for Windows 95</i> . New Delhi: Tata McGraw-Hill Publishing Company Ltd.							
3.	Photoshop CS6 Official Guide – Adobe Systems Incorporation, 2014							
4.	Lazear, S. M. (2012). <i>Adobe Illustrator for Fashion Design - 2nd Edition</i> . New Jersey: Prentice Hall.							

FASHION AND APPAREL TECHNOLOGY

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology			Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme												
Year	I	Core / Elective / Foundation FGT 1106I01: Fashion Styling			Credits / Hours per week			02 (2+0) / 02				
Semester	I	Year of Introduction: 2014 Year of Syllabus Revision: 2018			Maximum Marks / Grade			O (10 point scale)				
Mode of Transaction		Lectures										
Course Outcome (CO) FGT 1106I01 CO1 To develop the skills required to direct and co-ordinate a team of people CO2 To understand the basic styling elements and develop skills required to work as a fashion stylist CO3 To understand the role of the photo shoot and press release in a marketing campaign												
Unit No.	Topic				Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Project brief: Interpret and understand client requirements; Understand clients purposes (the message to be communicated); Plan the project to meet clients budget and deadlines; Ascertain and note all necessary information at a verbal briefing				7	25	1, 2, 3	CO1	PSO5	EMP SD	G	G HV PE
2	Styling elements: Understand the different roles of today's stylist working in various fields including styling designer collections for catalogues and look books; styling for shop display; styling for advertising; styling for the individual; Use fashion forecasting to ensure the relevance of the styled product; Completely brief relevant people including photographer, hair stylist and make-up vocabulary; Communicate effectively using a professional styling, hairstyling and make-up vocabulary; Selection of all				12	40	1, 2, 3	CO2	PSO5			

	required items to put a look together including garments and accessories; Understand the procedures involved in borrowing items from designers, outlets and individuals; Be responsible for the garments and accessories in her care while on loan from shops and individuals; Use professional tools and techniques to press/steam/care for the garments and accessories prior to and during a photo shoot or fashion show; Recognize the limitations of styling hair on location; Analyze the current trends in hair styling and make-up for advertising, publicity, catalogue, show and session work; Understand the different requirements of make- up for photo shoots, catwalk shows and television							
3	Photography and the photo shoot: Outline the history of fashion photography and its role in promoting fashion in the 20 th and 21 st centuries; Distinguish between the different types of professional cameras and lenses in common use; Understand the digital photographic process; Communicate using a professional photographic vocabulary; Plan the photo shoot to fit the client's budget and deadline; Direct the professional team producing the photo shoot	11	35	1, 2, 3	CO3	PSO5		
Reference Books								
1.	Buckley, C., & Mcassey, J. (2014). <i>Basics Fashion Design: Styling</i> . London: Bloomsbury Publications.							
2.	J., O. (1999). <i>Mastering Fashion Styling</i> . London: Trans-Atlantic Publications Inc.							

FASHION AND APPAREL TECHNOLOGY

SEMESTER II

 <p>The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology</p>	<p>Academic Year</p>		<p>2019-20</p>
	<p>B.Sc. (Garment Technology): Honors Programme</p>		

Year	I	Core / Elective / Foundation FGT 1201C01: Sewing Fundamentals	Credits / Hours per week	04 (1+3) / 07
Semester	II	Year of Introduction: 2014 Year of Syllabus Revision: 2018	Maximum Marks / Grade	O (10 point scale)
Mode of Transaction		Lectures and Practical		

Course Outcome (CO) FGT 1201C01

- CO1 To introduce sewing preparatory processes like marker planning, spreading and cutting
- CO2 To develop an understanding of various defects in a sewing machine and its rectification through proper selection of needle and thread
- CO3 To understand the importance of fabric grain, layout & use of various finishing techniques, hems, seams, etc.
- CO4 To demonstrate pattern drafting and stitching of kids wear
- CO5 To understand post sewing operations like finishing, pressing and packaging

Unit No.	Topic	Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Fabric spreading, marker making and cutting: Spreading of fabric: methods of laying - nap one way, nap either way, symmetry, fabric grain, face and back side; Marker: preparation and placement of marker (stripes, checks, one way and two-way designs); Cutting	7	10	2, 3	CO1	PSO1 PSO2	SD	G	G ES
2	Compatibility of sewing needle and sewing thread in relation with other sewing parameters: Correlation between sewing thread and fabric and its impact to stitch performance; Controlling stitch performance and quality and minimizing of defect occurrence	8	10	2, 3	CO2	PSO1 PSO2			
3	Practical: Design features:	45	40	2, 3, 6	CO3	PSO1 PSO2			

	Seams for different types of fabrics correlating with types of needles and threads; Types of tucks - basic, pin, shell, corded; Different types of pleats and gathers; Calculation of fabrics - various styles and age groups; Neckline finishes: importance of stay stitching, importance of notches and slits/clippings, facing and bias facing, bias binding, French binding; Plackets/pockets: two piece placket/kurta placket, continuous placket, patch, welt/bound, in-seam; Types of waistbands; Type of fasteners: buttons/button hole, press button, hook/ eye, velcro, zipper, centered, lapped, concealed; Types of cuff; binding edges: inside corner, outside corner; Type of collars; Peter pan, collar with V-neck, mandarin, shirt collar, roll collar							
4	Practical: Child's basic block and sleeve: Standard body measurements; Garments: baby pants - ruffles, elastic waist, run and fell seam, bias facing; 'A' line frock - Peter pan collar and puffed sleeve, patch pocket	33	30	2, 3, 6	CO4	PSO1 PSO2		
5	Practical: Post sewing procedures: Techniques, processes and equipment in finishing; Introduction to ironing, pressing - finishing equipment; Selection of machinery and techniques in relation to style, fabrics and customers' demands under pressing, molding; Elements of pressing - hand irons, buck presser, steam, blowing, foam finisher, steam electric iron, thermostat, buck padding, zero pressure point, carousel press, steam tunnel, steam dolly; Spotting chemicals, packing, pressing, shrinkage.	12	10	2, 3, 6	CO5	PSO1 PSO2		

Reference Books

1.	Aldrich, W. (2015). <i>Metric Pattern Cutting for Women's Wear - 6th Edition</i> . New York: Wiley-VCH GmbH & Co.
2.	Crawford, C. A. (1993). <i>Fashion your Own Skirts the Simple Way</i> . New Delhi: Bloomsbury Publishing India Ltd.
3.	Juvekar, V. B. (1953). <i>Easy Cutting</i> . Mumbai: Ball Co.
4.	Moulton, B. (1968). <i>Simplified Tailoring</i> . London: BT Batsford Ltd.
5.	Pandit, S. (1967). <i>A Manual of Children's Clothing</i> . Mumbai: Orient Longmans Limited.
6.	Singer. (1989). <i>Sewing Pants that Fit</i> . Minnesota: Cowles Creative Publishing Inc.
7.	Solinger, J. (1988). <i>Apparel Manufacturing Handbook- Analysis, Principles and Practice</i> . South Carolina: Bobbin Blenheim Media Corp.
8.	Thomas, A. J. (1996). <i>Art of Sewing</i> . New Delhi: UBJ Publication Ltd.

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology		Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme											
Year	I	Core / Elective / Foundation FGT 1202C02: Introduction to Apparel Industry			Credits / Hours per week			03(3+0) / 03			
Semester	II	Year of Introduction: 2018 Year of Syllabus Revision: -			Maximum Marks / Grade			O (10 point scale)			
Mode of Transaction		Lectures									
Course Outcome (CO) FGT 1202C02											
CO1 To teach the students the various aspects of the apparel industry CO2 To make the students understand as to how fashion apparel is designed, manufactured, marketed and distributed CO3 To impart knowhow of the apparel production process followed in the apparel industry CO4 To create awareness about brands, consumers and environmental constraints related to fashion											
Unit No.	Topic			Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	The raw materials of fashion industry: Structure of the textile and apparel industry; Ready-to-wear; company organization; Organization of the accessories industries			11	25	1, 2	CO1	PSO5	SD	R	G ES HV
2	Fashion and consumer: Fashion vocabulary; Evolution of fashion; Fashion cycle; Fashion categories; Fashion forecasting; Fashion selection			14	30	1, 2	CO2	PSO5			
3	Apparel production process: Pattern, grading and marker making; Spreading; Cutting; Ticketing; Bonding; Sewing; Finishing; Quality checking			11	25	1, 2	CO3	PSO5			
4	Consumer awareness: Brands, labels and sizes; Consumer redressal system; Environmental and legal concerns			9	20	1, 2	CO4	PSO5			

Reference Books	
1.	Brockman, H. L. (1965). <i>The Theory of Fashion Design</i> . New York: John Willey & Sons.
2.	Burns, L. D. & Brayant, N. O. (1997). <i>The Business of Fashion</i> . New York: Fairchild Publications.
3.	Carr, H. & Latham, B. (2008). <i>Technology of Clothing Manufacture - 4th Edition</i> . Oxford: Blackwell Publishing.
4.	Chambers, B. G. (1957). <i>Colour and Design in Apparel</i> . New York: Prentice Hall.
5.	Cooklin, G. (1997). <i>Garment Technlogy for Fashion Designers</i> . New Delhi: Wiley India Pvt. Ltd.
6.	Frings, G. (1999). <i>Fashion from Concept to Consumer – 9th Edition</i> . New Jersey: Prentice Hall.
7.	Glock, R., & Kunz, G. (2005). <i>Apparel Manufacturing: Sewn Product Analysis – Fourth ed</i> . New Delhi: Pearson India Ltd.
8.	Jarnow, J. (1965). <i>Inside the Fashion Business</i> . New York: John Willey & Sons.
9.	Stone, E. (1999). <i>The Dynamics of Fashion</i> . New York: Fairchild Publications.

FASHION AND APPAREL TECHNOLOGY

 <p>The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology</p>	<p>Academic Year</p>			<p>2019-20</p>
	<p>B.Sc. (Garment Technology): Honors Programme</p>			

Year	I	Core / Elective / Foundation FGT 1203C03: Structural Textile Design	Credits / Hours per week	06 (3+3) / 09
Semester	I	Year of Introduction: 2014 Year of Syllabus Revision: 2018	Maximum Marks / Grade	O (10 point scale)
Mode of Transaction		Lectures and Practical		

Course Outcome (CO) FGT 1203C03

- CO1 To gain an understanding of woven fabric manufacturing process, different types of weaves, their properties and applications
- CO2 To impart basic knowledge regarding knitted fabric, different types of knitted structures, their properties and end uses
- CO3 To understand manufacturing of nonwoven fabrics and their applications with respect to the apparel industry
- CO4 To get hands on practice of woven fabric manufacturing
- CO5 To demonstrate knitted and nonwoven fabric manufacturing process

Unit No.	Topic	Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Woven fabrics: Introduction to weaving; Methods of weaving: cardboard weaving, card weaving, frame weaving, loom weaving; Weaving preparatory processes; Loom and its parts; Preparation of the loom; Handloom, power loom and automatic loom including dobby and jacquard attachments; Basic weaves and their variations; Designation on point paper	15	20	1, 2	CO1	PSO1 PSO3	SD	G	ES
2	Knitted fabrics: Introduction to knitting; Knit vocabulary; Difference between knitted and woven fabrics; Warp and weft knitting; Different types of knitting needles; Properties and applications of plain, rib, interlock and purl knit structures; Weft and warp knitting	15	20	1, 2	CO2	PSO1 PSO3			

3	Non-woven fabrics: Introduction; Web formation: carding, air laying, wet laying, spun bond, melt blown; Web bonding: mechanical, chemical and thermal; Finishing of nonwoven: classification, applications; Application of nonwoven in garments	15	20	1, 2	CO3	PSO1 PSO3		
4	Practical: Woven samples: Preparation of samples by cardboard weaving technique; Preparation of samples of three basic weaves and their variation on the loom and product preparation	68	30	2, 3, 6	CO4	PSO1 PSO3		
5	Practical: Knitted and nonwoven: Visits to knitting and non-woven manufacturing units	22	10	2, 3, 4	CO5	PSO1 PSO3		

Reference Books

1.	Ajgaonkar, D. B. (1998). <i>Principles of Knitting</i> . California: Universal Publishing Corporation.
2.	Albrecht, W., Fuchs, H., & Kittelmann, W. (2003). <i>Nonwoven Fabrics</i> . New Jersey: Wiley-VCH GmbH & Co.
3.	Corbmann, B. P. (1986). <i>Textiles: Fibre to Fabric</i> . New York: McGraw Hills Inc.
4.	Gokerneshan, N. (2004). <i>Fabric Structure and Design</i> . New Delhi: New Age International Pvt. Ltd.
5.	Goswami, B. C. (2004). <i>Textile Sizing</i> . New York: Marcel Dekker Inc.
6.	Grosicki, Z. J. (1921). <i>Watson's Textile Design and Colour</i> . New Delhi: Woodhead Publishing Ltd.
7.	Horrocks, A. R. & Anand, S. C. (2000). <i>Handbook of Technical Textiles</i> . New Delhi: Woodhead Publishing Ltd.
8.	Mazza, C. & Zonda, P. (2003). <i>Textile Reference Book for Knitting</i> . Italy: ACIMIT.
9.	Nisbet, H. (1919). <i>Grammar of Textile Design</i> . London: Greenwood & Sons.
10.	Spencer, D. J. (2001). <i>Knitting Technology: A Comprehensive Handbook and Practical Guide</i> . New Delhi: Woodhead Publishing Ltd., 2001.
11.	Talukdar, M. K. (1998). <i>Weaving: Machines, Mechanisms, Management</i> . Ahmedabad: Mahajan Publishers.

