B.Sc. TEXTILES AND FASHION DESIGN SYLLABUS



B.Sc. TEXTILES AND FASHION DESIGN SYLLABUS (With effect from September 2021) DEPARTMENT OF HOME SCIENCE SCHOOL OF SCIENCES GRI (DU), GANDHIGRAM -624302

THE GANDHIGRAM RURAL INSTITUTE - DEEMED TO BE UNIVERSITY MINISTRY OF EDUCATION (SHIKSHA MANTRALAYA), GOI ACCREDITED BY NAAC WITH 'A' GRADE (3rd Cycle) GANDHIGRAM - 624302, DINDIGUL DISTRICT, TAMIL NADU

SEPTEMBER 2021

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

Students are able to

PEO 1: Understand the basic knowledge of fibers, textile processing, designing techniques in clothing and construction of different fabrics.

PEO 2: To provide knowledge, attitude, communication and skills to promote various fields of textile and fashion.

PEO 3: Give an overall comprehensive exposure and various aspects in designing, developing innovation design and for taking up entrepreneurship (Skill).

PEO 4: Provide a platform for creativity, vision with the advent of information technology to meet global needs.

PEO 5: Promote skills in developing different end products in apparel and home furnishings.

PEO 6: To make qualitative outputs through the traditional, cultural and environmental concepts.

PEO 7: Recognize and comply safe working practices and environmental regulation in the working area/ industries.

PEO 8: Entrepreneurial ventures self –employment promoted through life coping skills and to promote Individual empowerment.

PEO 9: Upgrade their knowledge for pursuing higher education.

Program Outcome (PO)

The POs are statements that describe what the students graduating from any of the educational programmes should be able to do.

<u>PO 1: Become knowledgeable in the subject of Textiles and Fashion Design and apply the</u> <u>principles of the same to the needs of the Employer / Institution / Society.</u>

PO 2: Gain Analytical skills in the area of Textiles and Fashion Design

<u>PO 3: Understand and appreciate professional ethics, community living and Nation</u> <u>Building initiatives</u>

PO 4: Explored in the skills such as Illustrator, supervisors, quality controller and textile tester.

PO 5: Able to execute professional entrepreneurial ethics, attitudes and values.

PO 6: Professionally equipped as Computer Aided Textile and Garment Designer

PO 7: Skilled as pattern maker, cutter, embroiderer and stitcher.

PO 8: Become well trained and knowledgeable Merchandiser.

PO 9: Able to act as professional Portfolio Designer/ Developer.

PO 10: Students will be employment provider than employment seeker. **PO1. PO2 and PO3** can be common to all the departments. The respective department can add the rest.

PROGRAMME SPECIFIC OUTCOME (PSO)

<u>PSOs are Statements that describe what the graduates of a specific educational Programme</u> <u>should be able to do.</u>

PSO1: Apply the knowledge of Textile and fashion design in the domain of Teaching/ Learning and Research.

PSO2: Solve the complex problems in the field of Textiles and fashion design with an understanding of the societal, legal and cultural impacts of the solution.

PSO3: Demonstrate knowledge and skills of designing and developing of garments and textile designing.

PSO4: Apply various types of elements and principles of designs in garments.

PSO 5: Analyze different types of fibers, yarns, fabrics and development of various weave structures.

PSO 6: Examine and analyze various textiles testing process.

PSO 7: Demonstrate traditional embroideries of India.

PSO 8: Design and develop surface embellishments works.

PSO 9: Create garments for children, women and men for different age groups.

PSO 10: Ability in designing and formulating for textile and garments using Computer Aided Textile and Garment designing.

PSO 11: Preparation of Portfolio design concepts.

NOTE:

PSO 3: Here the distinctiveness of the Department /Program can be brought in. That is, by incorporating a unit/module/a course or any other component(s), in a unique way, into the curriculum (Teaching, Learning and Evaluation), the Department can give an edge to its graduates in the competitive environment.

