



CHOICE BASED CREDIT SYSTEM
**(Semester Scheme with Multiple Entry and Exit Options
for Under Graduate Course)**

Syllabus for B.Sc. (Fashion & Apparel Design)

(I & II Semesters)

2021-2022 onwards

PREAMBLE

The curriculum designed by the committee in trajectory with National Education Policy 2020 guidelines aims to provide framework for understanding fashion design and accessories by sensitizing students to conceptual, visual and perceptual design process. The framed syllabus and the course policy is learner centric with varied levels of skills in the course of each academic year. Program structure and selected courses give diverse choice of subjects according to changing trends in fashion and design under Choice Based Credit System.

The textile and apparel industry is pivotal for the Indian economy by way of its momentous contribution to the GDP, industrial output, export earnings and employment generation. Government of India's thrust on textiles through 'Make in India', coupled with its emphasis on reforms and ease of doing business, augur well for the industry which offers a resilient outlook going forward. The textile sector in India is poised to grow exponentially in the coming years.

The Indian fashion industry needs design professionals with in-depth knowledge & skills relating to design innovation and technology. Considering the domestic and global requirement and challenges, the B.Sc. in Fashion and Apparel Design (Degree/Honours) course curriculum has been designed to help upcoming design professionals to demonstrate their personal design philosophy, perpetuate innovation and creativity. This will enable the industry to come up to the global standards to apply the knowledge of designing in various fields.

As envisioned in the National Education Policy 2020, the syllabus offers holistic education and all round development in undergraduate studies under Choice Based System. The main objective of this course is to orient the students towards the various facets of fashion industry. The students will be empowered with knowledge, technical know-how, skills required for various roles in the industry and entrepreneurship for embarking on their professional careers.

Programme Objectives

1. To empower students to have satisfying and fruitful career in fashion industry.
2. To equip students with knowledge of design & creativity which would in turn help them pursue higher education.
3. To empower students with ample knowledge to set up new start-ups or Self-help groups.
4. To encourage entrepreneurial skills and technical knowledge for national and international fashion centres and apparel industry
5. To provide an understanding of Fashion and Apparel Design in various fields of fashion, textiles, apparel, furnishings, home textiles, and retail business.
6. To provide hands-on experience on the upgraded technologies.
7. To provide experience in responding to market opportunities with creative and innovative products that integrate a set of academic disciplines such as fashion, textile materials, design fundamentals, business fundamentals, sourcing, data mining of market information, and new developments in fashion and apparel industry.

Programme Outcomes

By the end of the Programme the students will

- 1:** Gain knowledge of the fundamental principles of fashion, apparel, and design.
- 2:** Inculcate knowledge on the fashion process from conceptualisation to technical expertise.
- 3:** Apply knowledge and skills in the use of basic tools, techniques and processes sufficient to produce work from specification to finished products.
- 4:** Use CAD applications in par with the industry demands.
- 5:** Foster a spirit of zeal in learning and communicating fashion towards professional development.
- 6:** Become familiar with upcoming trends and practices in fashion and apparel sectors.
- 7:** Recognize the professional and personal responsibility of Designers to the community.
- 8:** Understand techniques that impacts fashion and apparel industry to meet specific consumer demands.
- 9:** Apply logical thinking gained from the knowledge acquired.
- 10.** Exhibit skills leading to employability in fashion and allied industries.
- 11:** Interpret design concepts and ideas represented through illustrations, photographs, graphics and visual display of merchandise.
- 12.** Create global design products utilising knowledge of new technology and sustainability in Fashion.
- 13:** Comprehend sustainability in their design aesthetic and design sustainability.
- 14:** Develop entrepreneurial spirits through start-ups to function independently to promote their design vision through creative and innovative work.

**Proposed Structure (IC Model) for Undergraduate Programme
B.Sc. /B.Sc. (Honours) in Fashion and Apparel Design**

Sem.	Discipline core (DSC) (L+T+P) (Credits)	Discipline Elective (DSE) Open Elective (OE) (L+T+P) (Credits)	Ability Enhancement Compulsory courses (AECC), Languages (L+T+P)		Skill Enhancement Courses (SEC)			Total Credits
					Skill Based (L+T+P)	Value based (L+T+P)		
I	FD 1.1 (3+0+2) – Textile Science	OE 1 (3+0+0): Textiles and Costumes of India	L1-1 Language -I (3+1+0) (3)		SEC-1: Digital Fluency (2) (1+0+2)	Physical Education - Yoga (1) (0+0+2)	Health & Wellness (1) (0+0+2)	26
	FD 1.2 (3+0+2) – Fundamentals of Fashion Design		L2-1 Language -II (3+1+0) (3)					
	FD 1.3 (0+0+3) – Basics of Pattern Making and Garment Construction							

Sem.	Discipline core (DSC) (L+T+P)	Discipline Elective (DSE) Open Elective (OE)	Ability Enhancement Compulsory courses (AECC), Languages (L+T+P)		Skill Enhancement Courses (SEC)			Total Credits
					Skill Based (L+T+P)	Value based (L+T+P)		
II	FD 2.1 (3+0+2) – Dyeing & Printing in Textiles	OE-2(3+0+0): Clothing Care & Maintenance	L1-2 Language -I (3+1+0) (3)		Physical Education – Sports (1) (0+0+2)	NCC/NSS/R&R(S&G) / Cultural (1) (0+0+2)		26
	FD 2.2 (3+0+2) – Fashion Design & Illustration		L2-2 Language -II (3+1+0) (3)					
	FD 2.3 (0+0+3) – Garment Detailing -I			Environmental Studies (2)				

Exit option with certificate in Fashion & Apparel Design (with a Minimum of 48 Credits).

Scheme of Examination

B.Sc. (FASHION & APPAREL DESIGN)								
SEMESTER – I								
CODE	Course	Theory/ Practical	Instruct ion Hrs/wk	Duration of Exam (Hrs)	Marks			CREDIT
					IA	Exam	Total	
	Language I	Theory	4	3	40	60	100	3
	Language II	Theory	4	3	40	60	100	3
FD1.1T FD1.1P	Textile Science	Theory	3	3	40	60	100	3
		Practical	4	4	25	25	50	2
FD1.2T FD1.2P	Fundamentals of Fashion Design	Theory	3	3	40	60	100	3
		Practical	4	4	25	25	50	2
FD1.3P	Basics of Pattern Making and Sewing	Practical	6	4	50	50	100	3
FD OE-1	Open Elective	Theory	3	3	40	60	100	3
	SEC	Theory+ Practical	1+2	2	25	25	50	2
	PE-Yoga	Practical	2	-	25	-	25	1
	H&W	Practical	2	-	25	-	25	1
					375	425	800	26

SEMESTER – II								
CODE	Course	Theory/ Practical	Instruct ion Hrs/wk	Duration of Exam (Hrs)	Marks			CREDIT
					IA	Exam	Total	
	Language I	Theory	4	3	40	60	100	2
	Language II	Theory	4	3	40	60	100	2
FD2.1T FD2.1P	Dyeing & Printing in Textiles	Theory	3	3	40	60	100	3
		Practical	4	4	25	25	50	2
FD2.2T FD2.2P	Fashion Design & Illustration	Theory	3	3	40	60	100	3
		Practical	4	4	25	25	50	2
FD2.3P	Garment Detailing -I	Practical	6	4	50	50	100	3
FD OE-2	Open Elective	Theory	3	3	40	60	100	3
	SEC	Theory+ Practical	1+2	2	25	25	50	2
	PE-Sports	Practical	2	-	25	-	25	1
	NCC/NSS/R&R/CA	Practical	2	-	25	-	25	1
					375	425	800	26

I Semester B.Sc.
FD 1.1 T - Textile Science (Theory)

Number of Theory Credits	Number of lecture hours /semester	Number of practical credits	Number of practical hours /semester
3	42	2	56
<p>Course outcomes: On successful completion of the course, the students will be able to</p> <ul style="list-style-type: none"> • Understand the classification, characteristics and use of textile fibres. • Analyse the basic components of fibres and their relationship to performance. • Gain knowledge of fibres, yarns, methods of fabric construction. • Understand the performance and suitability of fabric for apparels. • Identify and differentiate fabric structures and types. • Design and develop woven fabrics. 			
Unit – 1			Hrs.
<p>Chapter 1 Introduction to Textile fibers, terminology, textile yarn, staple & filament, sources and classification of fibers Natural Fibers- Structure, physical, chemical, thermal properties and end use.</p> <ul style="list-style-type: none"> - Cellulose fibres- Cotton, Linen, Banana fibre - Protein fibres- Silk, Wool - Regenerated Cellulosic fibres- Viscose, Acetate rayon, Modal, Bamboo, Lyocell. 			4
<p>Chapter 2 Synthetic Fibers – Structure, physical, chemical, thermal properties and end use.</p> <ul style="list-style-type: none"> - Nylon, polyester, acrylic, modacrylic, polypropylene - Elastomeric fibres (spandex & Lycra). 			4
<p>Chapter 3 Polymers - Definition: Polymerization, degree of polymerization, Types of polymers - Homo polymer & co-polymer, types of polymerization - addition and condensation, Requirements of fibre forming polymer, Concept of polymer orientation and crystallinity.</p>			4
Unit -2			Hrs.
<p>Chapter 4 Spinning - Definition, types of yarn - single, 2 ply, 3 ply. Yarn twist and yarn count system. Spinning process - Ring and open yarn, compact yarn, air jet spinning and difference between rotor and ring spinning. Woolen and worsted yarn, flow chart for manufacturing of carded, combed and folded yarn, advantages.</p>			6

<p>Chapter 5 Blends - Definition, types, advantages and end use of blended yarn (P/C, P/V, P/W, W/V).</p> <p>Chapter 6 Fancy yarns - Types, properties and end use, texturization. Sewing threads- types, properties and end use.</p>	<p>2</p> <p>2</p>
<p>Unit -3</p>	<p>Hrs.</p>
<p>Chapter 7 Introduction to fabrics - Classification based on manufacturing technology. Methods of fabric formation - Woven, knitted and nonwovens. Fabric properties & end use. Geometrical properties and their importance yarn count, thread density, fabric width, thickness, fabric weight / gsm.</p> <p>Chapter 8 Woven fabric formation - Flow chart of woven fabric manufacture and objectives. Weaving preparatory, objectives and study of process - winding, warping, sizing, drawing, denting and weft winding. Introduction to loom - classification, working principle - primary, secondary and tertiary motions of weaving. Classification of woven fabrics - Hand loom & power loom and its characteristics. Classification of looms and their salient features.</p> <p>Elementary weaves Classification of weaves, characteristics, construction, salient features of plain weave, variation (Rib, Basket), twill weave - variation (RHT, LHT, pointed & herring bone), satin / sateen weave - variation, fabric design and graphical representation of the above mentioned weaves. Introduction, properties and salient features of crepe fabrics - Georgette, chiffon, extra threads, warp and weft pile, brocade & damask, terry pile structures.</p> <p>Chapter 9 Introduction to knitting - Terminology, classification. Weft knitting - single jersey, modified single jersey, purl, rib, interlock. Warp knitting - tricot and rachel, properties and end uses. Introduction to nonwovens - terminology, types-needle punch, spun bonding, felting technique, properties and end uses.</p>	<p>8</p> <p>8</p> <p>4</p>

References
<ul style="list-style-type: none"> • Bernard P. Corbman, “Textiles: Fibre to Fabric”, McGraw Hill Education, 6th edition, 1985. • Billie J. Collier, Phyllis G. Tortora, “Understanding Textiles”, Pearson, 6th edition, 2000. • Gohl E.P.G., Velensky, L.D, “Textile Science” CBS Publishers and Distributors, 2nd edition, 2005. • Gordon Cook J, “Hand Book of Textile Fibres”, Woodhead Publishing, 5th revised edition, 1984. • Gilbert R. Merrill, “Cotton Opening and Picking”, Universal Publishing Corporation, 1999. • Hall A.J., “The standard Hand Book of Textiles”, Wood Head Publishing, 8th edition, 2004.