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology			Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme												
Year	I	Core / Elective / Foundation FGT 1204C04: Advance Pattern Making			Credits / Hours per week			04 (0+4) / 08				
Semester	I	Year of Introduction: 2018 Year of Syllabus Revision: -			Maximum Marks / Grade			O (10 point scale)				
Mode of Transaction		Practical										
Course Outcome (CO) FGT 1204C04 CO1 To understand the basic terminologies related to sleeves, patterns of sleeves and its variations CO2 To understand the basic terminologies related to collars, patterns of collars and its variations CO3 To demonstrate points of control in each pattern for achieving desired fit in a dress CO4 To enable students to generate well-fitting patterns and manipulate them to achieve desired style line CO5 To discuss various defects and their rectification at the pattern making stage												
Unit No.	Topic				Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Practical: Sleeve: Basic terminology of sleeve; Basic pattern of sleeve: various parameters controlling fit and fall of sleeve, balance points in sleeve and its significance in fit and fall of sleeve, balancing of patterns and notches and its importance, discussion on various defects and their rectifications at pattern stage; Sleeve variation – cap / flare / shirt / puff; Grown on sleeve – dolman / Raglan (2pc / darted / 1pc); 2pc sleeve patterns				24	20	2, 3, 4	CO1	PSO1 PSO2 SPO4	SD	G	G ES
2	Practical: Collar: Basic terminology of collars; Collar variations – Peter pan / sailor / band / shirt - 2pc / 1pc, convertible; Balancing of patterns and				24	20	2, 3, 4	CO2	PSO1 PSO2 PSO4			

	notches and its importance; Grown on collars – shawl collar; Pattern of notch collar							
3	Practical: Dress and its variation: Introduction to fish dart and its difference from the open ended darts; Fits of dresses – shift / sheath / box / tent / contoured; Importance and relevance of various parameters controlling the fit and fall of dresses; Dress variations – princess / panel; Discussion on various defects and there rectifications at pattern stage	30	25	2, 3, 4	CO3	PSO1 PSO2 PSO4		
4	Practical: Trouser and its variation: Basic trouser block; Terminology used for trouser; Trouser leg line variations and fit variations – jeans / slacks / jumpsuit / dungaree; Various components of trouser i.e. pockets / fly etc.	30	25	2, 3, 4	CO4	PSO1 PSO2 PSO4		
5	Practical: Discussion on various defects and there rectifications at pattern stage	12	10	2, 3, 4	CO5	PSO1 PSO2 PSO4		

Reference Books

1.	Al-Haboui, M. H. (1992). <i>Anthropometry for a Mix of Different Populations</i> . Amsterdam: Applied Ergonomics, Elsevier.
2.	Annis, J. F. (1978). <i>Variability in Human Body Size- Anthropometric Source Book</i> . Washington DC: NASA Reference Publication.
3.	Aldrich, W. (2015). <i>Metric Pattern Cutting for Women's Wear - 6th Edition</i> . New York: Wiley-VCH GmbH & Co.
4.	Armstrong, H. J. (2009). <i>Pattern making for Fashion design – 5th Edition</i> . Noida: Harper Collins Publishers India.
5.	Basia, S. (2010). <i>Technical Drawing for Fashion</i> . London: Laurence King Publishing.
6.	Holzman, D. C. (1996). <i>Fewer Sizes Fit All</i> . Technology Review. Discussion of Paal's method of creating an optimized sizing system based on anthropometric data.
7.	Hudson, P. B. (1979). <i>Generating Patterns</i> . Bobbin. 20(8).
8.	Peterson, E. A. (1980). <i>Standardization of industrial garment fit: Is it feasible? Is it necessary? Is it desirable?</i> London: Industrial Launderer.
9.	Reich, N., & Goldserry, E. (1993). <i>Development of body measurement tables for women 55 and older and the relationship to ready-to-wear garment size</i> . (Research Technical Report Number PCN 33-000006-18, ISR 06). Philadelphia: American Society for Testing and Materials/Institute for Standards Research.
10.	Shoben, M. M., & Ward, J. P. (1990). <i>Pattern Cutting and Making Up – Revised Edition</i> . Oxford: Butterworth Heinmann.
11.	Singh, D., & Young, R. K. (1995). <i>Body weight, waist-to-hip ratio, breasts and hips: roles in judgments of female attractiveness and desirability for relationships</i> . Ethology and Sociobiology.
12.	Stoudt, H. W. (1981). <i>The Anthropometry of the Elderly</i> . Human Factors, 23(1).
13.	Suhner, I. A. (2012). <i>Technical Drawing for Fashion Design: Garment Source Book</i> . Netherlands: The Pepin Press.
14.	Zarapkar, K. R. (2008). <i>Zarapkar System of Cutting</i> . Mumbai: Navneet Publication (India) Ltd.

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology			Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme												
Year	I	Core / Elective / Foundation FGT 1205F01: Understanding Apparel Market			Credits / Hours per week			04 (2+2) / 06				
Semester	II	Year of Introduction: 2014 Year of Syllabus Revision: 2018			Maximum Marks / Grade			O (10 point scale)				
Mode of Transaction		Lectures and Practical										
Course Outcome (CO) FGT 1205F01												
CO1 To understand the basic terminologies related to apparel market CO2 To impart basic understanding and knowledge of global apparel market scenario CO3 To analyze the fashion apparel market around the world CO4 To understand the sizing and construction detail of apparel from different market segment												
Unit No.	Topic				Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Apparel industry: Terms and terminologies related to apparel market; Evolution of apparel market; Factors affecting apparel market				6	10	1, 2	CO1	PSO5	SD	R	G ES HV
2	Recent apparel market scenario/trends: Post modernization and fashion; Changes in the fashion market: late 20th - 21st century; Globalization and e-fashion: eco fashion and sustainability, casual wear, semi-formal wear, formal wear				9	15	1, 2	CO2	PSO5			
3	Apparel fashion market analysis: Fashion development: France, the center of fashion; beginning of retail expansion of fashion; Effects of industrial revolution on fashion: mass production of clothing, retailing during the 19th century, changes caused by communications, leisure and				15	25	1, 2	CO3	PSO5			

	industry; Manufacturing of fashion: Pret-a-Porter, Haute Couture, made to order/custom made garments							
4	Practical: Market survey-segments of market; Collection of products from different market segments; Analysis of products from different market segments; Making directory of products	60	50	1, 2, 4, 5	CO4	PSO5		

Reference Books

1.	Burns, L. D., & Bryant, N. O. (1997). <i>The Business of Fashion</i> . New York: Fairchild Publications.
2.	Diamond, J., & Diamond, E. (1997). <i>The World of Fashion - 2nd Edition</i> . New York: Fairchild Publications.
3.	Dickerson, K. G. (2009). <i>Inside the Fashion Business – 7th Edition</i> . New Delhi: Pearson Education Inc.
4.	Frings, G. (1999). <i>Fashion from Concept to Consumer – 9th Edition</i> . New Jersey: Prentice Hall.
5.	Hebrero, M. (2015). <i>Fashion Buying and Merchandising: From Mass-Market to Luxury Retail</i> . Canada: CreateSpace Independent Publishing Platform.
6.	Kincade, D. H. (2011). <i>Merchandising of Fashion Products</i> . New Delhi: Pearson Education.
7.	Rosenau, J. A., & Wilson, D. L. (2006). <i>Apparel Merchandising: The Line Starts Here - 2nd Edition</i> . New York: Fairchild Publications.
8.	Stone, E. (1999). <i>The Dynamics of Fashion</i> . New York: Fairchild Publications.

FASHION AND APPAREL TECHNOLOGY

 <p>The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology</p>	<p>Academic Year</p>			<p>2019-20</p>
	<p>B.Sc. (Garment Technology): Honors Programme</p>			

Year	I	Core / Elective / Foundation FGT 1206E01: New Materials for Fashion	Credits / Hours per week	02 (2+0) / 02
Semester	I	Year of Introduction: 2018 Year of Syllabus Revision: -	Maximum Marks / Grade	O (10 point scale)
Mode of Transaction		Lectures		

Course Outcome (CO) FGT 1206E01

- CO1 To impart knowledge regarding existing trends related to fashion garments.
- CO2 To enable students to use fabrics, accessories and related materials for innovative application to apparels.
- CO3 The course will inculcate innovative problem-solving approach.
- CO4 To study alternative methods of fabric joining and their advantages and disadvantages

Unit No.	Topic	Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Futuristic materials: innovative application of novel materials: Terms and terminologies; Recent trends in: fabrics, closures and fasteners – buttons, buttonholes, zippers, hooks, drawstrings and ties, others, trims – braids, cords, fringes, laces, rickrack's, strings, tapes, ribbons, piping, others, surface embellishment – appliqué, beads and sequences, embossing, embroidery, rhinestones, printing, others; Their applications	8	25	1, 2	CO1	PSO1	SD	R	G ES HV
2	Market research: Market survey of trends in fabrics, trims and accessories; Sourcing: types, market, cost, fabrics, closures and fasteners – buttons, buttonholes, zippers, hooks, drawstrings and ties, others, trims – ribbons, rickrack, braids, cords, fringes, laces, strings, tapes, piping, others, surface embellishments – appliqué, beads	9	30	3, 4, 5	CO2	PSO1			

	and sequences, embossing, embroidery, rhinestones, printing, others							
3	Alternate innovations: The creative process: creativity and environment, creativity and character traits; Changing ideas into opportunities; Creative uses of materials other than conventional use	7	25	1, 2, 3	CO3	PSO1		
4	Alternate methods of fabric joining: Purpose, methods, advantages and disadvantages: faggoting, fusing; Other methods	6	20	1, 2, 3	CO4	PSO1		

Reference Books

1.	Adair, J. (2009). <i>The Art of Creative Thinking: How to Be Innovative and Develop Great Ideas</i> , Edition reprint. UK: Kogan Page Publishers.
2.	Balaram, S. (2011). <i>Thinking Design</i> , National Institute of Design. New Delhi: Sage Publications.
3.	Brown, S. (2013). <i>Refashioned: Cutting Edge Clothing from Upcycled Material</i> , UK: Laurence King Publishing Ltd.
4.	Bubonia, J. E. (2014). <i>Apparel Production Terms and Processes</i> . New York: Bloomsbury.
5.	Carr, H. and Latham, B. (2008). <i>Technology of Clothing Manufacture</i> . Edited by David J. Tyler, 4th edn. Oxford: Blackwell.
6.	Clive Hallet, Amanda Johnston. (2010). <i>Fabric for Fashion- a comprehensive guide to natural fibers</i> . London: Laurence King Publishing Ltd.
7.	Guy, C., Bill, L. (2007). <i>The Creative Thinking Plan: How to Generate Ideas and Solve Problems in Your Work and Life</i> , Edition revised. Great Britain: Financial Times/Prentice Hall.
8.	Jennings, T. (2011). <i>Creativity in fashion design- An inspiration workbook</i> . USA: Faichlid Books.
9.	Lau, J. Y. F. (2011). <i>An Introduction to Critical Thinking and Creativity: Think More, Think Better</i> . New Jersey: John Wiley & Sons.
10.	O'Day, R. (2010). <i>Creative Thinking</i> , Edition reprint. US: Kessinger Publishing.
11.	Worsely, H. (2011). <i>100 Ideas that changed fashion</i> . London: Laurence King Publishing Ltd.
12.	The ICFAI University (2004). <i>Creativity</i> , Hyderabad: ICFAI University.
13.	http://www.brainstorming.co.uk/tutorials/creativethinking.html

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology			Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme												
Year	I	Core / Elective / Foundation FGT 1207I02: Entrepreneur Development			Credits / Hours per week			02 (2+0) / 02				
Semester	I	Year of Introduction: 2014 Year of Syllabus Revision: 2018			Maximum Marks / Grade			O (10 point scale)				
Mode of Transaction		Lectures										
Course Outcome (CO) FGT 1207I02 CO1 To acquaint the students with an in depth knowledge source for an intending entrepreneur CO2 To enable students gain perspective of the entrepreneurial functions CO3 To aid students to adopt and implement the entrepreneurial functions in practice												
Unit No.	Topic				Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Concept development for an enterprise: Entrepreneur and entrepreneurship: an introduction; Business system: an introduction; Entrepreneurial process and theories; Business ownership; Entrepreneurial development program				9	30	1, 2	CO1	PSO6	EMP ENT SD	G	HV PE
2	Enterprise financing and management: Finance planning; Working capital and inventory management; Production and operation management; Marketing management; Personnel management; Quality management				12	40	1, 2	CO2	PSO6			
3	Enterprise development: Growth strategies; Accounting; Sickness in enterprise; E-commerce; Franchising				9	30	1, 2	CO3	PSO6			
Reference Books												
1.	Chandran, R. (2009). <i>International Business – Second ed.</i> Mumbai: Jaico Publishing House.											
2.	Khanka. S., S. (2010). <i>Entrepreneurial Development.</i> New Delhi: S. Chand & Co. Ltd.											