B.Sc. UGC Innovative Textiles and Fashion Design Syllabus 2021onwards

Semester wise Credit Distribution

S.No	Category	Course Code	Courses	Credits		Cont ours/	act week
					Т	P	Total
	I Semeste	r	•				
1.1	PartI		Language I	03	3	0	3
1.2	PartII		Language II	03	3	0	3
1.3	PartIII	21TFDU01A1	Elements of Fashion and design(A)	4+0	4	-	4
1.4	PartIII	21TFDU0101	Fashion illustration (AP)	0+2	-	4	2
1.5	PartIII	21TFDU0102	Fiber and yarn science(M)	4+0	4	0	4
1.6	PartV		NSS/Sports/Fine Arts	01	1	0	1
1.7	PartV		Yoga	01	1	0	1
1.8	PartIV		Environmental Studies	3+1	3	2	4
1.9	Part III	21TDFU0103	Industrial Training –I*	0+1	-	-	1
			Total	23	19	6	23
	II Semest	er					
2.1	Part I		Language I	03	3	0	3
2.2	Part II		Language II	03	3	0	3
2.3	Part III	21TFDU02A2	Pattern making & grading (AP)	0+2	-	4	2
2.4	Part III	21TFDU0204	Fabric structure (M)	4+0	4	0	4
2.5	Part III	21TFDU0205	Sewing techniques and Accessories(ML)	0+2	0	4	2
2.6	Part IV		Language III	02	2	0	2
2.7	Part V		Gandhian Studies	02	2	0	2
2.8	Part V		Extension Education	02	2	0	2
2.9	Part IV		Communication and Soft skills	02	2	0	2
3.0	Part III	21TFDU0206	Industrial Training –II*	0+1	-	-	1
			Total	23	18	8	23
	III Semes	ter					
3.1	Part I		Language I	03	3	0	3
3.2	Part II		Language II	03	3	0	3
3.3	Part III	21TFDU0307	Wet processing(M)	4+0	4	0	4
3.4	Part III	21TFDU0308	Children's apparel(ML)	0+2	-	4	2
3.5	Part III	21TFDU03A3	Recent advances in apparel designing (A)	4+0	4	0	4
3.6	Part III	21TFDU0309	Surface embellishment(AP)	0+2	-	4	2
3.7	Part IV		Language III	02	2	0	2
3.8	Part IV		Computer Course	03	3	0	3
3.9	Part V		Shanti Sena	01	1	0	1
3.10	Part V		Village Placement Programme	02	-	-	2
3.11	Part III	21TFDU0310	Industrial Training –III*	02	-	_	1
5.11	1 411 111		Total	27	20	8	27

	IV Seme	ster					
4.1	Part III	21TFDU04DX	Elective: Discipline Centric	03	3	0	3
4.2	Part III		Elective: Generic	03	3	0	3
4.3	Part III	21TFDU0411	Historic Textiles and costumes of India(M)	3+0	3	0	3
4.4	Part III	21TFDU0412	Textile Testing(M)	4+0	4	-	4
4.5	Part III	21TFDU0413	Textile finishing (M)	4+0	4	-	4
4.6	Part III	21TFDU0414	Women' s apparel (ML)	0+2	-	4	2
4.7	Part III	21TFDU04A4	Computer applications in Textiles and Fashion Industry (A)	4+0	4	-	4
4.8	Part III	21TFDU0415	Home Textiles(AP)	0+2	-	4	2
4.9	Part III		Human Values and Professional Ethics	01	1	-	1
4.10	Part III	21TFDU0416	Industrial Training –IV	0+1	-	-	1
			Total	27	22	8	27
	V Semes	ter					
5.1	Part III	21TFDU05DX	Elective:Discipline Centric	03	3	0	3
5.2	Part III		Elective: Generic	03	3	0	3
5.3	Part III	21TFDU0517	Apparel quality control (M)	4+0	4	0	4
5.4	Part III	21TFDU0518	Draping Techniques(ML)	0+2	-	4	2
5.5	Part III	21TFDU0519	Textiles and Their care(M)	4+0	4	-	4
5.6	Part III	21TFDU0520	Men's apparel(MP)	0+2	-	4	2
5.7	PartIV	21TFDU05SX	Skill Based Elective	0+2	0	2	2
5.8	PartIII	21TFDU0521	Internship –I*	0+1	-	-	1
			Total	21	17	10	21
	VI Seme	ster					
6.1	PartIII	21TFDU05MX	Modular	02	-	-	2
6.2	PartIII	21TFDU06MY	Modular	02	-	-	2
6.3	PartIII	21TFDU0621	Entrepreneurship Development in Textiles and Fashion (M)	4+0	4	-	4
6.4	PartIII	21TFDU0622	Portfolio presentation (M)	0+2	-	4	2
6.5	PartIII	21TFDU0623	Technical Textiles(M)	4+0	4	-	4
6.6	PartIII	21TFDU0624	CAD for Textiles and Fashion Design(ML)	0+2	-	4	2
6.7	PartIII	21TFDU0625	Project	04		8	4
6.8	PartIII	21TFDU0626	Internship –II*	0+3	-	-	3
			Total	23	8	20	23