I Semester B.Sc.
FD 1.1 P - Textile Science (Practical)

No. of practical Credits - 2	Number of practical hours - 56
Course outcomes: On successful completion of the course, the students will be able to	
<ul style="list-style-type: none"> • Identify fibres, sources, and their properties. • Gain knowledge of yarn types and their properties • Demonstrate knowledge of textiles and application of skills in the product development. • Analyse compatibility of fabric to meet performance criteria of textile. 	
Unit 1	6
Identification of different fibers by physical method - feel test, burning test, microscopic test and chemical method. Natural fibers - Cotton, silk, wool. Man-Made - Polyester, viscose, nylon, acrylic.	
Unit 2	8
Determination of yarn twist and yarn count. Determination physical properties of Sewing thread – No. of ply, yarn twist, yarn count, yarn defect, visual inspection of various sewing thread packages. Identification of yarns by physical method – Spun, filament yarns, ply and novelty yarns.	
Unit 3	12
Determination of geometric parameters of woven fabric – EPI/PPI, warp & weft count, cover factor, crimp%, fabric thickness, fabric weight/gsm.	
Unit 4	16
Sample development of 5x5 inch size woven sample for the weaves – plain and its variation (rib and matt weave), twill weave (RHT and LHT), satin and sateen with drafting and denting plan for all weaves.	

Unit 5	8
<p>Collection and portfolio preparation of different commercial samples with different weave structures - Organdy, muslin, taffeta, shantung, canvas, tweed, oxford shirting, monk's cloth, chiffon, georgette, seersucker, denim, gabardine, satin, sateen, brocade, damask, leno or gauze. Knit structures - single knits - single jersey, Lacoste, double knits - rib knit, purl knit, interlock knit, cable fabric, bird's eye, cardigans, Milano ribs, pointelle. Non-Woven - Felts, needle punch, tea bag paper, face cloths, shingling and synthetic fiber paper Note: Minimum 25 samples.</p>	
Unit 6	6
<p>Collection and development of fabric portfolio of the different commercial samples with different weaves and weight.</p> <p>A) Apparel - Women's wear (formal, casual, party, sports/active wear, leisure wear) - 4 samples for each category (sample size - 2x2 inch).</p> <p>B) Furnishing - Fabric used for curtains, upholstery (furniture cover cloth) (sample size - 4x4 inches).</p> <p>C) Households application - Kitchen towels. Mop cloth, carpets, and table cloth etc. - 2 samples for each category (sample size 4 x 4 inches).</p> <p>D) Support materials for garments and trims - Interlinings, linings, tapes, elastic, shoulder pad, etc.</p>	

I Semester B.Sc.

FD 1.2 T - Fundamentals of Fashion Design (Theory)

Number of Theory Credits	Number of lecture hours /semester	Number of practical credits	Number of practical hours /semester
3	42	2	56
<p>Course outcomes: On successful completion of the course, the students will be able to</p> <ul style="list-style-type: none"> • Basic principles and techniques of fashion design. • Learn all the fashion terminologies. • Understand the principles of colour theory and their application. • Develop a skill for drawing basic croqui and basic sketching. 			
Unit – 1			Hrs.
<p>Chapter 1 Fashion – Introduction, terminologies - fashion, style, taste, trend, fad, classics, cycle, boutique, haute couture, designer, Prêt a Porter, silhouette - types of silhouette – natural body, slim line, wedge, hour glass, extreme volume silhouette, croqui, muse, knock off, avant-garde, toile, atelier, bespoke, collage, frottage, montage.</p>			4
<p>Chapter 2 Design - Definition and types – structural and decorative design - Natural/ geometric/ abstract/ stylized/ ethnic/ conventional, requirements of a good structural and decorative design, Application of structural and decorative design in a dress, selection and application of trimmings and decorations.</p>			4
<p>Chapter 3 Elements of design – Line, shape or form, colour, size and texture. Principles of design - Balance – formal, informal and radial, rhythm- through repetition, radiation and gradation, emphasis, harmony and proportion. Advantages and uses in fashion.</p>			5
Unit - 2			Hrs.
<p>Chapter 4 Art media and application – pencils, colour pencils, oil pastels, water colours, poster colours, acrylic colours & fabric colours, markers.</p>			4
<p>Chapter 5 Colour - Introduction, colour wheel - primary, secondary and tertiary. Colour dimensions - hue, value and chroma, tint, tone, shade, colour harmony - related & contrasting colour harmonies & its sub divisions. Colour theory – Prang & Munsell colour systems. Colour psychology - colour and emotions, Indian approach to colour.</p>			5
<p>Chapter 6 Basic sketching techniques and sketching from life, perspective and its uses,</p>			5

Grid technique of rendering, principles of composition.	
Unit - 3	Hrs.
<p>Chapter 7 Introduction to anatomy, study of bone and muscular structure, proportions of males, females and children. Study of face, torso, legs and arms.</p>	5
<p>Chapter 8 Introduction to fashion art, proportion and the fashion figure - 8 head, 10 head, 12 head theory of fashion drawing.</p>	4
<p>Chapter 9 Theory of clothing origin, fashion cycle, length of cycle, fashion theories – trickle up, trickle down and trickle across, consumer identification with fashion life cycle - fashion leaders/ style icon/ followers/ innovators/ motivators/ victims, fashion for creative and artistic, principles of fashion, international major fashion centers. Principles of fashion movement - factors influencing fashion movement - accelerating factors, retarding factors, and recurring fashions. Predicting the movement of fashion.</p>	6

References
<ul style="list-style-type: none"> • Elisabetta Drudi, Tiziana Paci, “Figure Drawing for Fashion Design”, Pepin Press Publication, 2002. • Gavin Ambrose, Paul Harris, “The Visual Dictionary of Fashion Design”, Bloomsbury Publishing India Private Limited, 2007. • James Stockton, “Designers Guide to Colour”, Chronicle Books, San Francisco, 1984. • Maier, Manfred, “Basic Principles of Design”, Van Nostrand Reinhold, 1980. • Sharon L Tate, Mona S Edwards, “Inside Fashion Design”, Pearson Education India, 2006. • Stanyer Peter, “The Complete Book of Drawing Techniques”, Arcturus Publishing Ltd., 2003.

I Semester B.Sc.

FD 1.2 P - Fundamentals of Fashion Design (Practical)

No. of practical Credits - 2	Number of practical hours - 56
<p>Course outcomes: On successful completion of the course, the students will be able to</p> <ul style="list-style-type: none"> • Learn basics of sketching with different colour schemes and modes. • Practice dimensional sketching and colouring. • Understand colour patterns and combination. 	
Unit 1	
Introduction to art media and its applications, Line sketching and painting techniques, object drawing, simple rendering of art materials using pencil and colour pencils, still life of simple objects and fabrics draped at a distance using wet media, nature sketch of flowers and leaves using pastels and charcoal, landscape painting using mix media.	6
Unit 2	
Free hand drawing and grid technique of rendering. Design - natural/ geometric/ abstract/ stylized/ conventional. Principles of perspective drawing - Horizon, vanishing points, landscape drawing. One point, two point and three point perspective drawing.	10
Unit 3	
Elements of design - Point, line, shape, space, color and texture.	8
Unit 4	
Principles of design - Proportion, balance, rhythm, emphasis and harmony.	8
Unit 5	
Colour theory - Prang & Munsell colour systems. Colour wheel - primary, secondary and tertiary. Colour Dimensions - Hue, value and chroma, tint, tone, shade, colour harmony - related & contrasting colour harmonies & its sub divisions.	10
Unit 6	
Fashion illustration - Stick, block and fleshing of the fashion figure - 8 head, 10 head, and 12 head figures in simple standing poses.	14

I Semester B.Sc.
FD 1.3 P - Basics of Pattern Making and Garment Construction (Practical)

Number of Theory Credits	Number of lecture hours /semester	Number of practical credits	Number of practical hours /semester
NA	NA	3	84
<p>Course outcomes: On successful completion of the course, the students will be able to</p> <ul style="list-style-type: none"> • Classify sewing machines and understand their functioning. • Understand and learn pattern making techniques • Learn basic pattern making terminologies. • Construct basic pattern sets. 			
Unit – 1			Hrs.
<p>Chapter 1 Introduction to pattern making, identification of tools used for pattern making and garment construction - measuring tools, marking tools, cutting tools, sewing tools, pressing tools. Sketching of tools used for pattern making. Understanding and collection of papers of various gsm used in pattern making.</p>			8
<p>Chapter 2 Sewing machine – Identification of machine parts and functions, types-domestic sewing machine, industrial sewing machine, stitch formation, sewing machine attachments and uses. Sketching the basic sewing machine and parts and learning threading of single needle lock stitch machine, loading bobbin and bobbin case, fixing and removing the needle and care and maintenance of sewing machines. Stitching practice on paper and fabric (straight, curves, corners and circular).</p>			10
<p>Chapter 3 Demonstration of parts of a sewing machine, varieties of industrial sewing machines - single needle lock stitch machine, double needle lock stitch machine, chain stitch machines, over-lock machine, care and maintenance of sewing machine. Illustration of feeding mechanism - drop feed, differential feed, needle feed, compound feed & puller feed.</p>			10
Unit -2			Hrs.
<p>Chapter 4 Demonstration on types of sewing threads - function, performance, characteristics, causes of defects and remedies. Sewing machine needles - types, parts and functions Stitch classification - ASTM Standards, stitch dimensions and properties.</p>			8