3.	Kotler, P. (2004). <i>Principles of Marketing – Tenth ed.</i> New Delhi: Prentice Hall of India Pvt. Ltd.
4.	Singh, B. (2007). <i>Entrepreneurship Development.</i> New Delhi: Wisdom Publication.

FASHION AND APPAREL TECHNOLOGY

FASHION AND APPAREL TECHNOLOGY

SEMESTER III

 <p>The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology</p>	Academic Year		2019-20
	B.Sc. (Garment Technology): Honors Programme		

Year	II	Core /-Elective / Foundation FGT 1301C01: Anthropometrics and Sizing	Credits / Hours per week	05 (1+4) / 09
Semester	III	Year of Introduction: 2014 Year of Syllabus Revision: 2018	Maximum Marks / Grade	O (10 point scale)
Mode of Transaction		Lectures and Practical		

Course Outcome (CO) FGT 1301C01

- CO1 To understand the importance of anthropometric studies and development of size chart through body measurements
- CO2 To study the different size charts and sizing methods followed by apparel manufacturers
- CO3 To impart knowledge to develop technical sketches and specification sheets
- CO4 To impart practical knowhow about the technicalities of darts and contouring
- CO5 To demonstrate the different methods of sizing and grading

Unit No.	Topic	Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Study of human figure: Relative length and girth measurement for women and men - 8 head theory; Analysis of anthropometric studies and development of size chart for development of apparels.	8	10	1, 2	CO1	PSO1 PSO2			
2	Sizing followed by manufacturers of apparel products: Sizing standards – woven apparels and knit wears; Standardizing body measurements - importance and techniques; Made-to-measure technology – proprietary materials; Body scanning	7	10	1, 2	CO2	PSO1 PSO2	SD	G	G ES
3	Practical: Development of technical sketches: Design illustration- flat/technical sketches-methods and techniques; Technical sketches of tops, skirts, dresses, trousers, knits; Developing the spec sheet	30	20	2, 3, 4, 5	CO3	PSO1 PSO2			

4	Practical: Designing with darts: Graduated and radiating darts; Parallel darts; Asymmetric darts; Intersecting darts	22	15	2, 3, 4, 5	CO4	PSO1 PSO2		
5	Practical: Contouring: Contouring principles; Contour guide patterns; Classic, empire, surplice, off-shoulder, halter	30	20	2, 3, 4, 5	CO4	PSO1 PSO2		
6.	Practical: Sizing and grading: Generation of size chart;; Grading rules; Methods of grading- radial, cut slash and spread, nest and stack and vector; Grading of patterns (women's wear, men's wear, children's wear)	38	25	2, 3, 4, 5	CO5	PSO1 PSO2		

Reference Books

1.	Al-Haboui, M. H. (1992). <i>Anthropometry for a Mix of Different Populations</i> . Amsterdam: Applied Ergonomics, Elsevier.
2.	Annis, J. F. (1978). <i>Variability in Human Body Size- Anthropometric Source Book</i> . Washington DC: NASA Reference Publication.
3.	Aldrich, W. (2015). <i>Metric Pattern Cutting for Women's Wear - 6th Edition</i> . New York: Wiley-VCH GmbH & Co.
4.	Armstrong, H. J. (2009). <i>Pattern making for Fashion design – 5th Edition</i> . Noida: Harper Collins Publishers India.
5.	Basia, S. (2010). <i>Technical Drawing for Fashion</i> . London: Laurence King Publishing.
6.	Holzman, D. C. (1996). <i>Fewer Sizes Fit All</i> . Technology Review. Discussion of Paal's method of creating an optimized sizing system based on anthropometric data.
7.	Hudson, P. B. (1979). <i>Generating Patterns</i> . Bobbin. 20(8).
8.	Peterson, E. A. (1980). <i>Standardization of industrial garment fit: Is it feasible? Is it necessary? Is it desirable?</i> London: Industrial Launderer.
9.	Reich, N., & Goldserry, E. (1993). <i>Development of body measurement tables for women 55 and older and the relationship to ready-to-wear garment size</i> . (Research Technical Report Number PCN 33-000006-18, ISR 06). Philadelphia: American Society for Testing and Materials/Institute for Standards Research.
10.	Shoben, M. M., & Ward, J. P. (1990). <i>Pattern Cutting and Making Up – Revised Edition</i> . Oxford: Butterworth Heinmann.
11.	Singh, D., & Young, R. K. (1995). <i>Body weight, waist-to-hip ratio, breasts and hips: roles in judgments of female attractiveness and desirability for relationships</i> . Ethology and Sociobiology.
12.	Stoudt, H. W. (1981). <i>The Anthropometry of the Elderly</i> . Human Factors. 23(1).
13.	Suhner, I. A. (2012). <i>Technical Drawing for Fashion Design: Garment Source Book</i> . Netherlands: The Pepin Press.
14.	Zarapkar, K. R. (2008). <i>Zarapkar System of Cutting</i> . Mumbai: Navneet Publication (India) Ltd.

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology		Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme											
Year	II	Core / Elective / Foundation FGT 1302C02: Kid's and Women's Wear			Credits / Hours per week			04 (0+4) / 08			
Semester	III	Year of Introduction: 2018 Year of Syllabus Revision: -			Maximum Marks / Grade			O (10 point scale)			
Mode of Transaction		Practical									
Course Outcome (CO) FGT 1302C02											
CO1 To understand the different sewing machines used in apparel industry CO2 To construct garments by incorporating various garment construction techniques for women's and kid's wear CO3 To understand the finishing of sleeves and waistband CO4 To inculcate understanding regarding operational breakdown and preparation of spec sheet											
Unit No.	Topic			Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Practical: Industrial and specialized sewing machine: Basic sewing machine: presser foot, throat plate, presser spring, needle bar, take up lever, tension device, take up spring, thread guides, bobbin and bobbin case, feed dog, stitch regulator, back tack lever, needle; Feed mechanism: variable top feed, needle feed, unison feed, compound feed			24	20	2, 3	CO1	PSO1 PSO2	SD	G	G ES HV
2	Practical: Stitching of kid's garments: Skirt and its variation; Trouser and its variation; Shirt and its variation; Dress and its variation			24	20	3, 4, 6	CO2	PSO1 PSO2			
3	Practical: Stitching of women's garments: Skirt and its variation; Trouser and its variation; Shirt and its variation; Dress and its variation			24	20	3, 4, 6	CO2	PSO1 PSO2			

4	Practical: Sleeves and waistband: Sleeves and sleeve finishes	24	20	3, 4, 6	CO3	PSO1 PSO2		
5	Practical: Operation breakdown and spec sheet preparation: Garment operation breakdown and process flow	24	20	2, 3, 4, 5	CO4	PSO3 PSO4		

Reference Books

1.	Aldrich, W. (2015). <i>Metric Pattern Cutting for Women's Wear - 6th Edition</i> . New York: Wiley-VCH GmbH & Co.
2.	Carr, H. & Latham, B. (2008). <i>Technology of Clothing Manufacture - 4th Edition</i> . Oxford: Blackwell Publishing.
3.	Crawford, C. A. (1993). <i>Fashion your Own Skirts the Simple Way</i> . New Delhi: Bloomsbury Publishing India Ltd.
4.	Glock, R. E., & Kunz, G. I. (2005). <i>Apparel Manufacturing: Sewn Product Analysis - 4th Edition</i> . Chennai: Pearson India
5.	Juvekar, V. B. (1953). <i>Easy Cutting</i> . Mumbai: Ball Co.
6.	Moulton, B. (1968). <i>Simplified Tailoring</i> . London: BT Batsford Ltd.
7.	Pandit, S. (1967). <i>A Manual of Children's Clothing</i> . Mumbai: Orient Longmans Limited.
8.	Singer. (1989). <i>Sewing Pants that Fit</i> . Minnesota: Cowles Creative Publishing Inc.
9.	Thomas, A. J. (1996). <i>Art of Sewing</i> . New Delhi: UBJ Publication Ltd.

FASHION AND APPAREL TECHNOLOGY

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology		Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme											
Year	II	Core / Elective / Foundation FGT 1303C03: Garment Production and Machinery			Credits / Hours per week			04 (3+1) / 05			
Semester	III	Year of Introduction: 2014 Year of Syllabus Revision: 2018			Maximum Marks / Grade			O (10 point scale)			
Mode of Transaction		Lectures and Practical									
Course Outcome (CO) FGT 1303C03											
CO1 To enable the students to understand the mass production technical knowhow in a readymade garment manufacturing unit CO2 To inculcate understanding regarding the various types of machines and its accessories used for apparel manufacturing in bulk CO3 To expose the students to the latest practices and technological world of garment production CO4 To enable the students to select appropriate machinery for the production of the required production line in a readymade garment unit CO5 To develop practical understanding regarding different ways to overcome problems during the process											
Unit No.	Topic			Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Marker planning, spreading and cutting: Marker planning: planning, drawing and reproducing the marker, requirements of marker planning, maximizing marker utilization, methods of marker planning; Spreading: spreading the fabric, requirements of the spreading process, methods of spreading; Cutting: objectives of cutting, methods of cutting, preparation of cut work for the sewing room			12	20	1, 2	CO1	PSO3	SD	G	ES
2	Industrial sewing: Seam types; Stitch types; Sewing machine feed mechanisms; Sewing machine needles; Sewing threads			12	20	1, 2	CO2	PSO3			
3	Sewing machinery:			8	15	1, 2	CO2	PSO3			

	Classification of sewing machines; Basic sewing machine shapes and associated work aids; Automatic machines							
4	Garment accessories and enhancements: Labels; Decoration; Fabrics for support and insulation; Narrow fabric trims; Fastenings	8	15	1, 2	CO3	PSO3		
5	Alternative methods of joining materials: Fusing: advantages of using fusible interlinings, requirements of fusing, fusing process, factors affecting fusing, fusing equipment, methods of fusing, quality control in fusing; Welding and adhesives	5	10	1, 2	CO4	PSO3		
6	Practical: Troubleshooting in the cutting and sewing room	30	20	2, 3, 4	CO5	PSO3		

Reference Books

1.	Bheda, R. (2003). <i>Managing Productivity in the Apparel Industry</i> . New Delhi: CBS Publishers & Distributors.
2.	Carr, H. & Latham, B. (2008). <i>Technology of Clothing Manufacture - 4th Edition</i> . Oxford: Blackwell Publishing.
3.	Chuter, A. J. (1995). <i>Introduction to Clothing Production Management - 2nd Edition</i> . Oxford: Blackwell Publishing.
4.	Cooklin, G. (1997). <i>Garment Technology for Fashion Designers</i> . New Delhi: Wiley India Pvt. Ltd.
5.	Fan, J., & Hunter, L. (2009). <i>Engineering Apparel Fabrics and Garments</i> . New Delhi: Woodhead Publishing Pvt. Ltd.
6.	Glock, R. E., & Kunz, G. I. (2005). <i>Apparel Manufacturing: Sewn Product Analysis - 4th Edition</i> . Chennai: Pearson India.
7.	Jones, I., & Stylios, G., K. (2013). <i>Joining Textiles: Principles and Applications</i> . New Delhi: Woodhead Publishing Pvt. Ltd.
8.	Rathinamoorthy, R., & Surjit, R. (2015). <i>Apparel Machinery and Equipments</i> . New Delhi: Woodhead Publishing Pvt. Ltd.
9.	Solinger, J. (1988). <i>Apparel Manufacturing Handbook- Analysis, Principles and Practice</i> . South Carolina: Bobbin Blenheim Media Corp.