Industrial Training/ Internship* During Semester Break/ Vacation

Total Credits = 23+23+27+27+21+23=144

Major Electives (Discipline Centric)

Course code	Title of the course	Credit	Contact hrs	CFA	ESE	TOTAL
21TFDU04D1	Fashion forecasting and Merchandising	3+0	3	40	60	100
21TFDU04D2 21TFDU05D1	Boutique planning Garment costing	3+0 3+0	3 3	40 40	60 60	100 100
21TFDU05D2	Fashion Psychology	3+0	3	40	60	100

Skill Based Electives

Course code	Title of the course	Credit	Contact hrs	CFA	ESE	TOTAL
21TFDU05S1	Textile Crafts	0+2	2	20	30	50
21TFDU05S2	Soft Toy Making	0+2	2	20	30	50

Modular Courses

	Course code	Title of the course	Credit	Contact hrs	CFA	ESE	TOTAL
MX	21TFDU06M1	Fashion Grooming	2	2	50	-	50
МХ	21TFDU06M2	World costumes	2	2	50	-	50
MY	21TFDU06M3	Wardrobe Planning	2	2	50	-	50
	21TFDU06M4	Basic Textile Economics	2	2	50	-	50

Value Added Courses

	S.No	Course code	Course Title	Credits	Contact Hours
1.		21TFDU0VA1	Embroidery	2	2
2.		21TFDU0VA2	Painting	2	2
3.		21TFDU0VA3	Basic Sketching and Rendering	2	2
4.		21TFDU0VA4	Basics of Fashion Illustrations	2	2

I Semester

ELEMENTS OF FASHION AND DESIGN (A)

Course code: 21TFDU01A1	Credit: 4+0	Max Mark: 100
Objectives:		

- To enable students to gain knowledge of design, textile design and fashion
- To understand the fashion design concept and process

Specific Learning Outcome:

After learning this paper the students will gain knowledge in design concepts and elements used for design creations and clothing concepts related to the design development.

Unit I

Terms related to the fashion industry – fashion, style, fad, classic, and collection, trend, chic custom made, haute couture, knock-off avant garde, pre – a – porter. Theories of fashion adoption- Trickle down or down ward flow theory, Trickle across of horizontal flow theory, Trickle up or upward flow theory. Fashion cycle and its importance. fashion leaders and fashion followers.

Unit II

Design definition, classification - Structural and decorative design, symmetrical and asymmetrical design . Elements of design- Silhouette, Line, colour, Texture, Principles of design - Proportion, Balance, Rhythm, Emphasis, Harmony, Colour theory- Prang and Munsel colour system, Hue, Value and intensity. Factors affecting fashion - Economic factors, Consumer income, Sociological factors, Psychological factors.

Unit III

Figure theory and analysis, types, Female body type - Pear body type, Diamond body type, Round body type, Hourglass body type, Inverted triangle body type, Straight body type, Male body type - Short and heavy body type, Tall and heavy body type, Short and thin body type, Tall and thin body type, Athletic body type, Figure types - Heavy figure, Thin, Slender, Narrow and Broad shoulder, Small face, Prominent chin and Jaw, Thick arm and Prominent forehead.

Unit IV

Clothing definition, classification- Production theory, Modesty theory, Adornment theory, Clothing communicates- Age, Sex, Marital status, Cultural influences, Physical appearance, Life style, Occupation, Economic status, Social status, Value and Attitudes, Political beliefs, Religious beliefs, Industrialization, Emotions, Interests.

Unit V

Fashion figure proportion- Learning figure basics, Drawing constant proportion, Guidelines, Upper Torso definition, Lower Torso definition, Fashion Elongation and the figure, Figure map- 8. 10,1 2 head theory for men, women and children.

Text books

- 1. Comdex Fashion Design- Vol-1 Fashion Concepts
- 2. Elements of fashion and apparel design-G.J. Sumathi
- 3. Elements of fashion and apparel design Sumathi 81-224-1371-4
- 4. Encyclopedia of dress making Raul Jewel
- 5. Stanyer, Peter, "The Complete Book of Drawing Techniques" Arcturus Publishing Limited for Book Mart Limited 2003

- 1. Edith Tomory, "A History of Fine Arts" in India and the West" Orient Longman Publishers 1982, reprinted 1999.
- 2. Hideaki Chijiwa, Colour harmony "A Guide to creative colour Combination".
- 3. HelIn Goworek, "Drawing Course a step by sep Guide" Blackwell Publications.