<p>Chapter 5 Development of basic hand stitches - Temporary and permanent stitches, methods, importance and applications of basting, running, tacking, hand overcast, chain, button hole, hemming stitches - plain and blind hemming. Machine stitches - Lock stitch and over lock stitches. Seams - Definition, classification, ASTM Standards, seam and seam finishes, seam dimensions, SPI, seam defects causes and remedies.</p>	10
<p>Chapter 6 Introduction to pattern making techniques - Drafting, draping and flat pattern technique, advantages and uses. Pattern making terminologies - Marks and symbols (notches, punch/circles), pattern information (grain, part, piece, cut symbols) seam allowance, fabric terms (grain, bowing, skewing). Development of children's sloper.</p>	8
Unit -3	Hrs.
<p>Chapter 7 Body measurements - Importance, types of body measurements, body measuring method. Demonstration and calculation of average measurement for mass production of taking body measurements, anthropometric study, average analysis of body measurements and standardizing the measurements (at least measurements of 20 people to be collected for an average analysis).</p>	10
<p>Chapter 8 Design and development of kid's wear garment - Jabla, A - line frock, waistline frock, bush shirt and shorts with elastic.</p>	10
<p>Chapter 9 Design and development of long skirt and circular skirt.</p>	10

References
<ul style="list-style-type: none"> • Allyne Bane, "Flat Pattern Design", McGraw-Hill Inc. US, 1972. • Gerry Cooklin, "Introduction to Clothing Manufacture", Wiley-Blackwell, 2nd edition, 2008. • Harold Carr & Barbara Latham, "The Technology of Clothing Manufacture", Oxford Publications, USA, 1994. • Helen J Armstrong, "Pattern Making for Fashion Design", Pearson Education India, 5th edition, 2013. • Winfred Aldrich, "Metric Pattern Cutting", John Wiley & Sons, 3rd edition, 1994.

**I Semester
(Open Elective)
OE 1: TEXTILES AND COSTUMES OF INDIA**

Number of Theory Credits	Number of lecture hours /semester	Number of practical credits	Number of practical hours /semester
3	42	NA	NA
<p>Course Outcomes: On successful completion of the course, the students will be able to</p> <ul style="list-style-type: none"> • Gain knowledge in historical textiles and design from the historical time till date. • Understand about traditional woven textiles of different states of India. • Learn about the traditional costumes of different states of India. 			
<p>Unit 1 Textiles and costumes of India. Introduction, history, types, motifs and symbols, prehistoric textiles and costumes - costume components for men, women and children, hair and hair dresses. Indus Valley Civilization, Vedic age, Mughals, Guptas.</p>			6
<p>Unit 2 Ancient Indian textiles and costumes. History and social life, costumes, jewelry, textiles and dyes - Indus valley, Vedic, Mauryan, Shatavana period, Kushans, Gupta and Mughals.</p>			6
<p>Unit 3 Northern traditional textiles. Traditional woven textiles of North states of India – Brocades of Banaras, Chanderi and Tancoi, Himru, Pipli. Traditional costumes of North India - Jammu & Kashmir, Punjab, Himachal Pradesh, Haryana, Uttaranchal and Uttar Pradesh.</p>			8
<p>Unit 4 Southern traditional textiles. Traditional woven textiles of Southern states of India – Paithani and Pitamber, Pochampalli, Kancheevaram, Kalamkari, Mysore silk, Aarni Silk. Traditional costumes of Southern states of India – Tamil Nadu, Kerala, Karnataka and Andhra Pradesh.</p>			8
<p>Unit 5 Eastern traditional textiles. Traditional woven textiles of Eastern states of India – Dacca muslin, applique work of Bihar, Balucheri, Jamdhani. Traditional costumes of Eastern states of India – West Bengal, Bihar, Jharkhand, Arunachal Pradesh, Assam, Sikkim, Nagaland, Manipur, Mizoram, Meghalaya and Tirupura.</p>			7

<p>Unit 6 Western textiles Traditional woven textiles of Western states of India – Maheshwari sarees of Madhya Pradesh, Patola, Bandhini and Amrus. Traditional costumes of Western states of India – Rajasthan, Gujarat, Maharashtra, Madhya Pradesh, Chhattisgarh and Goa.</p>	7
References	
<ul style="list-style-type: none"> • Jamila Brij Bhusan “The Costumes and Textiles of India”, Taraporevala, Bombay. • John Gillow & Nicholas Barnad, “Traditional Indian Textiles”. Thames & Hudson, 1993. • Karen Baclawski, “The Guide to Historic Costumes”, Drama Publishers, 1995. • Martand Singh, “Saris’ of India – Bihar & West Bengal”, Wiley Eastern Ltd. 1993. • Parul Bharnager, “Traditional Indian Costumes & Textiles”, Abhishek Publication, 2009. • Ritu Kumar, “Costumes and textiles of Royal India”, Christie’s Books, 1999. • Roshen Alkazi, “Ancient Indian Costume”, Art Heritage, 1983. • Rta Kapur Chishti & Amba Sanyal, “Saris of India – Madhya Pradesh,” Wiley Eastern Ltd. 1989. 	

II Semester B.Sc.

FD 2.1 T - Dyeing and Printing in Textiles (Theory)

Number of Theory Credits	Number of lecture hours /semester	Number of practical credits	Number of practical hours /semester
3	42	2	56
<p>Course outcomes: On successful completion of the course, the students will be able to</p> <ul style="list-style-type: none"> • Learn and practice the dyeing of textiles made by natural and synthetic fibres. • Adapt the process parameters and use of dyeing machines for dyeing of textile materials. • Select the dyes and recipes for preparation of printing paste for printing of textile materials. • Apply various finishing treatment process and treat the fabric with different finishing agents. 			
Unit – 1			Hrs.
<p>Chapter 1 Introduction to wet processing - Terminologies, sequence of wet processing operations for cotton, silk, wool, synthetic and blended fabrics.</p>			2
<p>Chapter 2 Preparatory and dyeing process of cellulosic fibers. Preparation - Singeing, desizing, scouring, bleaching, mercerization - objectives, recipe, machineries used and the process. Dyeing - Dyeing process using direct, reactive, vat and sulphur dyes.</p>			5
<p>Chapter 3 Preparatory and dyeing process of protein fibers (wool and silk). Preparation for silk - Degumming and bleaching of silk - objectives, recipe, machineries used and process. Preparation for wool - Scouring, carbonizing of wool - objectives, recipe, machineries used and process. Dyeing - Dyeing process using reactive and acid dyes, reactive dyes, basic dyes.</p>			5
Unit -2			Hrs.
<p>Chapter 4 Dyeing of synthetic fibers using disperse dyes. Dyeing - Method of dyeing - stock, yarn, piece, union and garment dyeing</p>			5
<p>Chapter 5 Printing - Introduction, definition, printing styles and methods, Direct style-block, stencil, screen, roller, duplex, rotary, transfer printing, discharge style, resist style - batik, minor printing methods - flocking, marbling, photo printing, warp printing and air brush printing.</p>			5

<p>Chapter 6 Finishes – Introduction, definition, importance, classification of finishes - permanent and temporary finishes. Basic or routine finishes - stiffening, calendaring, weighing, tentering, mercerization. Aesthetic finishes - special calendaring, moiré embossed surface, glazed finish, acid and alkali finishes, softening and fading finishes.</p>	6
Unit -3	Hrs.
<p>Chapter 7 Functional finishes - Antimicrobial, antistatic, crease resistant, flame resistant, mothproof, shrinkage control, water repellent, water proof, micro encapsulation finishes, soil-release finishes.</p>	5
<p>Chapter 8 Stain removal, various solvents used and different methods of washing, difference between soaps and detergents. Chemical agents used in stain removal of coffee, blood, oil, grease, curry, juice, lip stick, hair dye. Care of textiles & fabrics - principles of laundering. Types - hand wash, machine wash and dry cleaning.</p>	5
<p>Chapter 9 Environmental concerns and social responsibility - Introduction to environmental issues - air pollution, water pollution, and solid waste pollution. Sustainability in the production of textile. Corporate social responsibility in textile industry.</p>	4

References
<ul style="list-style-type: none"> • Hall A J, “The standard Hand Book of Textiles”, Woodhead Publication, 2004. • Kate Broughton, “Textiles Dyeing”, Rockport Publishers Inc., 1996. • Mahapatra NN, “Textile Dyeing”, Woodhead Publishing India Pvt. Ltd., 2018. • Murphy W S, “Textile Finishing”, Abhishek Publishing, 2007. • Smith J E, “Textile Processing - Printing, Dyeing”, Abhishek Publishing, 2003. • Susheela Dantyagi, “Fundamentals of Textiles and their Care”, Orient Black Swan, 1980. • Wignate I B, “Textiles Fabrics & their Selection”, Prentice Hall, 6th edition, 1970.

II Semester B.Sc.
FD 2.1 P - Dyeing and Printing in Textiles (Practical)

No. of practical Credits - 2	Number of practical hours - 56
Course outcomes: On successful completion of the course, the students will be able to	
<ul style="list-style-type: none"> • Gain practical knowledge on dyeing methods. • Learn various methods of textile printing. • Identify and treat common fabric stains. 	
Unit 1	
Introduction to wet processing. Preparatory process - Desizing, scouring, bleaching and mercerization of cotton yarn/fabric	8
Unit 2	
Protein fiber - Degumming and bleaching of silk yarn / fabric, scouring and bleaching of wool fibre/yarn/fabric.	9
Unit 3	
Dyeing of cellulosic yarn/fabric by direct, reactive and vat dyes.	
Unit 4	
Dyeing of protein yarn/fabric by acid and reactive dyes.	10
Unit 5	
Printing of fabric using block and screen using pigment, reactive and direct dyes. Resist style of dyeing /printing - Tie and dye/ shibori / batik.	14
Unit 6	
Stain removal of oil, grease, blood, coffee and beverages	6

II Semester B.Sc.