 <p>The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology</p>	<p>Academic Year</p>			<p>2019-20</p>
	<p>B.Sc. (Garment Technology): Honors Programme</p>			

Year	II	Core /-Elective / Foundation FGT 1304C04: Textile Testing	Credits / Hours per week	04 (2+2) / 06
Semester	III	Year of Introduction: 2018 Year of Syllabus Revision: -	Maximum Marks / Grade	O (10 point scale)
Mode of Transaction		Lectures and Practical		

Course Outcome (CO) FGT 1304C04


- CO1 To make the students understand the importance and application of textile testing
- CO2 To understand the importance of strength testing of various textile materials
- CO3 To enable the students to understand the testing of yarns and fabrics used for apparels and its end uses
- CO4 To help the students to understand the fabric performance and its evaluation
- CO5 To practically demonstrate the yarn and fabric testing procedures followed in an apparel industry

Unit No.	Topic	Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Textile testing: Importance of textile testing; Standard atmospheric conditions; Sampling: aim of sampling; Types of sampling: random, bias, numerical and zoning	5	10	1, 2	CO1	PSO3	SD	G	ES
2	Yarn count, twist and strength: Yarn numbering instruments – quadrant balance, Knowles balance, wrap reel; Yarn twist testing: type of twist, effect of twist on fabric property, different methods of twist measurement; Yarn strength testing: principles and methods	5	10	1, 2	CO3	PSO3			
3	Tensile testing: Tensile terms: load, breaking load, stress, strain, initial modulus, work of rupture, CSP, RKM; Principle for testing tensile strength:	10	20	1, 2	CO2	PSO3			

	CRT and CRL; Single yarn strength tester; Tensile strength testing; Bursting strength testing; Tearing strength testing; Seam strength testing							
4	Fabric testing: Quality parameters of a fabric; Fabric thickness testing; Fabric abrasion resistance: classification of abrasion, parameters affecting testing of abrasion resistance, assessment of abrasion damage; Pilling of fabrics: factors responsible, ICI pill box tester; Measurement of air permeability and water repellency: air permeability test, water permeability, drop test, spray test; Parameters affecting handle of fabric: drape ability, fabric stiffness; Crease resistance and crease recovery tester	10	20	1, 2	CO4	PSO3		
5	Practical: Yarn testing: Yarn count measurement; Yarn twist measurement; Yarn strength tests	22	15	2, 3, 4, 5	CO5	PSO3		
6	Practical: Fabric testing: Drape measurement; Crease recovery measurement; Abrasion resistance testing; Stiffness testing; Fabric grab strength and strip strength testing on tensile testing machine; Tearing strength measurement; Bursting strength measurement; Seam strength measurement	38	25	2, 3, 4, 5	CO5	PSO3		

Reference Books

1.	Saville, B. P. (2000). <i>Physical Testing of Textiles</i> . New York: CRC Press LLC.
2.	Booth, J. E. (1996). <i>Principles of Textile Testing – 3rd Edition</i> . New York: CBS Publishers & Distributors Pvt. Ltd.
3.	Skinkle, J. H. (1949). <i>Textile Testing</i> . New York: Chemical Publishing Inc.
4.	Morton, W. E. & Hearle J. W. S. (2008). <i>Physical Properties of Textile Fibers – 4th Edition</i> . New Delhi: Woodhead Publishing Ltd.
5.	Kothari, V. K. (1999). <i>Testing and Quality Management</i> . New Delhi: IAFL Publications.
6.	Mehta, P. V. (2012). <i>Quality Management Handbook for the Apparel Industry</i> . New Delhi: New Age International Pvt. Ltd.

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology		Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme											
Year	II	Core / Elective / Foundation FGT 1305C05: Fabric Processing and Finishing			Credits / Hours per week			04 (2+2) / 06			
Semester	III	Year of Introduction: 2018 Year of Syllabus Revision: -			Maximum Marks / Grade			O (10 point scale)			
Mode of Transaction		Lectures and Practical									
Course Outcome (CO) FGT 1305C05											
CO1 To enable the students to learn about the wet processes of textile industry CO2 To gain an understanding of dyeing and printing methods CO3 To impart knowledge about the different finishes and their method of applications CO4 To practically demonstrate the dyeing and printing of textile materials with different types of dyes and using different techniques											
Unit No.	Topic			Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Dyeing: Sequence and objectives of fabric preparatory processes; Classification of dyes based on method of application; Dyeing methods of cellulosic, protein and synthetic fibres			9	15	1, 2	CO1 CO2	PSO1 PSO3	SD	G	G ES
2	Printing: Difference between dyeing and printing; Styles of printing: direct, discharge and resist; Methods of printing: block, roller, screen, digital; After treatment processes: fixation			9	15	1, 2	CO2	PSO1 PSO3			
3	Finishing: Objectives and significance of finishing; Classification of finishes; Principle, process and application of chemical finishes: softening, stiffening, durable press finish, weighing, crease resistance, soil release, flame retardant, water repellent, rot and			12	20	1, 2	CO3	PSO1 PSO3			

	mildew, moth proof and antistatic finish; Principle, process and application of mechanical finishes: calendaring, sanforizing, raising, brushing, crabbing, decatizing, parchmenting, milling, etc.							
4	Practical: Dyeing: Dyeing of cotton fabric with direct dye, reactive dye, vat dye and sulphur dye; Dyeing of silk fabric with acid dye and basic dye; Dyeing of wool fabric using metal complex dye and reactive dye	36	30	2, 3, 5, 6	CO4	PSO1 PSO3		
5	Practical: Printing: Printing of cotton using direct, resist and discharge styles (for each select one or two dyes)	24	20	2, 3, 5, 6	CO4	PSO1 PSO3		

Reference Books

1.	Broadbent, A. D. (2001). <i>Basic Principles of Textile Coloration</i> . London: Society of Dyers and Colourists.
2.	Datya, K. V., & Vaidya, A. A. (1984). <i>Chemical Processing of Synthetic Fibers and Blends</i> . New York: Wiley-VCH GmbH & Co.
3.	Lewin, M., & Sello, S., B. (1984). <i>Chemical Processing of Fibers and Fabrics – Functional Finishes, Part B</i> . New York: Mercel Dekker.
4.	Marsh, J. T. (1979). <i>An Introduction to Textile Finishing</i> . Ahmedabad: B. I. Publications Pvt. Ltd.
5.	Miles, L. W. C. (1994). <i>Textile Printing: 2nd Edition</i> . London: Society of Dyers and Colourists.
6.	Schindler, W. D., & Hauser, P. J. (2004). <i>Chemical Finishing of Textiles</i> . New Delhi: Woodhead Publishing Ltd.
7.	Shenai, V. A. (1981). <i>Technology of Textile Processing - Vol. III, V, VII & VIII</i> . Chennai: Shevak Publications.

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 <p>The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology</p>	<p>Academic Year</p>			<p>2019-20</p>
	<p>B.Sc. (Garment Technology): Honors Programme</p>			

Year	II	Core / Elective / Foundation FGT 1306E02: Fashion Branding	Credits / Hours per week	02 (2+0) / 02
Semester	III	Year of Introduction: 2014 Year of Syllabus Revision: 2018	Maximum Marks / Grade	O (10 point scale)
Mode of Transaction		Lectures		

Course Outcome (CO) FGT 1306E02

- CO1 To apply branding concepts to create a personal/fashion brand
- CO2 To demonstrate the value and importance of the brand for the company and the customer
- CO3 To define the branding process and develop a roadmap for creating a brand

Unit No.	Topic	Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Branding and branding process: The brand: definition; Types of brand; Brand life cycles; Branding and marketing; Determining the brand level; Company and the customer; Position strategy; Brand communication	9	30	1, 2	CO1	PSO5	EMP ENT SD	G	G ES HV PE
2	Luxury and retail brands: Why luxury brands? Defining luxury brands; Luxury and traditional marketing principles; How to create a "star" luxury brand; Private labels; Retail brands: product vs. service, retail brand decision, retail customer, retail concept; retail channels, positioning based on retail concept, merchandise, price, location, service, store experience, communication, growth, e-tailing	14	45	1, 2	CO2	PSO5			
3	Age of interactive wireless and virtual brands: Interactive brand: mass communication ; Wireless brand: RFID and mobile technologies; M-branding, beaming, audio targeting	7	25	1, 2	CO3	PSO5			

Reference Books	
1.	Abellam, M. & Minquet, J., M. (2010). <i>Fashion Branding</i> . London: Trans-Atlantic Publications.
2.	Brennan, B. & Schafer, L. (2012). <i>Branded: How Retailers Engage Consumers with Social Media and Mobility</i> . New Jersey: Hoboken & SAS Business.
3.	Chanalier, M. & Mazzalovo, G. (2008). <i>Luxury Brand Management: A world of Privilege</i> . New Jersey: Hoboken.
4.	Hancock, J. (2009). <i>Brand/Story: Ralph, Vera, Johnny, Billy and other Adventures in Fashion Branding</i> . New York: Fairchild Books.
5.	Kendall, G. (2009). <i>Fashion Brand Merchandising</i> . New York: Fairchild Books.
6.	Meadows, T. (2007). <i>How to Step up and Run a Fashion Label</i> . London: Laurance King Publishing.
7.	Okonkwo, U. (2007). <i>Luxury Fashion Branding: Trends, Tactics, Techniques</i> . London: Palgrave Macmillan.
8.	Tangate, M. (2012). <i>Fashion Brands: Branding Style from Armani to Zara</i> . London: Kogan.

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		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology		Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme											
Year	II	Core / Elective / Foundation FGT 1307I02: Shop Floor Management			Credits / Hours per week			02 (2+0) / 02			
Semester	III	Year of Introduction: 2014 Year of Syllabus Revision: 2018			Maximum Marks / Grade			O (10 point scale)			
Mode of Transaction		Lectures									
Course Outcome (CO) FGT 1307I03											
CO1 To acquaint the students with the different components and processes taking place on shop floor CO2 To enable the students for charting and layout for various departments for apparel manufacturing unit CO3 To understand the importance of space and its proper management and utilization on shop floor to enhance productivity											
Unit No.	Topic			Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV)and Professional Ethics (PE)
1	Shop floor management overview: Definitions: shop floor, yield, costing supports, standard operation details, lot sector extensions, inventory; Shop floor management parameters			9	30	1, 2	CO1	PSO4			
2	Inventory planning and layouts: Inventory lot transaction: material, resource and cost transaction, lot splitting, lot managing, lot transacting and lot transferring; Creating inventory lot transaction creating lots for shop floor; Time motion theory; Layout analysis of shop floor: small/medium/large; Flow process chart; Industry related symbols			12	40	1, 2	CO2	PSO4	SD	G	ES PE
3	Space analysis Warehouse; Cutting room; Sewing room; Finishing			9	30	1, 2	CO3	PSO4			
Reference Books											

1.	Bheda, R. (2003). <i>Managing Productivity in the Apparel Industry</i> . New Delhi: CBS Publishers & Distributors.
2.	Cooklin, G. (1997). <i>Garment Technology for Fashion Designers</i> . New Delhi: Om Books Service.
3.	Carr, H. & Latham, B. (2008). <i>Technology of Clothing Manufacture - 4th Edition</i> . Oxford: Blackwell Publishing.
4.	Chuter, A. J. (1995). <i>Introduction to Clothing Production Management - 2nd Edition</i> . Oxford: Blackwell Publishing.

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SEMESTER IV

 <p>THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA सत्यं त्रिवं सुन्दरम्</p>	The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology	Academic Year	2019-20
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B.Sc. (Garment Technology): Honors Programme

Year	II	Core /-Elective / Foundation FGT 1401C01: Men's Wear	Credits / Hours per week	04 (0+4) / 08
Semester	IV	Year of Introduction: 2018 Year of Syllabus Revision: -	Maximum Marks / Grade	O (10 point scale)
Mode of Transaction		Practical		

Course Outcome (CO) FGT 1401C01

- CO1 To enable the students to drafting and stitching of men's garments like shirts, trousers and jackets
- CO2 To demonstrate and stitch the sewing of knitted fabrics and related problems and precautions
- CO3 To understand the techniques of sample development from spec sheet

Unit No.	Topic	Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Practical: Drafting and stitching of men's garments in trends: Different features to be covered: shirt- yoke, collars, sleeves, cuff, plackets, pockets, variation in hemlines; Trouser- waistband, different type of pockets, fly; Jacket - Linings, interlinings, pockets, lapel	36	30	2, 3, 4, 5, 6	CO1	PSO1 PSO2	SD	G	G ES
2	Practical: Sewing fundamentals of knitted fabrics: Types of seams; Stitch type; Sewing machine needles and threads; Sewing problems and seam performance	24	20	2, 3	CO2	PSO1 PSO2			
3	Practical: Construction of knitted garments: Men's polo neck t-shirt; Kids shorts	24	20	2, 3, 4, 5, 6	CO2	PSO1 PSO1			
4	Practical: Sample preparation from spec sheet: Specification sheet analysis and its pattern making for the designed garment; Generations of sample garment	36	30	2, 3, 4, 5, 6	CO3	PSO1 PSO2 PSO3 PSO4			

Reference Books	
1.	Aldrich, W. (2015). <i>Metric Pattern Cutting for Women's Wear - 6th Edition</i> . New York: Wiley-VCH GmbH & Co.
2.	Cooklin G. (1997). <i>Garment Technology for Fashion Designers</i> . New Delhi: Wiley India Pvt. Ltd.
3.	Crawford, C. A. (1993). <i>Fashion your Own Skirts the Simple Way</i> . New Delhi: Bloomsbury Publishing India Ltd.
4.	Juvekar, V. B. (1953). <i>Easy Cutting</i> . Mumbai: Ball Co.
5.	Long, C. (2000). <i>Sewing with Knits: Classic, Stylish Garments from Swimsuits to Eveningwear</i> . Connecticut: Taunton Press.
6.	Moulton, B. (1968). <i>Simplified Tailoring</i> . London: BT Batsford Ltd.
7.	Pandit, S. (1967). <i>A Manual of Children's Clothing</i> . Mumbai: Orient Longmans Limited.
8.	Singer. (1989). <i>Sewing Pants that Fit</i> . Minnesota: Cowles Creative Publishing Inc.
9.	Thomas, A. J. (1996). <i>Art of Sewing</i> . New Delhi: UBJ Publication Ltd.
10.	Zarapkar, K.R. (2008). <i>Zarapkar System of Cutting</i> . Navneet Publication (India) Ltd., Mumbai.