Unit	Topics to be covered	Hours
	Terms related to the fashion industry – fashion, style, fad, classic, and collection, trend, chic custom made, haute couture, knock-off avant garde, pre – a – porter.	3
I	Theories of fashion adoption- Trickle down or down ward flow theory, Trickle across of horizontal flow theory, Trickle up or upward flow theory	3
	Fashion cycle and its importance.	3
	Fashion leaders and fashion followers.	2
	Design definition, classification - Structural and decorative design, symmetrical and asymmetrical design	3
	Elements of design- Silhouette, Line, colour, Texture,	2
	Principles of design - Proportion, Balance, Rhythm, Emphasis, Harmony,	3
II	Colour theory- Prang and Munsel colour system, Hue, Value and intensity.	2
	Factors affecting fashion - Economic factors, Consumer income, Sociological factors, Psychological factors.	2
	Figure theory and analysis, types, Female body type - Pear body type, Diamond body type, Round body type, Hourglass body type	3
III	Inverted triangle body type, Straight body type, Male body type - Short and heavy body type, Tall and heavy body type,	3
	Short and thin body type, Tall and thin body type, Athletic body type, Figure types - Heavy figure, Thin, Slender, Narrow	3
	Broad shoulder, Small face, Prominent chin and Jaw, Thick arm and Prominent forehead.	2
	Clothing definition, classification- Production theory, Modesty theory, Adornment theory,	4
IV	Clothing communicates- Age, Sex, Marital status, Cultural influences, Physical appearance, Life style, Occupation, Economic status, Social status	4
	Value and Attitudes, Political beliefs, Religious beliefs, Industrialization, Emotions, Interests.	3
	Fashion figure proportion- Learning figure basics,	2
	Drawing constant proportion, Guidelines	2
	Upper Torso definition, Lower Torso definition, Fashion	3
	Elongation	
V	The figure, Figure map- 8. 10,1 2 head theory for men, women and children.	2
	Total hours	55

Course code: 21TFDU0101

Credit: 0+2 Max.Marks: 100

Objectives:

- To enable the students to familiarize with fashion designing and illustration techniques.
- Acquaint with the steps involved in drawing and to gain skill in illustration and design garments for personal / individual taste.

Specific Learning Outcome:

Sketching is an important skill that is required by a fashion designer, textile designer or a graphic designer. After completion of the course the students will have hands on skills in sketching, colouring, rendering and various other techniques involved in sketching. They will be able to illustrate human figures in different postures and garments.

Unit I

Basic human proportion, Anatomy and model drawing, 8, 10, 12 head theory, Straight, Flesh, Motion posture, Elongation figure, Body figures and features- Hair styling, Eye, Face, Arm, legs, Figure drawing, Body Movement – Kids, Female and Male, Hand movement, Face drawing and detailing, Full fledged fashion figure front view, back view and different angle.

Unit II

Garment details- Collars- varieties, Cuffs- varieties, Sleeves- varieties, Yokesvarieties, Neckline- varieties, Pockets- varieties, Style manipulation, Illustration of shirt- varieties, Trouser -varieties, Gown -varieties, Frocks- varieties, Skirtvarieties, Jacket- varieties, Sketching- folds and Curves of different fabric drapes.

Unit III

Rendering Techniques- Pencil, and Colour pencil, Charcoal, Water colour, Poster colour, Oil and Acrylic, Fabric rendering of different varieties of fabrics, Prints, Woven"s, Knit, Wool, Fur, Lustrous, Dark, Sheer, lace, Embellishment etc.

Unit IV

Photo analysis- different garments of kids, Male and Female, Experimenting with collage as a method of illustration, Croquis and Flat sketches, Male, Female and Kids, development of costume on croquis using elements of fashion.

Unit V

Theme board and Mood borad creation and definition- Portfolio presentation using rendering techniques, Product development through fashion illustration in apparel and accessories.