FD 2.2 T - Fashion Design & Illustration (Theory)

Number of Theory Credits	Number of lecture hours /semester	Number of practical credits	Number of practical hours /semester
3	42	2	56
<p>Course outcomes: On successful completion of the course, the students will be able to</p> <ul style="list-style-type: none"> • Develop a skill for drawing basic croqui with facial details. • Create stylized croqui for fashion illustrations. • Understand the design process of fashion forecasting and fashion research. • Learn sketching technique of flats and specs. • Understand the fashion clothing categories. 			
Unit – 1			Hrs.
<p>Chapter 1 Introduction to fashion illustration and brief history of fashion illustration. Study of well-known fashion illustrators (René Bouché, David Downton, Jason Brooks, Lorenzo Mattotti). The role of fashion illustration as a mode of expression and representation for contemporary apparel styles and trends.</p>			3
<p>Chapter 2 Fashion figure - Study of various proportions, balance line in drawing fashion figures, gestures and movements. 6½, 8 head, 10 head, 12 head figures, the fashion face arms, legs, hands and feet.</p>			6
<p>Chapter 3 Figure analysis, body types - Hourglass, inverted triangle, pear shape, apple shape and lean column (rectangular) designing for diverse body types and ages - infant, toddler, children, young boys and girls.</p>			5
Unit -2			Hrs.
<p>Chapter 4 Garment style features - Silhouettes - types of silhouettes, sleeves - set-in sleeve and bodice combination sleeves, dress and blouses - formal and casual, shirts - men and women, skirts - flared, pencil, circular, pegged, gored, trousers - pencil, pleated, bell bottom, cargo, flared, collars - shirt, shawl, mandarin, flat, peter pan, yokes - yoke with fullness, yoke without fullness, asymmetrical yokes, pockets - patch, welt, side, kangaroo, in-seam pocket, cuffs - single, double, pointed, French cuff, band cuff.</p>			5

<p>Chapter 5 Fashion clothing psychology - Political influence, social influence, environmental influence, geographical influence, cultural influence, environment of fashion, colour psychology, human behavior and clothing, clothing and gender differentiation, clothing and personality, clothing and attitude, clothing and motivation, grooming (for male and female).</p>	5
<p>Chapter 6 Fashion seasons – Introduction and terminologies - International market and Indian market, design, prototype, manufacturing, product launch, retail store, couture, RTW, mass-produced, fashion designer, stylist, fashion journalist, fad, fit, pattern, size label, care label, laundering, fashion shows, catwalk, fashion magazines, webzines, social media, lingerie, longue wear, fragrance, endorsement, model, mannequin, merchandise. Season - winter, summer, spring autumn.</p>	4
Unit -3	Hrs.
<p>Chapter 7 Indian fashion designers - Sabyasachi Mukherjee, Ritu Kumar, Ritu Beri, JJ Valaya, Wendell Rodrick’s, Raghavendra Rathod, Manish Malhotra, and their brands based on following criteria - Introduction of the designer, education, specialty, brand / label, contribution to fashion, product range, outlets, collection showcase. Fashion brands, fashion capitals, fashion icons and role of fashion in movies, sports and politics.</p>	5
<p>Chapter 8 International fashion designers- Christian Dior, Gianni Versace, Coco Chanel, Donna Karan, Calvin Klein and their brands based on following criteria - Introduction of the designer, education, specialty, brand / label, contribution to fashion, product range, outlets, collection showcase. Fashion brands, fashion capitals, fashion icons and role of fashion in movies, sports, and politics.</p>	5
<p>Chapter 9 Fashion clothing categories - Introduction, types, based on age and activity, styling, price and size ranges for men’s, women’s and kid’s wear.</p>	4

References	
<ul style="list-style-type: none"> • Bina Abling, “Fashion Sketchbook”, Bloomsbury Academic USA, 6th edition, 2015 • Jaeil Lee, Comitte Steen, “Technical Source Book for Designers”, Bloomsbury Academic USA, 2nd edition, 2015. • John Wiley, "Theory of Fashion Design" John Wiley and Sons. Inc, New York, 1990. • Patrick John Ireland, “Fashion Design Illustration - Children", Batsford, London, 1996. • Patrick John Ireland, “Fashion Design Illustration - Women", Batsford, London, 1996. • Peacock J, “Fashion Source Books", Thames and Hudson, London, 1998. • Tisianna Paci, “Figure Drawing for Fashion Design”, Pepin Press Publication, 2002. 	

II Semester B.Sc.
FD 2.2 P - Fashion Design & Illustration (Practical)

No. of practical Credits - 2	Number of practical hours -56
Course outcomes: On successful completion of the course, the students will be able to	
<ul style="list-style-type: none"> • Understand the use of textures on various fabrics. • Sketch human figures and understand shapes and features. • Develop folio with design concepts inspired by designers. 	
Unit 1	
Fashion illustrations - 6½, 8 head, 10 head, and 12 head fashion figures - standing, moving and action.	
Unit 2	
Model drawing - Children, female and male figures. Body figures and features - Face, eyes, nose, lips, ears, arms and legs. Hair styling - Women/men basics.	
Unit 3	
Fabric rendering - Learning to simulate textures of various fabrics - Cotton, silk, fur, net, leather, velvet, denim, corduroy, georgette, chiffon, knitted, crochet, lace, embroidered and printed.	
Unit 4	
Sketching and rendering of garment features - blouses - formal and casual, shirts - men and women, skirts - flared, pencil, circular, pegged, gored, trousers - pencil, pleated, bell bottom, cargo, pedal pushers, collars - shirt, shawl, mandarin, flat, peter pan, yokes - yoke with fullness, yoke without fullness, pockets - patch, welt, side, kangaroo, in-seam pocket, cuffs - single, double, pointed, French and band cuff, sleeves - set-in sleeve and bodice combination sleeve.	
Unit 5	
Development of folio with design concepts inspired by one Indian Designer - Sabyasachi Mukherjee, Ritu Kumar, JJ Valaya, Wendell Rodrick's, Raghavendra Rathod, Manish Malhotra, Bhumika, Shyamal.	
Unit 6	
Development of folio with design concepts inspired by one International Designer - Christian Dior, Gianni Versace, Coco Chanel, Donna Karan, Calvin Klein.	

II Semester B.Sc.
FD 2.3 P - Garment Detailing-I (Practicals)

Number of Theory Credits	Number of lecture hours /semester	Number of practical credits	Number of practical hours /semester
NA	NA	3	84
<p>Course outcomes: On successful completion of the course, the students will be able to</p> <ul style="list-style-type: none"> • Apply knowledge about industrial method of pattern making, grading and marker plan. • Understand about garment sizes and categories. • Handle special fabrics for garment construction. • Learn minor and major garment construction techniques. 			
Unit – 1			Hrs.
<p>Chapter 1 Preparation of basic block - Pattern set (bodice front, back, sleeve, skirt - front and back), development of basic pattern set.</p>			8
<p>Chapter 2 Flat pattern technique - Introduction, types, application and uses (pivot and slash technique).</p>			10
<p>Chapter 3 Fullness - Introduction, types of fullness, application and uses, development of Samples Garment detailing - Dart manipulation - single dart and double series. Conversion of darts to tucks, pleats, gathers, and stylines. Radiating and graduating darts.</p>			10
Unit -2			Hrs.
<p>Chapter 4 Major components - Introduction, definition, terms, application, classification and types, development of samples. Collars - Definition, terms, classification and types - Peter pan, sailor, turtle collar, shawl, formal shirt collar, mandarin collar and with its variations - construction. Yokes - Definitions, purpose, types - with fullness and without fullness, shapes - construction Sleeves – Definition, purpose, terms, classification and types – set in, plain puff sleeve, raglan, Magyar sleeve.</p>			10
<p>Chapter 5 Minor components - Introduction, definition, terms, application, classification and types, development of samples. Pockets - Definitions, purpose, types - patch pockets, patch pockets with flap,</p>			12

<p>seam pockets, welt pockets and variations. Cuff - Definitions, purpose, types – single, double and shaped cuff. Plackets - Definition, types - self placket, continuous bound placket, two piece sleeve placket and shirt placket. Neck line finishes - Definition, types - piping, facing (bias facing, shaped facing) bias binding.</p> <p>Chapter 6 Trims-Definition, types, frills, ruffles, ricrac, faggoting, applique, lace, motifs, scallop edging, smocking, basic embroidery, decorative fastenings. Development of folio.</p>	08
Unit -3	Hrs.
<p>Chapter 7 Demonstration of garment categories - Silhouettes - variations, torso dress, princess line, panel, with waistline, without waist line garments.</p> <p>Chapter 8 Incorporation of garment closures on samples - Introduction, types - Hook and eye, press buttons, shirt button and button holes, visible and concealed zippers, velcro.</p> <p>Chapter 9 Develop garments for women using major and minor components.</p>	10 8 8

References
<ul style="list-style-type: none"> • Elizabeth Liechty, Judith Rasband, “Fitting and Pattern Alteration”, Bloomsbury Academic USA, 2016. • Helen J Armstrong, “Pattern Making for Fashion Design”, Pearson, 5th edition, 2013. • Martin M Shoben, Patrick J Taylor, “Grading for the Fashion Industry”, LCFS Fashion Media, 2004. • Natalie Bray, “Dress Fitting - Basic Principles and Practice”, BSP Professional Book Publishers, 2nd edition, 1991. • Patric Taylor, “Grading for the Fashion Industry”, Stanley Thomas Ltd., 1990.

**II Semester
(Open Elective)
OE 2 - CLOTHING CARE AND MAINTENANCE**

Number of Theory Credits	Number of lecture hours /semester	Number of practical credits	Number of practical hours /semester
3	42	NA	NA
<p>Course Outcomes: On successful completion of the course, the students will be able to</p> <ul style="list-style-type: none"> • Learn aspects related to care and maintenance of clothing. • Understand washing methods for different types of clothing and storage. • Differentiate between soaps and detergents. • Gain knowledge about stain removal and care of expensive clothes. 			
<p>Unit 1 Water- hard and soft water, methods of softening water. Zeolite or base exchange method. Determination of water hardness.</p>			6
<p>Unit 2 Laundry soaps – Manufacture of soap and methods, composition of soap, types of soap, soap less detergents, chemical action and advantages of detergents. Difference between soaps and detergents.</p>			6
<p>Unit 3 Laundry equipment and reagents: Study of laundry equipment and laundry reagents - soaps - detergents - cleaning action of soaps, indigenous cleaning agents - rita nut - shikakai - green gram - bran solution - study of modern and industrial cleaning agents</p>			8
<p>Unit 4 Stiffening agents: Study of stiffening agents - purpose of stiffening- classification of stiffening agents preparation and uses of stiffeners- natural and commercial starches - preparation of starch for use – bleaching agents - blueing and tinting agents and their application – optical whiteners.</p>			8
<p>Unit 5 Washing machine and care labels - Study of different types of house hold/industrial washing machine- rotary - swirling - pressure - tumble wash etc.; various systems of care labeling-washing instruction. Bleaching instruction-drying instruction-ironing instruction-dry cleaning instruction. Placement of labels on garments.</p>			7
<p>Unit 6</p>			

Stain removal: Principles of laundering - stain removal - various solvents for stain removing blood, tea, rust; oil/grease etc. – different methods of washing - application of friction by hand rubbing - scribing – tumble wash. General rules and ways of stain removal	7
References	
<ul style="list-style-type: none"> • Dantyagi S., “Fundamentals of Textile and Their Care”, Oriental Longmans Ltd, New Delhi, 1996. • Denlkar, “Household Textiles and Laundry Work”, Atma Ram and Sons, Delhi, 1993. • Davis, “Laundry and Clothing Care”, Drama Book Publishers, 1995. • Neomi D'Souza, “Fabric Care”, New Age International Publisher, 1998. • Parthiban M, Srikrishnan MR, “Apparel Finishing and Clothing Care”, WPI, 2020. • Rajkishore Nayak, Saminathan Ratnapandian, “Care and Maintenance of Textile Products Including Apparel and Protective Clothing”, CRC Press, 1st edition, 2018. 	