FASHION AND APPAREL TECHNOLOGY

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology			Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme												
Year	II	Core / Elective / Foundation FGT 1402C02: Computer Aided Pattern Designing and Development			Credits / Hours per week			05 (1+4) / 09				
Semester	IV	Year of Introduction: 2014 Year of Syllabus Revision: 2018			Maximum Marks / Grade			O (10 point scale)				
Mode of Transaction		Lectures and Practical										
Course Outcome (CO) FGT 1402C02												
CO1 To understand the different software used for pattern designing in apparel industry CO2 To develop an understanding of pattern grading and making with different production methods using CO3 To develop competency in CAD applications for pattern making												
Unit No.	Topic				Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Introduction to computer aided pattern design and development: Different software those are used in garment industry; Need of software in garment industry				15	20	1, 2	CO1	PSO1 PSO2 PSO4	EMP SD	G	G ES
2	Practical: Introduction to Zyndex software: Pattern making: basic block, basic skirt, T-shirt, trouser, shirt; Pattern grading: grading standard size blocks to various size, master pattern grading; Marker planning				45	30	2, 3, 6	CO2	PSO1 PSO2 PSO4			
3	Practical: Introduction to Tukatech software: Pattern making: basic block, basic skirt, T-shirt, trouser, shirt; Pattern grading: grading standard size blocks to various size, master pattern grading; Marker planning				45	30	2, 3, 6	CO2	PSO1 PSO2 PSO4			
4	Practical: Fitting and pattern alteration in CAD: Fitting: analysis of garment fit on a toile, solving fitting problems in various garments; Pattern alteration-importance of altering				30	20	2, 3, 4, 5, 6	CO3	PSO1 PSO2 PSO4			

	patterns: Common pattern alterations in a garment, alteration of pattern for irregular figures								
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Reference Books	
1.	Armstrong, H. J. (2009). <i>Pattern making for Fashion design – 5th Edition</i> . Noida: Harper Collins Publishers India.
2.	Cooklin G. (1992). <i>Pattern Cutting for Women’s Outerwear</i> . New Delhi: Wiley India Pvt. Ltd.
3.	Cooklin G. (1990). <i>Pattern Grading for Women’s Clothes</i> . New Delhi: Wiley India Pvt. Ltd.
4.	Cooklin G. (1992). <i>Pattern Grading for Men’s Clothes</i> . New Delhi: Wiley India Pvt. Ltd.
5.	Cooklin G. (1991). <i>Pattern Grading for Children’s Clothes</i> . New Delhi: Wiley India Pvt. Ltd.
6.	Zarapkar, K. R. (2008). <i>Zarapkar System of Cutting</i> . Mumbai: Navneet Publication (India) Ltd.
7.	Zyndex software user manual.
8.	Tukacad software tutorials.

FASHION AND APPAREL TECHNOLOGY

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology	Academic Year				2019-20			
B.Sc. (Garment Technology): Honors Programme										
Year	II	Core / Elective / Foundation FGT 1403C03: Plant Layout in Apparel Industry			Credits / Hours per week			05 (2+3) / 08		
Semester	IV	Year of Introduction: 2014 Year of Syllabus Revision: 2018			Maximum Marks / Grade			O (10 point scale)		
Mode of Transaction		Lectures and Practical								
Course Outcome (CO) FGT 1403C03										
CO1 To introduce the students with various components and different types of layout used in an apparel industry CO2 To impart hand on experience to gain understanding the floor planning and management CO3 To enable the students to work out flowchart and layout for various departments for apparel manufacturing unit CO4 To understand different services, work place design, output analysis and material handling										
Unit No.	Topic		Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV)and Professional Ethics (PE)
1	Introduction to services: Electrical- fan and light; Plumbing- water supply, drainage and steam supply; Lighting and ventilation- natural; Insulation and sound proofing		10	10	1, 2, 3	CO1	PSO3 PSO4	EMP SD	G	ES PE
2	Type of layout for different type of manufacturing and production system: Type of layout: vertical and horizontal, Manufacturing systems; Production systems		20	20	1, 2, 3	CO1	PSO3 PSO4			
3	Practical: List of activities in an apparel manufacturing unit and their space analysis: Factory area- storage of fabrics to warehouse; Processes checking, cutting, sewing, finishing; Areas for production personnel; Utilities- canteen/crèche/toilets/drinking water, etc.;		32	25	2, 3, 4, 5, 6	CO2	PSO3 PSO4			

	Administrative area; Reception; Offices- managers / supervisor's office; Degree of closeness between the activities for deciding the location standards for area requirements per person per workstation; Understanding of good layout- interior spaces in terms of lighting, ventilation, flow patterns, clearances, etc.							
4	Practical: Work place design: Motion economy; Ergonomics	13	10	2, 3, 4, 5, 6	CO3	PSO3 PSO4		
5	Practical: Product and required output analysis: Man, machine and area calculation; Storage requirements	26	20	2, 3, 4, 5, 6	CO4	PSO3 PSO4		
6	Practical: Introduction to material handling: Importance and objective of material handling; Types of material handling equipment; Specialized material handling equipment's / systems related to the apparel industry	19	15	2, 3, 4, 5, 6	CO4	PSO3 PSO4		

Reference Books

1.	Babu, V., R. (2012). <i>Industrial Engineering in Apparel Production</i> . New Delhi: Woodhead Publishing India Pvt. Ltd.
2.	Bheda, R. (2003). <i>Managing Productivity in the Apparel Industry</i> . New Delhi: CBS Publishers & Distributors.
3.	Cooklin, G. (1997). <i>Garment Technology for Fashion Designers</i> . New Delhi: Wiley India Pvt. Ltd.
4.	Carr, H. & Latham, B. (2008). <i>Technology of Clothing Manufacture - 4th Edition</i> . Oxford: Blackwell Publishing.
5.	Chuter, A. J. (1995). <i>Introduction to Clothing Production Management - 2nd Edition</i> , Oxford: Blackwell Publishing.
6.	Glock, R. E., & Kunz, G. I. (2005). <i>Apparel Manufacturing: Sewn Product Analysis - 4th Edition</i> . Chennai: Pearson India.
7.	Erwin, W. (1982). <i>Time Study Procedures</i> . Mumbai: Institute of Industrial Engineers.
8.	Nayak, R., & Padhye, R. (2015). <i>Garment Manufacturing Technology</i> . New Delhi: Woodhead Publishing.

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology			Academic Year			2019-20			
B.Sc. (Garment Technology): Honors Programme											
Year	II	Core / Elective / Foundation FGT 1404C04: Cost Analysis			Credits / Hours per week			02 (2+0) / 02			
Semester	IV	Year of Introduction: 2018 Year of Syllabus Revision: -			Maximum Marks / Grade			O (10 point scale)			
Mode of Transaction		Lectures and Practical									
Course Outcome (CO) FGT 1404C04											
CO1 To impart basic knowledge of costing methods in apparel manufacturing CO2 To enable students to calculate the product cost of various apparel products based on its values CO3 To make the students understand about the various factors affecting retail apparel cost											
Unit No.	Topic			Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Introduction to costing: Definition and objectives of costing; Elements and classification of cost: direct, indirect, overheads; Difference between costing and pricing; Stages of costing; Costing methods			7	25	1, 2	CO1	PSO5			
2	Material cost: Parameters involving material costing, inventory control and evaluation, accounting for wastage, scrap and defects, depreciation, factors influencing fabric cost and trims cost; Fabric costing for woven and knitted products: weaving cost, costing as per fabric construction, fabric cost per meter, fabric cost/garment, yarn cost, calculation for GSM, fabric cost per kg; Trims and accessories cost: cost of trims (labels, tags, buttons, etc.), accessories (hanger, inner board, poly bag, buttons, etc.), CMT charges, other charges (print, embroidery, etc.)			9	30	1, 2, 3, 5	CO2	PSO5	SD	G	ES PV

3	Labor and manufacturing cost: Labor cost: parameters of labor costing, labor cost budgeting and variances, wage rate and piece rate: comparative analysis, incentive plans; Manufacturing cost: classification of overheads, allocation and appointment, calculation of prime cost; General operating expenses.	8	25	1, 2, 3, 5	CO2	PSO5		
4	Retail pricing: Markups/markdown calculation; Retail pricing strategy overview; Export pricing; INCOTERMS and their application; Freight costing: types of freight cost, freight cost calculations	6	20	1, 2, 3, 5	CO3	PSO5		

Reference Books

1.	Clodfelter, R. (2015). <i>Retail Buying: From Basics to Fashion</i> . New York: Fairchild Publications Inc.
2.	Glock, R. E., & Kunz, G. I. (2005). <i>Apparel Manufacturing: Sewn Product Analysis - 4th Edition</i> . Chennai: Pearson India.
3.	Hornsgren, C. T., Datar, S. M., & Rajan, M. V. (2015). <i>Cost Accounting - 15th Edition</i> . Chennai: Pearson India.
4.	Jeffrey, M. & Evans, N. (2011). <i>Costing for the Fashion Industry</i> . Oxford: Berg Publishers.
5.	Lezama, M., Webber, B., & Dagher, C. (2004). <i>Sourcing Practices in Apparel Industry</i> . London: Commonwealth Secretariat.
6.	Nayak, R., & Padhye, R. (2015). <i>Garment Manufacturing Technology</i> . New Delhi: Woodhead Publishing.

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		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology			Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme												
Year	II	Core / Elective / Foundation FGT 1405C05: Finishing and Packaging Technology			Credits / Hours per week			04 (3+1) / 05				
Semester	IV	Year of Introduction: 2014 Year of Syllabus Revision: 2018			Maximum Marks / Grade			O (10 point scale)				
Mode of Transaction		Lectures and Practical										
Course Outcome (CO) FGT 1405C05												
CO1 To develop the holistic understanding of the finishing and packaging of garments used for the apparel industry CO2 To develop an understanding of the various types of finishes and to identify their effects on properties and their end uses in the apparel sector CO3 To make the students understand the modern techniques of garment finishing in relation to productivity, cost, quality and performance CO4 To equip the students with practical knowledge of various chemical finishing processes used in the apparel industry CO5 To impart practical knowhow of the different packaging techniques and materials used in apparel industry												
Unit No.	Topic				Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Finishing of garments: Finishing of garments: different types of finish- durable press finish, wash and wear finish; Spotting and washing of garments: identification of stains, characteristics and history, selection criteria of spotting chemicals, factors for spotting; Finishing of jeans with special emphasis on various types of jeans washing: stone wash, acid wash, enzyme wash, sand blasting, ozone and laser fading, quick wash denims, crush finish; Environment pollution, eco friendliness in washing and finishing				15	20	1, 2	CO1	PSO3 PSO5	SD	G	ES HV
2	Evaluation of finishes:				10	15	1, 2	CO2	PSO3 PSO5			

	Evaluation of finishes: basic concept of evaluation of different types of finishes like, flame retardancy, water proof/repellent, soil resistant, crease resistant through simple test methods; Cost estimation of finishing processes: basic knowledge on the cost involvement of the various types of finishes						
3	Pressing: Pressing: objective of pressing, fabric and garment characteristics, pressing equipment, parametric conditions, types of pressing; Packaging and folding: criteria for packaging, specifications and standards for packaging and folding, material and equipment used for packaging, considerations for packaging and folding.	10	15	1, 2	CO3	PSO3 PSO5	
4	Packaging: Background to the standard; Overview of packaging industry; Definition of packaging; Functions of packaging; Packaging materials; Review of the packaging legislation; Printing and decoration of packaging, include labels and labeling; Environmental issue and waste disposal	10	15	1, 2	CO1	PSO3 PSO5	
5	Practical: Garment finishes-chemical: Finishes on garments (shirt/denims): durable press (shirt); Enzyme finish- desizing, enzyme wash, softeners; Various jean washes- mechanical and chemical: abraded effect (sandpaper, abrading machine), spray finishing, bleaching, printing; Innovating a denim finish using above methods; Stain removal (grease, blood, lipstick, tea/coffee, gravy, ink/ball point, soil)	12	15	2, 3, 4	CO4	PSO3 PSO5	
6	Practical: Apparel finishing: Bar tacking; Buttonhole and buttoning Snaps and rivets; Thread cutting	9	10	2, 3, 4	CO4	PSO3 PSO5	
7	Practical: Packaging-folds, materials and relevance: Infant wear; Kid's wear; Ladies wear; Men's wear; Innovating a folding and packaging technique	9	10	2, 3, 4	CO5	PSO3 PSO5	

Reference Books

1.	Booth, J. E. (1996). <i>Principles of Textile Testing – 3rd Edition</i> . New York: CBS Publishers & Distributors Pvt. Ltd.
2.	Carr, H. & Latham, B. (2008). <i>Technology of Clothing Manufacture - 4th Edition</i> . Oxford: Blackwell Publishing.
3.	Corbman, B. P. (1985). <i>Textiles: Fiber to Fabrics - 6th Edition</i> . New York: McGraw-Hill Education.
4.	Glock, R. E., & Kunz, G. I. (2005). <i>Apparel Manufacturing: Sewn Product Analysis - 4th Edition</i> . Chennai: Pearson India.
5.	Lewin, M., & Sello, S. B. (1984). <i>Chemical Processing of Fibres and Fabrics - Functional Finishes, Part B</i> . New York: Marcel Dekker.
6.	Marsh, J. T. (1979). <i>An Introduction to Textile Finishing</i> . Ahmedabad: B. I. Publications Pvt. Ltd.
7.	Mehta, P. V. (2012). <i>Quality Management Handbook for the Apparel Industry</i> . New Delhi: New Age International Pvt. Ltd.
8.	Tortora, P. G., & Collier, B. J. (1996). <i>Understanding Textiles- 7th Edition</i> . New Jersey: Prentice Hall.