Text Books

- 1. Comdex Fashion Design- Vol-1 Fashion Concepts
- 2. Advanced Fashion Sketch Book, Bina Abling, OM Book Service, India (2007)
- 3. Basic fashion design Styling 978-2-940411-39-9
- 4. Sapna sarkas "Fashion and sketch book" 978-93-81031-39-1
- 5. Harold Carr "Fashion design and product development"
- 6. Fashion Design illustration Children Ireland
- 7. verekes "Fashion designers hand book for adobe illustration Centers" 978-1-4051-6055-1
- 8. Anmol Roy "Fashion designing and technologies" 978-81-8411-304-4
- 9. Figure Drawing for Fashion, Isao Yajima, Graphic-Sha; First Edition (1987)
- 10. Fashion Art for the Fashion Industry, Rita Gersten, Fairchild Books (1989)

- 1. Fashion Illustration Flat drawing
- 2. Eugeniakim "Saturday night ha"t0-307-33794-4
- 3. Tatham Seamas, "fashion design drawing course" 978-0-7641-2473-0
- 4. Fashion Drawing The Basic Principles, Anne Allen and Julian Seaman, Anova Books.
- 5. Fashion illustration and Presentation, Manmeet Sodhia, Kalyani Publishers.
- 6. Fashion Source Book, Kathryn Mckelvey, Blackwell Science
- 7. Encyclopedia of fashion details, Patrick John Ireland, Batsford.
- 8. Fashion Illustration, Colin Barnes, Little Brown and Co. (UK) (April 1995).
- 9. Snap Fashion Sketch Book, Bill Glazer, Prentice Hall; 2 edition (2007).

Lecture Schedule

Unit	Topics to be covered	Hours
	Basic human proportion, Anatomy and model drawing, 8, 10, 12 head theory, Straight, Flesh, Motion posture, Elongation figure	5
I	Body figures and features- Hair styling, Eye, Face, Arm, legs, Figure drawing,	5
	Body Movement – Kids, Female and Male, Hand movement, Face drawing and detailing	4
	Full fledged fashion figure front view, back view and different angle.	4
	Garment details- Collars- varieties, Cuffs- varieties, Sleeves- varieties, Yokes- varieties, Neckline- varieties,	4
II	Pockets- varieties, Style manipulation, Illustration of shirt- varieties, Trouser –varieties	4
	Frocks- varieties, Skirt- varieties, Jacket- varieties, Sketching- folds and Curves of different fabric drapes.	4
III	Rendering Techniques- Pencil, and Colour pencil, Charcoal, Water colour, Poster colour, Oil and Acrylic	5
111	Fabric rendering of different varieties of fabrics, Prints, Woven"s, Knit, Wool, Fur, Lustrous, Dark, Sheer, lace, Embellishment etc.	5
IV	Photo analysis- different garments of kids, Male and Female, Experimenting with collage as a method of illustration,	5
	Croquis and Flat sketches, Male, Female and Kids, development of costume on croquis using elements of fashion	5
V	Theme board and Mood borad creation and definition- Portfolio presentation using rendering techniques	5
	Total	60

FIBER AND YARN SCIENCE (M)

Course code: 21TFDU0102

Credit: 4+0

Max Mark: 100

Objectives:

- To impart the knowledge of fibers, sources, their identification and properties.
- To provide students with, the knowledge of yarn science and their properties.
- To impart the knowledge of manufacturing of natural and manmade fibers.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in different types of textile fibers, origin, its classifications, manufacturing and its properties. They will be able to identify different fiber types based on its physical and chemical parameters. They will gain knowledge in different methods involved in spinning process of fibers as well as different types of yarn.

Unit I

Textile fibers- Definition, Classification of textile fibers, Natural fiber, Manmade fiber, Basic units of fibers – Monomers and Polymers, Polymerisation, Degree of polymerisation, Types of polymers, Inter polymer bonds in textile fiber, Fiber morphology, Properties of textile fibers- Primary and Secondary properties.

Unit II

Natural fibers- Definition, Classification, Natural cellulosic fibers- Cotton, Flax, Jute growth, processing, properties. Other cellulosic fiber – Coir, Bamboo, Ramie, Hemp, Kenaf, Pina, Abaca, Sisal, Kapok, Banana - its properties and end use. Natural protein fibers – Wool, Silk- processing, properties and types. Other natural fibers-Rubber, Asbestos.

Unit III

Manmade fibers- Definition, Classification - Production of manmade fiber - Wet spinning, Dry spinning, Melt spinning, Classification of manmade fibers- Fibers from natural polymers- Viscose Rayon, Acetate- production process, properties and end uses. Fibers from synthetic polymers - Acrylic, Nylon, Aramids, Polyester - production process, properties and end uses. Elastomeric fibers- Rubber, Spandex fiber. Inorganic fibers- Glass, Carbon.