QUESTION PAPER PATTERN (Theory)

**I/II Sem. B.Sc. Examination
(2021-22 Onwards)
FASHION AND APPAREL DESIGN
Paper code and Title of the paper**

MAX MARKS-60

TIME: 3Hrs

**Instructions to the Candidates: i. *All sections are compulsory*
ii. *Illustrate wherever necessary***

SECTION – A

1. Answer any 10 of the following (10x2=20)

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.

SECTION – B

II. Answer any 5 of the following (5x4=20)

- 13.
- 14.
- 15.
- 16.
- 17.
- 18.

SECTION – C

III. Answer any 4 of the following (4x5=20)

- 19.
- 20.
- 21.
- 22.
- 23.

QUESTION PAPER PATTERN (Practical)

**I/IISem. B.Sc. Examination
(2021-22 Onwards)
FASHION AND APPAREL DESIGN
Paper code and Title of the paper**

MAX MARKS-25

TIME: 4Hrs

Instructions to the Candidates: i. *All sections are compulsory*

- | | |
|---------------------|-----------------|
| 1. | 10 Marks |
| 2. | 10 Marks |
| 3. Viva Voce | 05 Marks |

QUESTION PAPER PATTERN (Practical)

**I/IISem. B.Sc. Examination
(2021-22 Onwards)
FASHION AND APPAREL DESIGN
Paper code and Title of the paper**

MAX MARKS-50

TIME: 4Hrs

Instructions to the Candidates: i. *All sections are compulsory*

- | | |
|---------------------|-----------------|
| 1. | 20 Marks |
| 2. | 20 Marks |
| 3. Viva Voce | 10 Marks |

Outline for Continuous Assessment

Theory with 3 credits

Activity	C1	C2	Total
Session Test	15%	15%	30%
Seminars/Presentations/Activity	5%	-	05%
Assignment/Field Work	-	5%	05%
Total	20%	20%	40%

Practicals with 2/3 Credits

Activity	C1	C2	Total
Test / Performance	20%	20%	40%
Record Maintenance		10%	10%
Total			50%



BENGALURU CITY UNIVERSITY

CHOICE BASED CREDIT SYSTEM

**(Semester Scheme with Multiple Entry and Exit Options for
Under Graduate Course- as per NEP 2020)**

**Syllabus for B.Sc.
Fashion and Apparel Design
(III & IV Semester)**

2022-23 onwards

Proceedings of the Board of Studies meeting in Fashion & Apparel Design (UG) held on 7th September 2022 at 11 AM in the Board Room, Department of Apparel Technology & Management, Bengaluru City University, Bengaluru.

The Chairman welcomed all the members and the agenda was taken up for discussion.

Item No. 1. Approval of the scheme and syllabus of III & IV Semesters B.Sc. (Fashion & Apparel Design) course.

The members deliberated on the scheme and syllabus of III and IV Semesters proposed by the subject expert committee as per NEP-2020. After thorough discussion and after incorporating the necessary changes the Board unanimously approved the scheme and syllabus of III & IV Semesters as per IC model proposed by Karnataka Higher Education Council, Govt. of Karnataka to be implemented from the academic year 2022-23.

Item No. 2. Approval of the scheme and syllabus of III & IV Semesters B.Sc. (Interior Design & Decoration) course.

The members deliberated on the scheme and syllabus of III and IV Semesters proposed by the subject expert committee as per NEP-2020. After thorough discussion and after incorporating the necessary changes the Board unanimously approved the scheme and syllabus of III & IV Semesters as per IC model proposed by Karnataka Higher Education Council, Govt. of Karnataka to be implemented from the academic year 2022-23.

Item No. 3. Approval of panel of Examiners for B.Sc. (Fashion & Apparel Design) for the year 2022-23

The list of panel of examiners for B.Sc. (Fashion & Apparel Design) course for the year 2022-23 was placed before the members and their suggestions were incorporated and approved.

Item No. 4. Approval of panel of Examiners for B.Sc. (Interior Design and Decoration) for the year 2022-23

The list of panel of examiners for B.Sc. (Interior Design & Decoration) course for the year 2022-23 was placed before the members and their suggestions were incorporated and approved.

The Chairman thanked all the members for their active participation in the meeting.

Members Present:

Dr. R. Sudhakar

Chairperson

Dr. Sandhya Ravi

Member

Sri Devaraj

Member

Smt. Archana

Member

Smt. Bharathi

Member

Scheme of Examination

B.Sc. (FASHION & APPAREL DESIGN)								
SEMESTER – III								
CODE	Course	Theory/ Practical	Instruct ion Hrs/wk	Duration of Exam (Hrs)	Marks			CREDIT
					IA	Exam	Total	
	Language I	Theory	4	2.5	40	60	100	3
	Language II	Theory	4	2.5	40	60	100	3
FD3.1T FD3.1P	Fashion Art & Design	Theory	3	2.5	40	60	100	3
		Practical	4	3	25	25	50	2
FD3.2T FD3.2P	Garment Detailing II	Theory	3	2.5	40	60	100	3
		Practical	4	3	25	25	50	2
FD3.3P	Apparel Computer Aided Design	Practical	6	4	50	50	100	3
FD OE-3	Open Elective	Theory	3	2.5	40	60	100	3
	SEC	Theory+ Practical	1+2	2	25	25	50	2
	PE-Sports	Practical	2	-	25	-	25	1
	H&W	Practical	2	-	25	-	25	1
					375	425	800	26

SEMESTER – IV								
CODE	Course	Theory/ Practical	Instruct ion Hrs/wk	Duration of Exam (Hrs)	Marks			CREDIT
					IA	Exam	Total	
	Language I	Theory	4	2.5	40	60	100	2
	Language II	Theory	4	2.5	40	60	100	2
FD4.1T FD4.1P	Indian Textiles & Costumes	Theory	3	2.5	40	60	100	3
		Practical	4	3	25	25	50	2
FD4.2T FD4.2P	Textile & Apparel Testing	Theory	3	2.5	40	60	100	3
		Practical	4	3	25	25	50	2
FD4.3P	Apparel Production	Practical	6	4	50	50	100	3
FD OE-4	Open Elective	Theory	3	2.5	40	60	100	3
	AECC	Theory+ Practical	1+2	2	25	25	50	2
	PE-Sports	Practical	2	-	25	-	25	1
	NCC/NSS/R&R/CA	Practical	2	-	25	-	25	1
					375	425	800	26

Open Electives

III Semester: OE-3: Fashion Makeover

IV Semester: OE-4: Textile Arts & Crafts of India

Exit option with Diploma in Fashion & Apparel Design (with a minimum of 96 Credits)

Program Title	B.Sc. Fashion and Apparel Design	Semester	Third Semester
Course Code	FD 3.1 T	Course Credits	3
Course Name	Fashion Art and Design (Theory)	Contact hours	42 hrs

Course Outcomes: On successful completion of the course, the student will be able to:

- ❖ Understand the role of fashion illustration in fashion design.
- ❖ Analyse various fashion silhouettes and apply design concepts in fashion design.
- ❖ Identify various design elements to incorporate details like collars, necklines, sleeves, cuffs.
- ❖ Develop complete designer fashion figures with silhouettes and apply rendering techniques.

Course Content

Unit 1

Chapter 1

Fashion Research - Introduction, types, and source of research for design collection. Inspiration for fashion designers. Introduction to concepts and process of fashion portfolio designing.

4 Hrs

Chapter 2

Fashion Forecasting-Introduction, types. Forecasting - (Time Based) short term forecasting, long term forecasting. Techniques in forecasting- judgemental, initiative forecasting, Delphi technique, process of fashion forecasting. Colour forecasting- Introduction, importance, impact on fashion, 24 mood categorizations, fashion forecasting agencies.

5 Hrs

Chapter 3

Designing of garments based on figure types, garments to create optical illusion through elements and principles of design.

4 Hrs

Unit 2

Chapter 4

Trend Analysis- Identification/ selection of target market, trend analysis of earlier seasons to understand trend spotting methods and trend life cycles. Forecast interpretation of the current / subsequent season, developing style directions based on selected markets, trend reporting and data presentation.

5 Hrs

Trend analysis for different seasons, trend analysis agencies.

Chapter 5

Flat Sketch - Introduction, importance and application. Method of drawing flats, styling the flats, sketching flats freehand, proportion for flats for women, men, and children, croquis mixed with flats, portfolio flats, Flats for garment manufacture.

2 Hrs

<p>Chapter 6 Specification sheet – Introduction, importance, application, types- Manual, computerized. Detailed content- Season, description, client, fabrics, trims and accessories, brand label, care label, style, size, and other details.</p>	2 Hrs
Unit 3	
<p>Chapter 7 Design layout- Design objectives, direction, attitude in a pose, design emphasis, stylization for Designers. Design journal pages, design journal thumbnail sketches, maximizing design impact, composition rules, direction, grouping figures, layout, or line up.</p>	8 Hrs
<p>Chapter 8 High end rendering techniques-Introduction, depth, and shine. Highlights- pleats, drape, transparency, volume, gathers, folds fringes, ruffles, cowls, smocking, shirring, gore and pin tucks. Changing proportions - bridal looks, trains, dress and gowns, drape, and volume. Luxury fabric rendering- feather, fur lace, embroidered fabrics.</p>	8 Hrs
<p>Chapter 9 Sustainable Fashion – meaning and significance; Environmental concerns related to fashion; Linear fashion and circular fashion; 4R’s in sustainability – Repair, recycle, reuse, and reduce. Moving towards sustainable fashion - Eco fashion, slow fashion, fast fashion. Environmental impact of fast fashion.</p>	4 Hrs

References	
1	Bina Abbing, “Fashion Sketchbook”, Fair child Books, Canada, 7 th Edition, 2019.
2	Brockman HL, "Theory of Fashion Design" John Wiley and Sons. Inc., New York, 1990.
3	Jaeil Lee, Comitte Steen, “Technical Source Book for Designers”, Bloomsbury Academic USA, 2 nd edition, 2015.
4	Patrick John Ireland, “Fashion Design Illustration - Children", Batsford, London, 1996.
5	Patrick John Ireland, “Fashion Design Illustration - Women", Batsford, London, 1996.
6	Peacock J, “Fashion Source Books", Thames and Hudson, London, 1998.
7	Stecker P, “The Fashion Design Manual", Macmillan, Australia, 1997.
8	TisiannaPaci, “Figure Drawing for Fashion Design”, Pepin Press Publication, 2002.