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology			Academic Year			2019-20			
B.Sc. (Garment Technology): Honors Programme											
Year	II	Core/ Elective / Foundation FGT 1406I04: Accessory Design			Credits / Hours per week			02 (0+2) / 04			
Semester	IV	Year of Introduction: 2014 Year of Syllabus Revision: 2018			Maximum Marks / Grade			O (10 point scale)			
Mode of Transaction		Practical									
Course Outcome (CO) FGT 1406I04											
CO1 To make students aware of the various aspects of designing accessories related to garment business CO2 To develop skills in sketching and designing, relationship of accessories with garments, production aspect, markets, costing and current trends CO3 To develop an aptitude to launch their career in this new field as designers, merchandisers and production personnel											
Unit No.	Topic			Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV)and Professional Ethics (PE)
1	Practical: Anatomy of an accessory: Definition of different accessories and related terms: bag, footwear, jewelry, millinery, eyewear, scarves, ties, wristwatches, belts, gloves, sustainable design, industrial perspective design; Design task: developing an accessory library			15	25	2, 3, 6	CO1	PSO1 PSO5			
2	Practical: Creative product development: The design process; Trend forecasting; Presentation techniques; Market levels; Developing a range; Portfolio presentation			27	45	2, 3, 6	CO2	PSO1 PSO5	ENT SD	G	G ES
3	Practical: Fabric, materials and finishes: Natural fibres and fabrics; Natural metals and stones; New developments; Hand embellishments; Machine embellishments; Contemporary finishing techniques; Industrial finishes			18	30	2, 3, 6	CO3	PSO1 PSO5			
Reference Books											
1.	Abling, B. (2000). <i>Illustration Fashion</i> . New Delhi: Prentice Hall										

2.	Albrizio, A. & Lustig, O. (1999). <i>Classic Millinery Techniques: A Complete Guide to Making and Designing Today's Hats</i> . Lark: Asheville.
3.	Kathrya, M., & Janini, M. (1997). <i>Illustrations Fashion</i> . London: Blackwell Science Ltd.
4.	O'Hara, & Callan, G. (1998). <i>The Thames & Hudson Dictionary of Fashion and Fashion Designers</i> . London: Thames and Hudson.
5.	O'Keefe, L. (1996). <i>Shoes: A Celebration of Pumps, Sandals, Slippers and More</i> . New York: Workman Publishing.
6.	Tain, L. (2010). <i>Portfolio Presentation for Fashion Designers: 3rd Edition</i> . New York: Fairchild.
7.	Tate, S., L., & Glazer, B. (2008). <i>The Snap Fashion Sketchbook</i> . New York: Prentice Hall.

FASHION AND APPAREL TECHNOLOGY

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SEMESTER V

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology			Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme												
Year	III	Core / Elective / Foundation FGT 1501C01: Apparel Standards and Quality Control			Credits / Hours per week			04 (4+0) / 04				
Semester	V	Year of Introduction: 2014 Year of Syllabus Revision: 2018			Maximum Marks / Grade			O (10 point scale)				
Mode of Transaction		Lectures										
Course Outcome (CO) FGT												
CO1 To understand quality assurance, standards, specifications and their uses and relationships CO2 To impart knowledge about the inspection and testing procedure followed in apparel industry CO3 To know standard conditions for testing of materials and products and evaluate performance specifications CO4 To understand the different colorfastness properties and its importance for garments CO5 To get a theoretical knowhow about different labels used in apparel industry												
Unit No.	Topic				Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Introduction to quality: Definitions of quality; Meaning of quality based on product, user, manufacturing and value; Eight dimensions of quality; Factors important to perceived apparel quality; Quality control (QC), quality assurance (QA), quality management (QM); Approach to quality management; Standards and specifications: sources of standards, developing standards and specifications				15	25	1, 2	CO1	PSO3 PSO5	SD	G	ES PE
2	Inspection: Definitions and objectives of inspection; Sampling: no inspection, 100% inspection, spot checking, arbitrary sampling, statistical sampling; Raw material inspection; In-process inspection; Final Inspection				12	20	1, 2, 3	CO2	PSO3 PSO5			

3	Apparel testing: Standard test methods; Testing of fabrics: strength, bow and skewness, needle cutting/yarn severance, sewability, pilling, snagging, abrasion resistance, fabric stretch properties; Testing of other materials: interlinings, zippers, elastic waistbands, buttons, snap fasteners, hook and loop fasteners; Product safety: strangulation hazards, ingestion hazards, skin irritation, flammability, laceration hazards	15	25	1, 2, 3	CO3	PSO3 PSO5		
4	Colorfastness: Introduction to colorfastness; Scales for visual comparison of colors: grey scale for color change, grey scale for staining, chromatic color transference scale; Evaluation of colorfastness to washing or laundering, dry cleaning, light, crocking, perspiration, abrasion (frosting), heat, bleaching, water, chlorinated pool, sea water, water spotting	12	20	1, 2, 3	CO4	PSO3 PSO5		
5	Labeling of garments: Care labeling; Care labeling regulations; ISO care symbols	6	10	1, 2	CO5	PSO3 PSO5		

Reference Books

1.	Booth, J. E. (1996). <i>Principles of Textile Testing – 3rd Edition</i> . New York: CBS Publishers & Distributors Pvt. Ltd.
2.	Bubonia, J. E. (2014). <i>Apparel Quality Lab Manual</i> . London: Bloomsbury Publishing.
3.	Bubonia, J. E. (2014). <i>Apparel Quality: A Guide to Evaluating Sewn Products</i> . London: Bloomsbury Publishing.
4.	Cooklin, G. (1991). <i>Introduction to Clothing Manufacture</i> . Oxford: BSP Professional Books.
5.	Das, S. (2010). <i>Quality Characterization of Apparel</i> . New Delhi: Woodhead Publishing India Pvt. Ltd.
6.	Gohl, E., & Vilensky, L. (1993). <i>Textile Science: An Explanation to Fiber Properties</i> . Melbourne: Longman Cheshire.
7.	Kadolph, S. J., & Langford, A. L. (2006). <i>Textiles – 10th Edition</i> . New Jersey: Prentice Hall.
8.	Kadolph, S. J. (2007). <i>Quality Assurance for Textiles and Apparel – Second ed.</i> London: Bloomsbury Publishing.
9.	Mehta, P. V. (2012). <i>Quality Management Handbook for the Apparel Industry</i> . New Delhi: New Age International Pvt. Ltd.
10.	Stamper, A., Sharp, S., & Donnell, L. (1991). <i>Evaluating Quality Apparel</i> . New York: Fairchild Publications.

 The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology		Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme									
Year	III	Core / Elective / Foundation FGT 1502C02: Internship			Credits / Hours per week			12 (0+12) / 24	
Semester	V	Year of Introduction: 2014 Year of Syllabus Revision: 2018			Maximum Marks / Grade			O (10 point scale)	
Mode of Transaction		Practical							
Course Outcome (CO) FGT									
CO1 To enhance student's personal and professional development through hands on skill in the apparel industry									
CO2 To integrate different skills required for participating in planned, supervised work with a reflection and evaluation process at the end of the internship									
CO3 It will provide students the opportunity to relate theory holistically to practice and gain valuable experiences for future career									
CO4 To facilitate the student's ability to evaluate her/his work criteria for garment production and accessory accentuation									
CO5 To enable the students to work on an experiential industrial project in field of garment production, marker efficiency, productivity, plant layout merchandising, lean management, product life cycle, cost analysis, etc.									
Unit No.	Topic	Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Internships will be of duration of ten to twelve weeks in a nationally or internationally recognized firm related to design, apparel or accessory manufacture with supervision from industry professionals in the following areas: Stages of design; Product development and technical design; Manufacturing process; Merchandising; Sourcing; Retailing; Promotions	180	50	1, 2, 3, 4, 5, 6	CO1 CO2 CO3 CO4 CO5	PSO6 PSO7	EMP ENT SD	G	G ES HV PE
2	The students will undertake an experiential industrial project in field of garment production, marker efficiency, productivity, plant layout merchandising, lean management. Students will undertake any one project based on product life cycle	108	30	1, 2, 3, 4, 5, 6	CO1 CO2 CO3 CO4	PSO6 PSO7			

	management with measurable KPI, monitor entire cycle of a product, cost analysis before, during and post production, etc.				CO5			
3	At the end of the internship the student will be evaluated in terms of: An evaluation report submitted by the project director responsible for an intern; Internship and project report submitted by the student which elucidates his/her learning experience; Presentation of the project report by the student	72	20	1, 2, 3, 4, 5, 6	CO1 CO2 CO3 CO4 CO5	PSO6 PSO7		

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		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology			Academic Year			2019-20			
B.Sc. (Garment Technology): Honors Programme											
Year	III	Core / Elective / Foundation FGT 1503C03: Product Development			Credits / Hours per week			06 (2+4) / 10			
Semester	V	Year of Introduction: 2014 Year of Syllabus Revision: 2018			Maximum Marks / Grade			O (10 point scale)			
Mode of Transaction		Lectures and Practical									
Course Outcome (CO) FGT											
CO1 To enhance students understanding regarding production process of apparel and accessories sector (apparels, accessories and home furnishing) CO2 To develop an understanding of basic design process followed by a product manufacturer and develops skills to explore solutions for the given design brief CO3 To induce interest in analyzing a product design and create a proto type CO4 To develop problem solving abilities via the process of apparel designing, construction and making-up CO5 To provide students an opportunity to experience the ideas to increase quality production with minimum time and to gain an experience of launching an enterprise											
Unit No.	Topic			Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV)and Professional Ethics (PE)
1	Production process: Types of manufacturing units: own labels, job work, contract, Sourcing and procurement: need for sourcing, methods of sourcing, major producers and suppliers for raw materials like fabrics, trims, linings, interlining and others; Survey of ancillary producers like embroiderers			15	15	1, 2	CO1	PSO1 PSO2 PSO3 PSO4	EMP ENT SD	G	G ES HV PE
2	Design concept development: Key element in apparel product designing: ongoing trend, product function and value; Analyzing the details of the product like fabric, design elements, seams, accessories, size and cost			15	15	1, 2	CO2	PSO1 PSO2 PSO3 PSO4 PSO5			

3	Practical: Analyzing the product design and construction: Analyzing the product design: fabric style, design elements, fabric type, fabric weight, fabric color, seams, operation breakdown, trims, accessories, sizes, labels and cost; Preparation of a tech pack: style sheet and specification sheet	25	15	2, 3, 4, 5, 6	CO3	PSO1 PSO2 PSO3 PSO4		
4	Practical: Product realization: Technical drawing/flat sketches; Preparation of a draft; Pattern adaptations; Marker planning; Construction and development of apparel/textile product; Toile preparation; Making-up and finishing process of prototypes; Three garments: women's and men's using different production methods	70	40	2, 3, 4, 5, 6	CO4	PSO1 PSO2 PSO3 PSO4		
5	Practical: Presentation and evaluation of collection: Visual display; Presentation of the final collection in a static exhibit format; Portfolio presentation	25	15	2, 3, 4, 5, 6	CO5	PSO1 PSO2 PSO3 PSO4 PSO5 PSO6		