Unit IV

Yarn – Definition- Classification- Process of yarn construction, Spun yarns, Conventional yarn spinning, Un conventional yarn spinning, Filament yarn- spun yarns from filament fibers, Yarn number or Yarn count – Direct system, Indirect system, measurement of yarn count. Yarn Twist – Direction of twist, Amount of twist, Balance of the yarn, Functional of twist.

Unit V

Yarn structure – Simple yarn, Complex yarn, Textured yarns – Air jet texturising, False twist texturing. Sewing threads- Essential qualities of good sewing thread, Classification of sewing threads. Difference between a thread and a yarn. Yarn defects.

Text Books

- 1. Text book- Textile Science- Deepali Rastogi, Sheetal Chopra.
- 2. E.P.G. Gohl, L.D. Velensky, "Textile Science" CBS Publishers and Distributors, 2003
- 3. Seema sekhri "Fabric science" 978-81-203-4183-8
- 4. Kanwar varinder "Fabric studies" 81-272-1904-58
- 5. Druid "Fabric textile and patterns" 9789057681127
- 6. Barker "Hand book of textiles"
- 7. Jaistree "Hand book of textiles" 978-81-7132-717-

- 1. AJ. Hall. "The standard hand book of Textiles", Wood head Publishing 8th edition 2004.
- 2. P.V. Vidyasagar, "Hand Book of Textiles", A. Mittal Publications, 2005
- 3. Sara J. Kadolph, "Textiles", Prentice Hall, 10th edition 2007
- 4. J. Gordon Cook, "Hand Book of Textile Fibres", Vol IT Man Made Fibers, Wood Head Publishing
- 5. Murphy "Preparation of textile of fibres" 81-85733-75-9
- 6. Susile dantyayi "Fundamentals of textile and their care" 978-81-250-1027-2
- Bernard P. Corbman, "Textiles Fiber. to Fabric" McGrawhill Publications, 6th Edition 1983

Lecture Schedule

Unit	Topics to be covered	Hours
	Textile fibers- Definition of textile fibers, Classification of textile fibers, Natural fiber, Man made fiber.	3
	Basic units of fibers – Monomers .and Polymers, Polymerisation, Degree of polymerisation	3
Ι	Types of polymers, Inter polymer bonds in textile fiber, Fiber morphology	3
	Properties of textile fibers- Primary and Secondary.	2
	Natural fibers- Definition, Classification, Natural cellulosic fibers, Cotton, Flax, Jute	3
	Other cellulosic fiber – Coir, Bamboo, Ramie, Hemp, Kenaf, Pina, Abaca, Sisal, Kapok, Banana	3
II	Its properties, Natural protein fibers – Wool, Silk, other natural fibers- Rubber, Asbestos.	3
	Man made fibers- Definition, Classification - Production of man made fiber - Wet spinning	2
	Dry spinning, Melt spinning, Classification of man made fibers	2
	Fibers from natural polymers- Viscose Rayon, Cuprammonium Rayon, Acetate	3
	Fibers from synthetic polymers - Acrylic, Polyamide fibers - Nylon, Aramids, Polyolefins	3
III	Elastomeri fibers- Rubber, Elastane (Spandex fiber), Inorganic fibers- Glass, Carbon.	2
	Yarn – Definition- Classification- Process of yarn construction, Spun yarns, Conventional yarn spinning	3
IV	Un conventional yarn spinning, Filament yarn- spun yarns from filament fibers	2
	Yarn number or Yarn count – Direct system, Indirect system, measurement of yarn count	2
	Yarn Twist – Direct twist, Amount of twist, Balance of the yarn, Functional of twist.	2
V	Yarn structure – Simple yarn, Complex yarn, Textured yarns – Airjet texturising, False twist texturing	3
	Sewing threads, Essential qualities of good sewing thread,	2
	Classification of sewing threads, Difference between a thread and a yarn, Yarn defects.	3
	Total hours	49

INDUSTRIAL TRAINING –I*

Course code: 21TDFU0103 Credit: 0+1 Max.Marks:50

Specific Learning Outcome:

Based on the theory discussed in first semester, all students placed in field exposure during semester break. After successful completion of a field visit in textile manufacturing units and processing units the student will have a complete commercial knowledge on textiles, and also on the latest machineries and equipments.