Program Title	B.Sc. Fashion and Apparel Design	Semester	Third Semester
Course Code	FD 3.1 P	Course Credits	2
Course Name	Fashion Art and Design (Practical)	Contact hours	56 hrs

Course Outcomes: On successful completion of the course, the student will be able to:

- ❖ Understand the concepts and usage of fashion research, forecasting and trend analysis in designing.
- ❖ Incorporate designing skills using high end rendering techniques.

Course Content

Unit 1	12 Hrs
Research design- Preparation of portfolio based on inspiration, mood, colour, client, texture and fabric swatch boards based on current trend.	
Unit 2	8 Hrs
Illusion in garments -Line, space texture, colour, and silhouette. Designing of various garments from the following categories - Children wear, women's wear, men's wear, evening wear, nightwear, summer wear, winter wear and party wear (2each).	
Unit 3	10 Hrs
Flat sketch - Sketching flats for women, men and children wear. Spec sheet - Preparation of spec sheet with measurement and other details for formal and casual shirt, formal and casual trousers, and frocks (Any 2).	
Unit 4	10 Hrs
Fashion sketching of advanced illustration techniques and 3 dimensional views (only hand). Foreshortening of figures, grouping of figures - thematic figure composition.	
Unit 5	8 Hrs
Design layout- Direction, attitude in a pose, emphasis, stylization for designers, design journal pages, composition direction and line up.	
Unit 6	8 Hrs
High end rendering techniques- Sketching ruffles, cascades, cowls, smocking, shirring, gathers, gores, pin tucks, dress and gown, bridal look and bridal trains, luxe fabric rendering, black fabric rendering.	

Program Title	B.Sc. Fashion and Apparel Design	Semester	Third Semester
Course Code	FD 3.2 T	Course Credits	3
Course Name	Garment Detailing II (Theory)	Contact hours	42 hrs

Course Outcomes: On successful completion of the course, the student will be able to:

- ❖ Gain knowledge on industrial method of pattern making, grading and marker plan.
- ❖ Understand garment sizes and categories.
- ❖ Understand fitting techniques and pattern alteration techniques.
- ❖ Handle special fabrics for garment construction.

Course Content

Unit 1

Chapter 1

Introduction to pattern development, manual and computerized pattern development, marker making -Introduction, mini marker, marker plan development and marker efficiency. Digitizer, plotter, and scanner-application in pattern making.

3 Hrs

Chapter 2

Software- Introduction to software used in computerized pattern making, grading, and marker making, marker efficiency and computerized garment manufacturing process.

4 Hrs

Chapter 3

Pattern layout - Definitions, principles, types of layouts, importance of pattern layout. Fabric estimation - Definition, types of estimation, importance of fabric estimation.

6 Hrs

Unit 2

Chapter 4

Handling special fabrics - Introduction, types of special fabrics - stretch fabrics, knit, checks, plaids, stripes, velvet, corduroy, leather, fur, and lace. Factors to be considered while pattern making, garment construction, garment finishing, washing, care and storing.

6 Hrs

Chapter 5

Grading - Introduction, definition, grading terminologies, principles, types, sizes, grade rules and points, manual and computerized grading, importance, advantages, and disadvantages.

4 Hrs

Chapter 6

Fitting - Introduction, principles of fitting, types of garments fit, standards for a good fit, e-fitting, body scanner, 3D simulators.

6 Hrs

Pattern alteration techniques - Introduction, methods of alteration technique, importance. Pivot, slash and spread method (length, width, front, back, sleeve, shirt, skirt, trousers).

Unit 3	
Chapter 7 Interlining & interfacing - Introduction, properties, types, materials, method of applications. Machinery used -Continuous fusing press, flatbed fusing press, high-frequency fusing, hand iron.	4 Hrs
Chapter 8 Foundation garments- Introduction, design, fabric, trims, and accessories. Types of fitting for men's innerwear briefs & trunk, swimwear, Women's innerwear-brassier, panties and swim wear.	5 Hrs
Chapter 9 Sportswear and Active wear- Introduction, design, fabric, garment fitting, materials used and types of sport wear for men and women. Interlinings and interfacing used for sportswear.	4 Hrs

References	
1	Elizabeth G Liechty et al., "Fitting & Pattern Alteration: A Multi-Method Approach to the Art of Style Selection, Fitting, and Alteration", Fairchild Books, New York, 2016.
2	Helen J Armstrong, "Pattern Making for Fashion Design", Pearson, 5th edition, 2009.
3	Martin M Shoben, Patrick J Taylor, "Grading for the Fashion Industry", LCFS Fashion Media, 2004.
4	Natalie Bray, "Dress Fitting - Basic Principles and Practice", BSP Professional Book Publishers, 2nd edition, 1991.
5	Patric Taylor, "Grading for the Fashion Industry", Stanley Thomas Ltd., 1990.
6	Roshan Shishoo, "Textiles for Sportswear", Woodhead Publishing, 1 st edition, 2015.
7	Ruth E. Glock, Grace I. Kunz, "Apparel Manufacturing, Sewn Product Analysis", Pearson, 2018.
8	Steven George Hayes, PraburajVenkatraman, "Materials and Technology for Sportswear and Performance Apparel", CRC Press Taylor and Francis Group, 2017.
9	Winfred Aldrich, "Metric Pattern Cutting", Blackwell Science, UK, 1988.

Program Title	B.Sc. Fashion and Apparel Design	Semester	Third Semester
Course Code	FD 3.2 P	Course Credits	2
Course Name	Garment Detailing II (Practical)	Contact hours	56 hrs

Course Outcomes: On successful completion of the course, the student will be able to:

- ❖ Prepare pattern layout, fabric estimation and garment construction
- ❖ Design and construct garments for men, women, and sport categories
- ❖ Choose suitable garment accessories and trims for the designed garments

Course Content

Unit 1	14 Hrs
Designing and development of women's wear - Pattern layout, fabric estimation and costing must be developed for individual garment. <ul style="list-style-type: none"> ➤ Ladies top/Blouse ➤ Salwar kameez 	
Unit 2	14 Hrs
Designing and Development of men's wear - Pattern layout, fabric estimation and costing must be developed for individual garment. <ul style="list-style-type: none"> ➤ Casual Shirt/Kurta ➤ Trouser 	
Unit 3	10 Hrs
Designing and development of night wear for women -Pattern layout, fabric estimation and costing must be developed for individual garment (one set).	
Unit 4	10 Hrs
Designing and development of night wear for men -Pattern layout, fabric estimation and costing must be developed for individual garment(one set).	
Unit 5	6 Hrs
Development of manual grading of patterns – Men's shirt, women's top.	
Unit 6	2 Hrs
Collection and development of folio on special fabrics, interlining & interfacing.	

Program Title	B.Sc. Fashion and Apparel Design	Semester	Third Semester
Course Code	FD 3.3 P	Course Credits	3
Course Name	Apparel Computer Aided Design (Practical)	Contact hours	84 hrs

Course Outcomes: On successful completion of the course, the student will be able to:

- ❖ Use of designing software to develop patterns.
- ❖ Create design by using different designing tools.
- ❖ Develop patterns for various garments with PDS.

Course Content

Unit 1

Chapter 1

Introduction to computer aided design -Fundamentals, general process of design, application of computers in design, benefits of CAD and CAD in today's fashion industry.

4Hrs

Chapter 2

Introduction to fashion design software - Tools in detail, enhancing images, masking, transforms, working with layers, merging & blending layers, text effects. Creating an advertising brochure, brand label, care label designing, logo designing, development of visiting card, letterhead.

10 Hrs

Chapter 3

Painting & rendering using software, creating & manipulating fashion model drawings, gradient use for rendering & 3D effects, making collage. Applying filters, creating various boards- mood/inspiration/client/customer/colour and texture board using designing software on various themes.

12 Hrs

Unit 2

Chapter 4

Designing using software - Introduction, learning basic tools. Using basic shapes, transformations, duplicate, cloning. Applying fill, outlines, special effects, shaping objects, creating custom shapes using basic shapes and other drawing tool, working with the text, effects, shaping object with envelope tool, power clip objects, splitting and erasing portion of objects. Creating fashion accessories like necklace, bracelet, anklets, earring, and head gear etc.

10 Hrs

Chapter 5

Motifs development – Symmetrical/asymmetrical, balanced/unbalanced, repeat – ½ drop, ¼ drop, ¾ drop mirror – H/V and drop reverse. Design development of saree with borders,

10 Hrs

pallu, and all over. Design development of men's kurta with neckline, cuff, and sleeve.	
Chapter 6 Draping of garments on men's, women's & children for casual, party, night, sports, office/formal wear using software.	10 Hrs
Unit 3	
Chapter 7 Design development of flat sketches with stitch specification for the following - Children – girls (A-line & yoke frock), boys (shirt & shorts), adults - women's (top, skirt, gown), men's (shirt, kurta, trouser). Create spec sheets and cost sheets for the above garments using software.	10 Hrs
Chapter 8 PDS – Introduction, pattern design – Introduction to PDS (pattern design screen), file menu, opening and saving, managing pieces on the screen, measure, edit and view functions. Point & notch functions, line functions, piece functions.	10 Hrs
Chapter 9 Prepare basic pattern set, grade the patterns to smaller, larger size. Creating marker plan - A-Line frock, skirt, shirt, dress/top, shorts/trousers and kurta. (Note: Fashion studio software / Photoshop / Corel Draw/ Jindex 3D fashion/ 3D Clo etc. may be used).	8 Hrs

References	
1	Jinlian Hu, "Computer Technology for Textiles and Apparel", Woodhead Publishing, 1 st edition, 2011.
2	Kathleen Colursy M, "Fashion Design on Computers", Prentice Hall, 2004.
3	Radhakrishnan R, Subramanian S, Raju V, "CAD/CAM/CIM Computer Aided Design & Manufacturing", New Age International Publications, 2000.
4	Renee Weiss Chase, "CAD for Fashion Design", Prentice Hall Publications, 1997.
5	Stott M, "Pattern Cutting for Clothing Using CAD: How to Use Lectra Modaris Pattern Cutting Software", Woodhead Publishing, 2012.
6	Taylor P, "Computers in Fashion Industry", Heinemann Publication, 1990.
7	Voisinet Donald D. "Computer Aided Drafting & Design-Concept & Application", McGraw-Hill, 1987.
8	Winfred Aldrich, "CAD in Clothing & Textiles", Blackwell Science, 1994.