Reference Books

1.	Al-Haboui, M. H. (1992). <i>Anthropometry for a Mix of Different Populations</i> . Amsterdam: Applied Ergonomics, Elsevier.
2.	Annis, J. F. (1978). <i>Variability in Human Body Size- Anthropometric Source Book</i> . Washington DC: NASA Reference Publication.
3.	Aldrich, W. (2015). <i>Metric Pattern Cutting for Women's Wear - 6th Edition</i> . New York: Wiley-VCH GmbH & Co.
4.	Armstrong, H. J. (2009). <i>Pattern making for Fashion design – 5th Edition</i> . Noida: Harper Collins Publishers India.
5.	Basia, S. (2010). <i>Technical Drawing for Fashion</i> . London: Laurence King Publishing.
6.	Holzman, D. C. (1996). <i>Fewer Sizes Fit All</i> . Technology Review. Discussion of Paal's method of creating an optimized sizing system based on anthropometric data.
7.	Hudson, P. B. (1979). <i>Generating Patterns</i> . Bobbin. 20(8).
8.	Peterson, E. A. (1980). <i>Standardization of industrial garment fit: Is it feasible? Is it necessary? Is it desirable?</i> London: Industrial Launderer.
9.	Reich, N., & Goldserry, E. (1993). <i>Development of body measurement tables for women 55 and older and the relationship to ready-to-wear garment size</i> . (Research Technical Report Number PCN 33-000006-18, ISR 06). Philadelphia: American Society for Testing and Materials/Institute for Standards Research.
10.	Shoben, M. M., & Ward, J. P. (1990). <i>Pattern Cutting and Making Up – Revised Edition</i> . Oxford: Butterworth Heinmann.
11.	Singh, D., & Young, R. K. (1995). <i>Body weight, waist-to-hip ratio, breasts and hips: roles in judgments of female attractiveness and desirability for relationships</i> . Ethology and Sociobiology.
12.	Stoudt, H. W. (1981). <i>The Anthropometry of the Elderly</i> . Human Factors, 23(1).
13.	Suhner, I. A. (2012). <i>Technical Drawing for Fashion Design: Garment Source Book</i> . Netherlands: The Pepin Press.
14.	Zarapkar, K. R. (2008). <i>Zarapkar System of Cutting</i> . Mumbai: Navneet Publication (India) Ltd.

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology		Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme											
Year	III	Core /-Elective / Foundation FGT 1504C04: Lean Management			Credits / Hours per week			02 (1+1) / 03			
Semester	V	Year of Introduction: 2018 Year of Syllabus Revision: -			Maximum Marks / Grade			O (10 point scale)			
Mode of Transaction		Lectures and Practical									
Course Outcome (CO) FGT											
CO1 To introduce the concept and to acquaint the students with lean management CO2 To impart knowledge to co-relate lean management in actual work scenario CO3 To practically demonstrate the application of lean management at work place											
Unit No.	Topic			Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV)and Professional Ethics (PE)
1	Introduction: Concept of lean management; Terminologies used in lean management; Tools of lean management: 5S, Kaizan, Just in Time, Jidoka, Pokayoke, FMEA, SMED, Kanban, theory of constraints, TPM, Fish bone diagram (cause effect analysis)			8	25	1, 2	CO1	PSO4	SD	G	ES HV
2	Impact of lean management: Optimization of resources through lean tools; Improving profitability through lean tools			7	25	1, 2	CO1	PSO4			
3	Practical: Use of lean management for garment manufacturing Introduction to lean tools; Co-relation of lean tools in actual work scenario; Push and pull system; Visit to Industry			18	30	2, 3, 4, 5, 6	CO2	PSO4			

4	Practical: Project based on tools taught in previous units	12	20	2, 3, 4, 5, 6	CO3	PSO4			
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Reference Books

1.	Bhasin, S. (2015). <i>Lean Management Beyond Manufacturing: A Holistic Approach</i> . London: Springer International Publishing.
2.	Charron, R., Harrington, J., Voehl, F., & Wiggin, H. (2015). <i>The Lean Management Systems Handbook</i> . London: CRC Press.
3.	Chong, K. (2017). <i>Lean Management: The Essence of Efficiency, Road to Profitability, Power of Sustainability</i> . Singapore: Partridge Publishing.
4.	Davis, J., W. (2009). <i>Lean Manufacturing Implementation, Strategies that Work: A Roadmap to Quick and Lasting Success</i> . New York: Industrial Press.
5.	Fliedner, G. (2011). <i>Leading and Managing the Lean Management Process</i> . New York: Business Export Press.
6.	Jackson, T. L. (1996). <i>Implementing A Lean Management System</i> . Oregon: Productivity Press.
7.	Machado, C., & Davim, P. (2017). <i>Green and Lean Management</i> . London: Springer International Publishing.
8.	Trent, R. J. (2008). <i>End-to-end Lean Management: A Guide to Complete Supply Chain Improvement</i> . Florida: J. Ross Publishing.

FASHION AND APPAREL TECHNOLOGY

FASHION AND APPAREL TECHNOLOGY

SEMESTER VI

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology		Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme											
Year	III	Core / Elective / Foundation FGT 1601C01: Principles of Management and Marketing			Credits / Hours per week			04 (4+0) / 04			
Semester	VI	Year of Introduction: 2014 Year of Syllabus Revision: 2018			Maximum Marks / Grade			O (10 point scale)			
Mode of Transaction		Lectures									
Course Outcome (CO) FGT											
CO1 To gain an in depth understanding of fundamental principles of marketing, management and organization from a historical and contemporary perspective CO2 To inculcate leadership and marketing skills with its importance CO3 To enable students to develop an analytical and conceptual framework of marketing work management in small, medium and large enterprises CO4 To understand the basic concepts of fashion retailing and wholesaling											
Unit No.	Topic			Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Introduction to managers and management: Management and role of managers; Management as a system; ethics and social responsibilities; Value organization and culture; Environmental constraints on managers; Decision making: essence of manager's job			12	20	1, 2	CO1	PSO5 PSO6	ENT SD	G	ES HV PE
2	Leadership: Managers verses leaders; Trait theories; Behavioral theories; Contingency theories; Emerging approaches to leadership			12	20	1, 2	CO2	PSO5 PSO6			
3	Planning, organization and control: Commitment to the planning process; Organizational planning; Organizational structure and design; Foundations of control; Control tools and techniques			12	20	1, 2	CO3	PSO5 PSO6			
4	Fashion marketing and consumer demands:			12	20	1, 2	CO1	PSO5			


	Economics related to principles of fashion business and marketing; Consumer groups and behavior; Economic, technological and global influences on marketing; Marketing chain and segmentation					PSO6		
5	Fashion retailing, wholesaling and marketing: Retail market operations and its types; Buying preparations; Retail pricing, sales, evaluation and promotion; Domestic and International trade policies; Overseas communication system; Distribution and wholesale promotion	12	20	1, 2	CO4	PSO5 PSO6		

Reference Books

1.	David, A., & Robbins, S., P. (1996). <i>Human Resource Management</i> . New York: John Wiley.
2.	Frings, G., S. (1999). <i>Fashion from Concept to Consumer</i> . New Jersey: Prentice Hall.
3.	Gorden, L., J. (1961). <i>Economics for Consumer</i> . New York: American Book Co.
4.	Chris, G., B. (1960). <i>An Outline on Advertising</i> . New York: The Macmillan Co.
5.	Kreitner, R. (2004). <i>Management - ninth ed.</i> Boston: Houghton Mifflin.
6.	Kotler, P. (2004). <i>Principles of Marketing -tenth ed.</i> New Delhi: Prentice Hall of India Pvt. Ltd.
7.	Robbins, S., P., & Coulter, Mary. (1996). <i>Management</i> . New Delhi: Prentice Hall of India Pvt. Ltd.
8.	Robbins, S., P., & David, A. (2001). <i>Fundamentals of Management</i> . New Delhi: Pearson India.

FASHION AND APPAREL TECHNOLOGY

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology		Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme											
Year	III	Core / Elective / Foundation FGT 1602C02: Seminar			Credits / Hours per week			03 (3+0) / 03			
Semester	VI	Year of Introduction: 2014 Year of Syllabus Revision: -			Maximum Marks / Grade			O (10 point scale)			
Mode of Transaction		Seminar									
Course Outcome (CO) FGT CO1 To instill reading practice, develop critical understanding and reasoning aptitude in the area of design, machinery, garment production and space management CO2 To explore the theories and methodologies that have evolved the field of garment technology and contribute their own inquiries to its advancement CO3 To develop self-confidence, presentation and oratory ability											
Unit No.	Topic			Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Seminar presentation, discussion, panel discussion on core and allied subjects and global intersections; Systems of analysis; Operational analysis; Time motion studies; Optimizing production procedure			45	100	4, 5	CO1 CO2 CO3	PSO7	SD	G	G ES HV PE
Reference Books											
1.	Magazines and Journals: Apparel International Clothes Line Manmade fibers Journal of Fashion Marketing Management Business World Business India										

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology		Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme											
Year	III	Core / Elective / Foundation FGT 1603C03: Industrial Engineering			Credits / Hours per week			03 (2+1) / 04			
Semester	VI	Year of Introduction: 2018 Year of Syllabus Revision: -			Maximum Marks / Grade			O (10 point scale)			
Mode of Transaction		Lectures and Practical									
Course Outcome (CO) FGT											
CO1 Strategies to improvise methodologies to minimize the input and maximize the productivity and efficiency CO2 Understanding of how to improve methods and reduce work content for better productivity and efficiency CO3 To help students understand the time and motion study CO4 To practically demonstrate the application of industrial engineering in apparel industry											
Unit No.	Topic			Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Work study: Method study: Analysis of processes, flow chart, string diagram, left and right hand chart, multiple activity chart, principle of motion economy, micro-motion stud; Work measurement: understanding the need and application of production standards for planning and organizing activities; Time study: time study as work measurement technique, understanding and significance of allowances in understanding of performance, rating for time study, application of pre-determined motion and time systems for the apparel industry			11	25	1, 2, 3	CO1	PSO3 PSO4	SD	G	ES
2	Capacity planning and line balancing: Man and machine calculation; Concept of line balancing and calculation			10	25	1, 2, 3	CO2	PSO3 PSO4			

3	Industry related norms: Occupational safety and health safety, safety criteria, industrial accident; Working premises; Housekeeping, lighting, noise and vibration, climate, exposure to toxic substance; Personal and protective equipment, ergonomics, work timings and work related welfare activity	9	20	1, 2, 3	CO3	PSO3 PSO4		
4	Practical: Application of work study and line balancing: Industrial engineering, work place designing with complete measurement, elemental break down, costing, improvement in operation, expected output, benefits, running cost difference / saving	30	30	2, 3, 4, 5, 6	CO4	PSO3 PSO4		

Reference Books


1.	Babu, V., R. (2012). <i>Industrial Engineering in Apparel Production</i> . New Delhi: Woodhead Publishing India Pvt. Ltd.
2.	Bheda, R. (2003). <i>Managing Productivity in the Apparel Industry</i> . New Delhi: CBS Publishers & Distributors.
3.	Cooklin, G. (1997). <i>Garment Technology for Fashion Designers</i> . New Delhi: Wiley India Pvt. Ltd.
4.	Carr, H. & Latham, B. (2008). <i>Technology of Clothing Manufacture - 4th Edition</i> . Oxford: Blackwell Publishing.
5.	Chuter, A. J. (1995). <i>Introduction to Clothing Production Management - 2nd Edition</i> , Oxford: Blackwell Publishing.
6.	Glock, R. E., & Kunz, G. I. (2005). <i>Apparel Manufacturing: Sewn Product Analysis - 4th Edition</i> . Chennai: Pearson India.
7.	Erwin, W. (1982). <i>Time Study Procedures</i> . Mumbai: Institute of Industrial Engineers.
8.	Nayak, R., & Padhye, R. (2015). <i>Garment Manufacturing Technology</i> . New Delhi: Woodhead Publishing.