Industrial Visit:

From a practical point of view, this approach also seems like it might be a very useful way to document the process of getting to grips with the literature on a subject – helping immensely when it comes to putting together. We have one week/ two week exposure visit at the beginning of first semester. During second semester, the students undertake needs assessment exercise at various textile/ fashion field sites. Documentation in the form of report should be submitted by the candidates for evaluation purpose. The field training component is spread over in all academic institutes to place the successful candidates.

SEMESTER

PATTERN MAKING AND GRADING(AP)

Course code: 21TFDU02A2 Credit: 0+2

Max. Marks: 100

Objectives:

- To impart skills in basic techniques of pattern making.
- To impart pattern making and grading skills to the students.
- Lay a foundation for pattern development, pattern grading and pattern grading skills.

Specific Learning Outcome:

By learning this paper the students will gain knowledge in taking measurements for preparing metric patterns and commercial patterns. They will acquire knowledge in different pattern manipulation techniques and style development. This paper will give way to understand Fitting problems and fitting techniques. The students will also able to develop new designer patterns from basic patterns.

Unit I

Tools for clothing construction – Introduction, important tools & its types - their function. Brief study of Human growth. Different shapes of human body. **Body Measurements** – Importance, Principles of taking body measurements, Methods of taking body measurements for child, women & men, standard measurement chart for children, men and women.

Unit II

Methods of pattern making: Drafting- Definition, Principles of drafting, Merits & Demerits. Steps in drafting of Basic bodice block, Basic sleeve, Basic skirts, Basic trouser of a child. Flat pattern techniques – Definition, Merits & Demerits. Pivot, Slash, Spread & overlap method. Preparation of any two sleeve and skirts using overlap & spread method.

Unit III

Study of commercial pattern and body measurements - Birth of commercial pattern, Merits & Demerits. Preparation of commercial pattern. Grading – Definition, Types (Manual & computerized) Manual-Master grade, Basic back, Basic Front and Basic sleeve. Dart manipulation – principle, charting front bodice pattern – Slash & Spread techniques, Pivotal Transfer techniques.

Unit IV

Fitting and Pattern alteration: Fitting – Definition – Principles for good fit. Causes for poor fit, checking the fit of a garment, solving fitting problems in various garments-basic principles. Fitting techniques. Pattern alteration - importance of altering patterns. Principles for pattern alteration. Common pattern alterations in a blouse. Alteration of pattern for irregular figures. Preparation of fabric for cutting – Importance of grain in fabric cutting. Checking and straightening the fabric grain and fabric ends.

Unit V

Pattern layout – Rules in pattern layout – Types of layout. Layout for asymmetrical designs, Bold designs, Checked and One-way design. Economy of fabrics in placing pattern – Adjusting the fabrics to patterns. Rules for placement of fabric if not sufficient. Fabric cutting – Transferring pattern markings. Stay stitching & Ease stitching. True Bias – Introduction, preparation and uses of true bias. Draft a garment with any two style variation using your own measurement.

Text Books

- 1. Draping for Fashion Design, Hilde Jaffe, Nurie Relis.
- 2. Dress Design Draping and Flat Pattern, Hill House MS, Houghton Miffin Co, London, USA.
- 3. The theory of Fashion Design, Brockman, Magritha, John Wiley Sons, New York.

- 1. Design through Draping, Sheldon, Marhta, Burgers Publishing company, Minneapolis, USA.
- 2. Modern Pattern Design, Popin, Hariet, Funk and Wagnalls, New York and London.
- 3. Practical Clothing Construction Part I and II, Mary Mathews, Cosmic Press, Chennai (1986)
- 4. The Complete Book of Sewing Dorling Kindersley Limited, London (1986)
- 5. Sewing and Knitting A Readers Digest, step- by step guide, Readers Digest Pvt Ltd, Australia.