Program Title	B.Sc. Fashion and Apparel Design	Semester	Third Semester
Course Code	OE 3T	Course Credits	3
Course Name	Fashion Make Over (Theory)	Contact hours	42 hrs

Course Outcomes: On successful completion of the course, the student will be able to:

- ❖ Groom and style for any occasion.
- ❖ Acquire knowledge about various garments suitable for different occasions.
- ❖ Demonstrate knowledge and skills of makeover through reflective experiential learning.
- ❖ Bring about a change in personality through makeover.

Course Content

Unit 1

Chapter 1

Fashion make over - Introduction to makeover, importance, types- clothing, makeup, accessories, and materials.

4 Hrs

Chapter 2

Introduction to different styles (chic, exotic, classic, glamorous, sexy, sophisticated, tomboy, hippies, etc.). Study of fashion appreciation- historical, contemporary and art style to understand fashion as a social phenomenon.

4 Hrs

Chapter 3

Elements of fashion and styling for women - Skirt, blouses, dresses, trousers, tops (traditional, casual, formal), men- shirts, trousers, kurta, formals, jackets (traditional, casual, formal).

6 Hrs

Unit 2

Chapter 4

Selection of clothes - Clothing for children, teenagers, youth, middle aged, adults. Types of clothes, selection according to region, season and occasion.

5 Hrs

Chapter 5

Planning clothing needs for school, college, party, sports, formal, corporate, traditional, holiday.

5 Hrs

Chapter 6

Make up- Introduction to makeup, types, based on skin type, shape of the face, eyes, nose, lips.

5 Hrs

Unit 3

Chapter 7

Make up materials- brushes, moisturizer, primer, concealer, foundation, compact. Eye

6 Hrs

makeup- Introduction, types, materials. Lip – introduction, types, and materials. Choice of colours based on skin colour, make up for corporate, traditional, casual- beach, swimming. Special occasions - Wedding, party, award ceremony. Techniques for removal of makeup, skin care and maintenance.	
Chapter 8 Accessories- Introduction to men’s and women’s accessories, importance, types- heads gear, footwear, handwear, handbags, scarfs, stoles, watches, jewellery	4 Hrs
Chapter 9 Styling and makeover for different occasion- Formal wear, party wear- Indian, Western wear, casual wear, beach wear, for both men and women,	3 Hrs

References	
1	Alan Flusser, “Dressing the Man- Mastering the Art of Permanent Fashion”, Harper Collins Publication, 2002.
2	Alison Freer, “How to get Dressed”, Ten speed press, Berkeley Publishers, 2015.
3	Boris Entrup, “10 Minutes Make up”, Dorling Kindersley, London, 2014.
4	Clinton Kelly, Stacy London, “Dress you’re Best- The complete guide to finding the style that’s right for your body”, 3 River Press Publication, 2005.
5	Danielle Griffiths, “Fashion stylist Handbook”, Laurence King Publishers 2016.
6	Kendall Farr, “The Pocket Stylist”, Penguin Group Publishers, USA Inc., 2004.
7	Rouse ‘Understanding Fashion”, Blackwell Science, UK 1989.
8	Trish McEvoy, “The Makeover of Confident Women”, Harper Wave Publishers, 2017.

Program Title	B.Sc. Fashion and Apparel Design	Semester	Fourth Semester
Course Code	FD 4.1 T	Course Credits	3
Course Name	Indian Textiles and Costumes (Theory)	Contact hours	42 hrs

Course Outcomes: On successful completion of the course, the student will be able to:

- ❖ Understand history of textiles and its influence with reference to fashion clothing.
- ❖ Understand and use symbolic motifs and colour in designing traditional textiles.
- ❖ Acquaint with sketching skills of costumes for different regions of India.
- ❖ Understand the importance of Indian Costumes and use them in designing fashion designer wear.

Course Content

Unit 1

Chapter 1

History of clothing & textiles- Introduction, pre-historic reference, influence of religion, art, trade, and royalty with respect to main features and relevance to industry today. History of costumes - Introduction, beginning of costume - body decorations, body staining, tattooing, cutting and scarification, adoption of fibrous apparel, initial manufacturing of clothes. Earlier decoration of textiles, types of ornaments used in the beginning and other methods of skin decoration.

3 Hrs

Chapter 2

Textiles and costumes of India- Introduction, history, types, motifs and symbols, prehistoric textiles, and costumes - costume components for men, women and children, hair, and hair dresses.

3 Hrs

Chapter 3

Origin of clothing (Dress)-Stone age, Neolithic Age, Bronze Age, Indus Valley Civilization, Vedic age. Changing scenario of Indian costumes and influence on present day clothing.

6 Hrs

Unit 2

Chapter 4

Middle Ages - Textiles and costumes of India- Introduction, history, types, motifs and symbols, prehistoric textiles, and costumes. Costume components for men, women and children- hair, and hair dresses. Mauryan, Guptas, Satavahanas, Kushans & Mughals.

6 Hrs

Chapter 5

Hand Woven Textiles- Saris - Banaras Brocades, Baluchari, Jamdani, Dhaka Muslin, Himru, Amru, Tancoi, Patola, Pochampalli, Paithani, Kanjeevaram, Chanderi, Maheshwari, Ilkal, Molakalmuru, Mysore silks, Kasuvu, Narayanpet, Gadwall, Mangalagiri, Uppadaand

4 Hrs

Venkatagiri. Embroidered Textiles- Kashmiri, Chikankari, phulkari, Kanta, ParsiGara, Zardozi and Ari. Shawls-Kashmir Shawls, Kullu & Kinnaur Shawls. Wraps of North-east. Floor coverings - Carpets, Durries & Rugs.	
Chapter 6 Printed and painted textiles of India- Introduction, history, types of printed, dyed, and painted textiles of India. Colours, motifs, and techniques used in printed, dyed and painted Indian traditional textiles. Printed textiles: Block prints- Bagru, Sanganer, Ajrakh. Painted Textiles – Kalamkari, Warli, Madhubani.	8 Hrs
Unit 3	
Chapter 7 Resist dyed textiles - Introduction, types, design used in Bandhej & Lehariya of Rajasthan. Ikat - Patola of Gujarat, Bandha of Odisha, Pochampalli of Andhra.	4 Hrs
Chapter 8 Traditional costumes of Northern India – Jammu & Kashmir, Punjab, Himachal Pradesh, Haryana, Madhya Pradesh, Uttarakhand, and Uttar Pradesh. Traditional costumes of Eastern India – West Bengal, Bihar, Jharkhand, Arunachal Pradesh, Assam, Sikkim, Nagaland, and Manipur.	4 Hrs
Chapter 9 Traditional costumes of Southern India – Tamil Nadu, Kerala, Karnataka, and Andhra Pradesh. Traditional costumes of Western states of India – Rajasthan, Gujarat, Maharashtra, and Goa.	4 Hrs

References	
1	Gertrud Lehnert, “A History of Fashion in the 20th Century”, Konemann Publications, 2000.
2	Jamila BrijBhushan, “The Costumes and Textiles of India”, Taraporevala, Bombay, 1958.
3	John Gillow, “Traditional Indian Textiles”, Thames & Hudson Ltd., 1993.
4	Martand Singh, “Hand Crafted Indian Textiles”, Lustre Press, 2005.
5	Parul Bhatnagar, “Decorative Design History in Indian Textiles and Costumes”, Abhishek Publications, 2011.
6	Parul Bhatnagar, “Traditional Indian Costumes & Textiles”, Abhishek Publication, 2009.
7	Phyllis Tortora, Keith Eubank, “Survey of Historical Costumes, A History of Western Dress”, Bloomsbury Publishing India Private Limited, 5th edition, 2009.
8	Prakash, Raman K, Pradeesh K, “Warli Traditional Folk Art from India”, Shree Book Centre, Publication,2016.

Program Title	B.Sc. Fashion and Apparel Design	Semester	Fourth Semester
Course Code	FD 4.1 P	Course Credits	2
Course Name	Indian Textiles and Costumes (Practical)	Contact hours	56 hrs

Course Outcomes: On successful completion of the course, the student will be able to:

- ❖ Understand about evolution of Indian costumes since ancient times.
- ❖ Acquire knowledge of textiles and costumes and implement the techniques.
- ❖ Acquire skills in selecting fabrics for designing.
- ❖ Sketch and incorporate ancient designs.

Course Content

Unit 1	10 Hrs
Sketching of costumes and hairstyles of ancient India -Indus valley, Vedic period (men and women).	
Unit 2	10 Hrs
Sketching of costumes and hairstyles of Middle age- Mauryan, Kushans, Gupta and Mughal period (men and women).	
Unit 3	10 Hrs
Design and development of sarees (motif, all over, border, pallu) of any four states in India.	
Unit 4	12 Hrs
Sketching of costumes -Northern India (Jammu and Kashmir, Punjab, and Rajasthan), sketching of costumes of East India (West Bengal, Assam, Manipur) male & female.	
Unit 5	10 Hrs
Sketching of costumes -Western India (Gujarat, Maharashtra, Goa). Sketching of costumes of Southern India (Karnataka, Tamil Nadu, Kerala, Andhra Pradesh) male and female.	
Unit 6	4 Hrs
Development of a detailed report and pictures of any one textiles of India.	

Program Title	B.Sc. Fashion and Apparel Design	Semester	Fourth Semester
Course Code	FD4.2 T	Course Credits	3
Course Name	Textile & Apparel Testing (Theory)	Contact hours	42 hrs

Course Outcomes: On successful completion of the course, the student will be able to:

- ❖ Understand the procedures to be followed in textile testing.
- ❖ Analyse the various tests for fibre, yarn, fabric, and garments.
- ❖ Understand the working principles of textile testing equipments.

Course Content

Unit 1

Chapter 1

Introduction to textile testing, objectives of testing. Samples for testing- Types and its importance.