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology		Academic Year			2019-20		
B.Sc. (Garment Technology): Honors Programme									
Year	III	Core /-Elective / Foundation FGT 1604C04: Logistics and Supply Chain Management			Credits / Hours per week			03 (3+0) / 03	
Semester	VI	Year of Introduction: 2018 Year of Syllabus Revision: -			Maximum Marks / Grade			O (10 point scale)	
Mode of Transaction		Lectures							
Course Outcome (CO) FGT									
CO1 To understand various aspects of logistics and warehousing CO2 To familiarize the students with the general issues concerning management of warehouse CO3 To impart knowledge about the evolution of supply chain theories and practices CO4 To understand the supply chain management of apparel industry CO5 To realize the role of IT in supply chain management									
Unit No.	Topic	Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Logistics: Importance of logistics and distribution; Development and growth of logistics; Integrated logistics: total logistics concept (TLC), strategic, tactical and operational planning for logistics and distribution, financial impact of logistics, 3PL, 4PL; Customer service and logistics: order processing, components of customer service, levels and measures of customer service	9	20	1, 2	CO1	PSO5	SD	G	ES
2	Warehousing and transportation: Warehousing: material handling, package testing, palletized, non-palletized, pallet movement, stacking; Transportation: time and place utility, factors influencing transportation, transportation service, characteristics, transportation systems, role of third	9	20	1, 2	CO1 CO2	PSO5			

	parties, LTL shippers, small volume shippers, freight forwarders, large bulk suppliers, hazardous material							
3	Supply chain management: Definition and significance; Beer game/textile game; Buyer supplier relationships, cross functional teams, supply chain drivers; Cycle inventory, safety inventory, EOQ, inventory carrying cost, inventory flow and shrinkage, obsolescence, push/pull inventory, stock out, storage cost; Just in time and QR logistics, vendor managed inventory, postponement in supply chain	11	25	1, 2	CO3	PSO5		
4	Apparel/textile supply chain: Distribution and procurement channels in supply chain; Strategic alliances: collaboration in apparel supply chain, collaborative product development, ECR, CPFR, VICS, green supply chain; Role of intermediaries in supply chain, measuring supply chain efficiency, value stream mapping in supply chain; Strategic lead time management: time based competition, concept of lead time and value engineering, lead time gap, time compression in supply chain, critical path management in supply chain	11	25	1, 2	CO4	PSO5		
5	Role of IT in supply chain management: Supply chain IT framework and IT practice; IT enabled supply chain management	5	10	1, 2	CO5	PSO5		

Reference Books

1.	Agrawal, D. K. (2015). <i>Textbooks of Logistics and Supply Chain Management</i> . New Delhi: MacMillan Publishers India Ltd.
2.	Christopher, M. (1992). <i>Logistics & Supply Chain Management: Strategies for Reducing Cost and Improving Service</i> . New Delhi: Pearson Education.
3.	Johnson, J. C., & Wood, D. F. (1990). <i>Contemporary Logistics – 6th Edition</i> . New Jersey: Prentice Hall.
4.	Lambert, D. M. & Stock, J. R. (1987). <i>Strategic Logistics Management</i> . New York: McGraw Hill.
5.	Li, L. (2014). <i>Managing Supply Chain Logistics: Competitive Strategy for a Sustainable Future</i> . London: World Scientific Publishing Co.
6.	Luo, Z. (2012). <i>Innovations in Logistics and Supply Chain Management Technologies for Dynamic Economies</i> . Hershey: Business Science Reference.
7.	Mangan, J., & Lalwani, C. (2016). <i>Global Logistics and Supply Chain Management – Third ed</i> . London: John Wiley & Sons Ltd.
8.	Mohanty, R. P., & Deshmukh, S. G. (2004). <i>Essentials of Supply Chain Management</i> . Ahmedabad: Jaico Publishing house.
9.	Rushton, A., Croucher, P., & Baker, P. (1989). <i>The Handbook of Logistics and Distribution Management – 5th Edition</i> . New Delhi: Kogan Page Limited.

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology		Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme											
Year	III	Core /-Elective / Foundation FGT 1605C05: Entrepreneurial Skills			Credits / Hours per week			04 (3+1) / 05			
Semester	VI	Year of Introduction: 2014 Year of Syllabus Revision: 2018			Maximum Marks / Grade			O (10 point scale)			
Mode of Transaction		Lectures and Practical									
Course Outcome (CO) FGT											
CO1 To acquaint the students with an in-depth knowledge source for an intending entrepreneur CO2 To enable students gain perspective of the entrepreneurial functions CO3 To understand the enterprise management and development process CO4 To aid students to adopt and implement the entrepreneurial functions in practice											
Unit No.	Topic			Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Entrepreneur and entrepreneurship: The concept of entrepreneur; Distinction between manager and entrepreneur; Qualities of a successful entrepreneur; Functions of an entrepreneur; Types of entrepreneurs; The concept of entrepreneurship; Nature and characteristics of entrepreneurship; Entrepreneurship and intrapreneurship			11	20	1, 2	CO1	PSO5 PSO6	EMP ENT SD	G	G ES HV PE
2	Enterprise start-up: Business system: an introduction; Nature, scope and types of business system; History and evolution of business system; Business ownership			8	15	1, 2	CO1	PSO5 PSO6			
3	Enterprise financing:			7	10	1, 2	CO2	PSO5			

	Institutional finance and support to entrepreneurs; Finance planning; Capital structure and primary policies					PSO6		
4	Enterprise management: Working capital and inventory management; Production and operation management; Marketing management; Personnel management; Quality management	11	20	1, 2	CO3	PSO5 PSO6		
5	Enterprise development: Growth strategies; Accounting; Sickness in enterprise; E-commerce; Franchising	8	15	1, 2	CO3	PSO5 PSO6		
6	Practical: Presentation of a detailed business proposal of any business related to garment industry	30	20	2, 3, 4	CO4	PSO5 PSO6		

Reference Books

1.	Chandran, R. (2009). <i>International Business - 2nd Edition</i> . Mumbai: Jaico Publishing House.
2.	Drucker, P. F. (2015). <i>Innovation and Entrepreneurship: Practices and Principles</i> . New York: Routledge Classics.
3.	Granger, M., & Sterling, T. (2011). <i>Fashion Entrepreneurship: Retail Business Planning</i> . London: Bloomsbury Publishing.
4.	Gupta, C. B., & Khanka, S.S. (2011). <i>Entrepreneurship and Small Business Management</i> . New Delhi: Sultan Chand & Sons.
5.	Hisrich, R. D., Peters, M. P., & Shepherd, D. A. (2008). <i>Entrepreneurship – Sixth ed</i> . New Delhi: Tata McGraw Hill Education Pvt. Ltd.
6.	Kotler, P. (2004). <i>Principles of Marketing - 10th Edition</i> . New Delhi: Prentice Hall.
7.	Krueger, N. F. (2002). <i>Entrepreneurship: Critical Perspectives on Business and Management</i> . New York: Routledge Classics.
8.	Kumar, A. (2012). <i>Entrepreneurship: Creating and Leading an Entrepreneurial Organization</i> . New Delhi: Pearson India Ltd.
9.	Mohanty, S. K. (2017). <i>Fundamentals of Entrepreneurship</i> . New Delhi: PHI Learning Pvt. Ltd.
10.	Sharma, S., Singh, B., & Singhal, S. (2005). <i>Entrepreneurship Development</i> . New Delhi: Wisdom Publication.
11.	Stokes, D., Wilson, D., & Mador, M. (2010). <i>Entrepreneurship</i> . Hampshire: Cengage Learning.

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology		Academic Year			2019-20				
B.Sc. (Garment Technology): Honors Programme											
Year	III	Core /-Elective / Foundation FGT 1606C06: International Trade Practices			Credits / Hours per week			02 (2+0) / 02			
Semester	VI	Year of Introduction: 2014 Year of Syllabus Revision: 2018			Maximum Marks / Grade			O (10 point scale)			
Mode of Transaction		Lectures									
Course Outcome (CO) FGT											
CO1 To gain the conceptual clarity of the theoretical aspects of international trade CO2 To impart fundamental knowledge regarding import and export CO3 To enable students to understand in detail the procedure to develop international and domestic trade											
Unit No.	Topic			Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Procedures and documents: International trade contract procedure; Methods of payments; International trade documents; Uniform customs and practices			12	40	1, 2	CO1	PSO5			
2	Import-export: Excise duty procedure for exports; Export and import procedure under customs; FEMA regulations relating to exports and imports			9	30	1, 2	CO2	PSO5	SD	G	ES HV PE
3	Policy and shipment: Foreign trade policy; Export credit from banks in India: pre-shipment and post-shipment credit			9	30	1, 2	CO3	PSO5			
Reference Books											
1.	David, A., & Robbins, S. P. (1996). <i>Human Resource Management</i> . New York: John Wiley.										
2.	Frings, G., S. (1999). <i>Fashion from Concept to Consumer</i> . New Jersey: Prentice Hall.										

3.	Gorden, L., J. (1961). <i>Economics for Consumer</i> . New York: American Book Co.
4.	Chris, G., B. (1960). <i>An Outline on Advertising</i> . New York: The Macmillan Co.
5.	Kreitner, R. (2004). <i>Management – 9th ed.</i> Boston: Houghton Mifflin.
6.	Kotler, P. (2004). <i>Principles of Marketing – 10th ed.</i> New Delhi: Prentice Hall of India Pvt. Ltd.
7.	Robbins, S., P., & Coulter, Mary. (1996). <i>Management</i> . New Delhi: Prentice Hall of India Pvt. Ltd.
8.	Robbins, S., P., & David, A. (2001). <i>Fundamentals of Management</i> . New Delhi: Pearson India.

FASHION AND APPAREL TECHNOLOGY

		The Maharaja Sayajirao University of Baroda Faculty of Family and Community Sciences Institute of Fashion Technology Programme of Garment Technology		Academic Year			2019-20					
B.Sc. (Garment Technology): Honors Programme												
Year	III	Core / Elective / Foundation FGT 1607C07: Apparel Merchandising and Retailing			Credits / Hours per week			03 (2+1) / 04				
Semester	VI	Year of Introduction: 2018 Year of Syllabus Revision: -			Maximum Marks / Grade			O (10 point scale)				
Mode of Transaction		Lectures and Practical										
Course Outcome (CO) FGT												
CO1 To understand the correlation between merchandising and production functions in apparel buying and manufacturing CO2 To provide a comprehensive understanding of the buying, retailing and merchandising functions CO3 To understand fashion retailing and different techniques used in retail fashion promotion CO4 To impart knowledge about different promotion and visual merchandising techniques												
Unit No.	Topic				Contact Hours	Weightage (%)	BT Level	CO	PSO	Elements of Employability (Emp)/ Entrepreneurship (Ent)/ Skill Development (SD)	Relevance to Local (L)/ National (N)/ Regional(R)/Global (G)	Relation to Gender (G), Environment and Sustainability (ES), Human Values (HV) and Professional Ethics (PE)
1	Merchandising: Buying agency and manufacturer: merchandising definitions, jobs and roles of merchandisers in buying offices and manufacturing/exporting units, apparel sourcing structure, direct exporting, indirect exporting, foreign manufacturers, quick response sourcing trends; Vendor selection criteria: location, skills, product, quality, deliver, cost, capacity, government regulations, political and economic environments, human rights; Communication with buyers: buyer checklist (when meeting a new buyer what aspects that buyer and manufacturer need to				12	25	1, 2	CO1	PSO5 PSO6	EMP SD	G	G ES HV PE

	discuss); Range presentation to the buyer (to assess logical sequencing)							
2	Buying cycle: Buying cycle of merchandiser: types of buying cycles / seasonal; Time and action calendar of merchandiser: comparative and directional shopping, range planning and selection of critical path for product development, production and delivery	8	15	1, 2	CO1	PSO5 PSO6		
3	Retailing: Principle of retailing; Multi-channel retailing; Retail finance strategy; Customer relationship management; Structure of retail firm	10	20	1, 2	CO2 CO3	PSO5 PSO6		
4	Practical: Retail fashion promotion: Fashion advertising; Publicity; Special events: fairs / exhibitions / business service management	10	10	2, 3, 5	CO2 CO3	PSO5 PSO6		
5	Practical: Visual merchandising: Store planning; Seasonal visual merchandising; Windows; Interiors; Elements of visual merchandising; Departments	20	20	2, 3, 5, 6	CO4	PSO5 PSO6		

Reference Books

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2.	Bhalla, S., & Anuraag, S. (2010). <i>Visual Merchandising</i> . New Delhi: Tata McGraw Hill Education Pvt. Ltd.
3.	Clodfelter, R. (2013). <i>Retail Buying: From Basics to Fashion – Fourth ed.</i> New York: Fairchild Books.
4.	Curtis, E. (2004). <i>Fashion Retail</i> . New Delhi: Wiley India Pvt. Ltd.
5.	Diamond, J., & Diamond, E. (2010). <i>Contemporary Visual Merchandising and Environmental Design</i> . New Jersey: Prentice Hall.
6.	Diamond, J., Diamond, E., & Diamond, S. (2015). <i>Fashion Retailing: A Multi-channel Approach – Third ed.</i> London: Bloomsbury Publishing.
7.	Frings, G. (1999). <i>Fashion from Concept to Consumer – 9th Edition</i> . New Jersey: Prentice Hall.
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9.	Hebrero, M. (2015). <i>Fashion Buying and Merchandising: From Mass-Market to Luxury Retail</i> . Canada: CreateSpace Independent Publishing Platform.
10.	Kincade, D. H. (2011). <i>Merchandising of Fashion Products</i> . New Delhi: Pearson Education.
11.	Koumbis, D. (2014). <i>Fashion Retailing: From Managing to Merchandising</i> . London: Bloomsbury Publishing.
12.	Rosenau, J. A., & Wilson, D. L. (2006). <i>Apparel Merchandising: The Line Starts Here - 2nd Edition</i> . New York: Fairchild Publications.
13.	Strahle, J. (2017). <i>Green Fashion Retail</i> . Singapore: Springer Science.