3 Hrs

Chapter 2

Fibre terminologies, moisture and moisture relationship, moisture content and regain. Fibre maturity, fibre length, fibre fineness.

2 Hrs

Chapter 3

Yarn count - Direct system and indirect system. Its importance in fabric manufacturing. Yarn twist- twist direction, amount of twist, and effects of twist on fabric properties.

4 Hrs

Unit 2

Chapter 4

Fabric testing - Fabric dimensions- length, width, thickness, determination of fabric weight - GSM measurement and its application to different fabrics, cover factor, fabric shrinkage.

5 Hrs

Chapter 5

Testing of fabric strength - Terminology and definition-Tensile strength, bursting strength tear strength.

6 Hrs

Chapter 6

Fabric air permeability, stiffness, drape, crease resistance, abrasion resistance, pilling, bow & skew

9 Hrs

Unit -3	
Chapter 7 Determination of colour fastness to laundering, rubbing, light and perspiration.	5 Hrs
Chapter 8 Tensile properties of seams and stitches.	4 Hrs
Chapter 9 Garment and garment accessories testing – testing of fusible interlinings, zippers, elastic waistband, sewing threads, buttons, snap fasteners, wear testing.	4 Hrs

References	
1	Amutha K, “A Practical Guide to Textile Testing”, WPI Publishing, 1 st edition, 2016.
2	Arindam Basu, “Textile Testing”, South India Textile Research Association, Chennai, 2006.
3	Booth J E, “Principles of Textile Testing”, CBS Publishers and Distributors, New Delhi, 1996.
4	Jewel Raul, “Textile Testing”, APH Publishing house, New Delhi, 2014.
5	Patricia Dolez, Olivier Vermeersch & Valerio Izquierdo, “Advanced Characterization and Testing of Textiles”, Woodhead Publishing, 1 st edition, United Kingdom, 2017.
6	Pradeep V. Mehta, “Managing Quality in Apparel Industry”, New Age international Ltd.
7	Saville B P, “Physical Testing of Textiles”, Woodhead Publishing Ltd., Cambridge, 1999.
8	Sheraz Ahmad et al., “Advanced Textile Testing Techniques”, CRC Press Published, 1 st edition, New Delhi, 2017.

Program Title	B.Sc. Fashion and Apparel Design	Semester	Fourth Semester
Course Code	FD 4.2 P	Course Credits	2
Course Name	Textile & Apparel Testing (Practical)	Contact hours	56 hrs

Course Outcomes: On successful completion of the course, the student will be able to:

- ❖ Test fabrics for various parameters
- ❖ Handle the textile testing equipment with ease.
- ❖ Understand the procedure to be followed to test fabrics.

Course Content

Unit 1	12 Hrs
Determination of geometrical properties of fabrics - Thread density, yarn count, GSM, thickness, cover factor.	
Unit 2	8 Hrs
Determination of fabric bending and drape.	
Unit 3	12 Hrs
Determination of fabric tensile strength, abrasion resistance and pilling resistance.	
Unit 4	4 Hrs
Determination of fabric crease recovery.	
Unit 5	12 Hrs
Determination of fabric shrinkage, colour fastness to washing, rubbing and light.	
Unit 6	8 Hrs
Determination of garment accessories testing - Button snap pull test, zipper test, seam strength test.	

Program Title	B.Sc. Fashion and Apparel Design	Semester	Fourth Semester
Course Code	FD 4.3 P	Course Credits	3
Course Name	Apparel Production (Practical)	Contact hours	84 hrs

Course Outcomes: On successful completion of the course, the student will be able to:

- ❖ Develop patterns as per Industrial Standards.
- ❖ Use skills in designing and garment construction of men's and women's garments
- ❖ Understand and develop tech pack and spec sheet.
- ❖ Work confidently in production line of an apparel industry.

Course Content

Unit 1

Chapter 1

ASTM standards for seams & stitches, development of samples of seams and its types, Development of samples of stitch types, stitch & seam dimensions.

4 Hrs

Chapter 2

Apparel accessories & components - Fasteners, labels, support materials, decorative trims, tapes & packing materials. Preparation of folio on all apparel accessories & components used in apparel industry.

4 Hrs

Chapter 3

Analysis of style and fit for kid's men's and women's wear garments (any two brands). Develop tech pack for the analysed garments.

4 Hrs

Unit 2

Chapter 4

Design and development of men's formal/executive shirt using blocks. Development of tech pack including spec sheet, trims and support materials, construction details, bill of material (BOM), layout, fabric estimation and costing.

12Hrs

<p>Chapter 5 Design and development of men's trouser and casual jacket using blocks. Development of flat sketch, spec sheet, tech pack, trims and support materials, construction detail, BOM, layout, fabric consumption and costing.</p>	12 Hrs
<p>Chapter 6 Design and development of men's ethnic wear - Sherwani suit using blocks. Development of flat sketch, spec sheet, tech pack, construction details, trims and support materials, BOM, layout, fabric consumption and costing.</p>	12 Hrs
Unit 3	
<p>Chapter 7 Design and development of women's formal/executive shirt using blocks. Development of flat sketch, spec sheet, tech pack, construction detail, trims and support material, BOM, layout, fabric consumption and costing.</p>	12 Hrs
<p>Chapter 8 Design and development of women's formal skirt using blocks. Development of flat sketch, spec sheet, tech pack, construction detail, trims and support material, BOM, layout, fabric consumption and costing.</p>	12 Hrs
<p>Chapter 9 Design and development of executive blazer (men/women) using blocks. Development of flat sketch, spec sheet, tech pack, construction detail, trims and support material, BOM, layout, fabric consumption and costing.</p>	12 Hrs

References	
1	Chuter A J, "Introduction to Clothing Production Management", Wiley India Pvt. Ltd., 2nd edition, 2011.
2	Claire Shaeffer, "Sewing for the Apparel Industry", Pearson Publication, second edition, 2012.
3	Mary Ruth Shields, "Industrial Clothing Construction Methods", Fair Child Publications, 2010.
4	Paula J, Myers-Mcdevitt, "Apparel Production Management and the Technical Package", Fair Child Publications, 2010.
5	Ruth E. Glock, Grace I. Kunz, "Apparel Manufacturing Sewn Product Analysis", Pearson/Prentice Hall, 2005.
6	Teresa Gilewska "Pattern Drafting for Fashion-Advanced" Bloomsbury Publishing, 2019.

Program Title	B.Sc. Fashion and Apparel Design	Semester	Fourth Semester
Course Code	OE4 T	Course Credits	3
Course Name	Textile Art and Crafts of India (Theory)	Contact hours	42 hrs

Course Outcomes: On successful completion of the course, the student will be able to:

- ❖ Gain in-depth knowledge about Textile Art and Crafts of India.
- ❖ Develop understanding of various Indian art and crafts.
- ❖ Understand the materials and process of developing arts and crafts in India.
- ❖ Appreciate the art and craft of India.

Course Content

Unit 1

Chapter 1

Textile art & craft - Introduction, meaning, definition, types of art and craft in India.

2 Hrs

Chapter 2

Introduction to the basic concept in art & crafts. History of Indian art & craft. Factors influencing craft - social, economic, psychological, technological influence.

4 Hrs

Chapter 3

Art & crafts of Northern India – Kashmir- carpets, shawls, silverware, and woodworks. Punjab - Phulkari, jootis, durries and parandas. Haryana -pottery, weaving, Bagh, and Palm leaf work. Himachal Pradesh- paintings, leather craft metal work and stone craft.

6 Hrs

Unit 2

Chapter 4

Art & craft of Northern India- Chhattisgarh, Gonda art, bamboo craft, cowrie craft, kosa, wrought iron craft etc. Madhya Pradesh- stone carvings, folk paintings, iron craft, zari, toys and doll making,

6 Hrs

<p>Chapter 5</p> <p>Art & craft of West India – Rajasthan- blue pottery, ivory works, Meenakari, Lac works, Thewa art. Gujrat- Bead Craft, Khavda Pottery. Maharashtra- Kolhapur chappal, Warli painting, Bidiri ware and metal embossing. Goa- funky crafts of Goa. Seashell crafts, brassware, wooden lacquerware, papier mache and Azulejos or Hand painted tiles.</p>	5 Hrs
<p>Chapter 6</p> <p>Art & Craft of North-East India-Arunachal Pradesh- colourful masks, silver objects, bamboo and cane articles, wood carving, Mishmi shawls and Sherdukpen shawls, Thangka Painting. Assam- bamboo craft, silk textiles, cane craft, water hyacinth handicraft, bell metal craft and pottery. Manipuri -wood carving, shawls and blankets and Manipuri dance doll, Kaun Grass Craft, and stone carving. Mizoram- weaving. Nagaland- baskets hats and mats.</p>	5 Hrs
Unit 3	
<p>Chapter 7</p> <p>Art & Craft of East India- West Bengal- Terracotta, Madur, Shola, and Dash avatar cards. Odisha- fine stone carving, Pattachitra, silver filigree. Jharkhand- Jadupatua Painting, Sohrai Painting.</p>	6 Hrs
<p>Chapter 8</p> <p>Art & Craft of South India- Karnataka Wooden -doll making, Mysore paintings, ivory carving, wood carving and sandalwood craft. Kerala -Coconut shell, coir products, metal crafts. Tamil Nadu- Tanjore paintings, Kolu dolls, mats, Toda embroidery, applique. Telangana - dhokra craft, Bidiri craft, Cheriya paintings, pearl work. Andhra Pradesh- Kondapalli toys made of softwood, golden-hued Nirmal paintings, Kalamkari paintings.</p>	6 Hrs
<p>Chapter 9</p> <p>Current Scenario of art & crafts in India - Current scenario of art & craft in domestic and International Market. Visit to any two craft clusters.</p>	2 Hrs

References	
1.	Aditi Rajan & Rajan MP, “Crafts of India- Handmade in India”, Mapin Publication Pvt. Ltd., 2014.
2.	Chattopadhyay K.D, “Indian Carpets and Floor Coverings”, All India Handicrafts Board, New Delhi, 1977.
3.	“Craft Traditions of India-Past, Present and Future”, NCERT Publication, 2011.
4.	Jaya Jaitley, “Crafts Atlas of India”, Niyogi Books, 2012.
5.	Marthand Singh, “Handcrafted Indian Textiles”, Roli Books, 2005.
6.	Prakash, K & Pradeesh K Raman, “Warli- Traditional Folk art from India”, English Edition Publishers, 2016.
7.	Prakash, K, “Rajasthani Folk Art - Traditional Art from India”, English Edition Publishers, 2003.