Lecture Schedule

Unit	Topics to be covered	Hours
	Study of body measurements, importance of body measurements, standard measurements chart for all age groups.	3
Ι	Standard measuring techniques- commercial patterns for all age groups and its application in pattern making.	3
	Methods of pattern making definition- drafting, principles of drafting. Steps in drafting children"s, adults bodice and sleeve patterns.	4
п	Flat pattern techniques- definition, pivot, slash and spread method. Dart manipulation- slash and spread, pivot transfer technique.	4
	Layout definition, layout planning- types of layout, merits and demerits of layout, marking, assembling.	4
	Fitting- definition, principles of good fit, causes for poor fit, checking the fit of a garment, fitting techniques.	4
ш	Pattern alteration- importance of altering patterns, principles of pattern alteration.	4
	Grading- definition, types of manual and computerized. Manual- master grade basic back, basic front,	4
	Basic collar and basic facing and grading.	4
TX7	Computerized grading technology- information flow, system description.	3
IV	Draping- importance of draping- the dress form and its types. Draping steps for basic bodice, skirt, pants and intimates	5
V	Various intimates for men, women, adolescence and kids, intimate garments- introduction, material used and types of fitting for men"s innerwear briefs and truck. Women"s	5
v	inner wears. Total	47

FABRIC STRUCTURE (M)

Course code: 21TFDU0204 Credit: 4+0

Max.Marks: 100

Objectives:

- To impart knowledge of fabric manufacture and fabric characteristics.
- To enable students to understand fabric structures and to analyze them.
- To impart knowledge of various looms and knitting machine.

Specific Learning Outcome:

After learning this paper the students will be able to design textile fabrics i.e. woven, knitted and non woven fabrics manually. They will acquired knowledge in different types of looms, loom parts and mechanisms of different looms, both handloom and power loom. The students will know the different types of knitting machines, knitting machine parts and functions, as well as they will be able to design knit fabrics.

Unit I

Weaving- Definition- Classification, introduction to fabric manufacturing technology- sequence of preparatory process for weaving and its objectives- sizing, weft winding, warping. Passage of material through weaving machine (loom)- study of looms- different types of loom- important motions of weaving- shedding, picking, beat-up and let-off, take up motions- hand loom, power loom, shuttle loom, shuttle less loom.

Unit II

Woven fabric and design- general characteristics of woven fabric, elements of woven design- design, draft plan, peg plan. Basic weave design- Plain weave and its derivatives. Twill weaves- types, Satin and Sateen weaves. Crepe weave, Honey comb weave, Huck a back weaves, Mock leno, Extra warp and Extra weft. Dobby and Jacquard weave structure and types.

Unit III

Knitting- definition, Classification, terms used in knitting, knitting elements- types and its mechanism – latch needle mechanism, knitting machine types- flat bed and circular knitting machine- mechanism. Warp and Weft knitting- principle, typesstitches, structure, properties and uses. Comparison of warp and weft knitting. Study on Jacquard knitting.

Unit IV

Non woven- definition, Methods of manufacturing- web formation- types and mechanism. Fabric formation- bonding- mechanical, chemical and thermal bondingtypes and mechanisms. Comparison between weaving, knitting and non woven. Comparison between woven, knitted and non woven fabrics, characteristics and end uses.

Unit V

Decorative fabric construction - Braiding and types- Two and three dimensional braiding, Circular braiding. Bonded fabrics - its characteristics and end use. Netting,

Lace, Knotting, Crocheting, Embroidery, tatting – properties, types and end uses. Felting- construction, types, its characteristics and end use.

Text Books

- 1. Ormerod A, "Modern Preparation and Weaving machiner", Woodhead Publication, 2004
- 2. Chitra, chowdhary "Textile design and structure" 978-81-8342-298-7
- 3. Charu samy "Textile design theory"978-81-224-3053-0
- 4. Tanya jain "Textile designing theory and concept"
- 5. Frank Ames "Woven master recipes of Sikh heritage"
- 6. W.S. Murphy, "Textile Weaving & Desigm", Abhishek Publication, 2003
- 7. J. Gordon Cook, Hand Book of textiles Fibers Vol I & II", Woodhead Publication
- 8. Text book- Textile Science- Deepali Rastogi, Sheetal Chopra.

- 1. Amjden C.A "Navaho Weaving Its techniques and History", Abhishek Publication.
- 2. Z.J. Grosicki, "Watson"s Textile Design & Colour, 7th Edition Woodhead Publication.
- 3. W.S. Murphy, "Handbook of weaving" Abhishek Publication.
- 4. Deborah Chnadler, "Learning to weave", Interweave Press, 1995.
- 5. J.J. Pizzuto, "Fabric Science" 6th Edition, Fairchild Publications.

Lecture Schedule

Unit	Topics to be covered	Hours
	Weaving- Definition- Classification, introduction to fabric manufacturing technology- sequence of preparatory process for weaving.	3
Ι	Sizing, weft winding, warping. Passage of material through weaving machine (loom)- study of looms- different types of loom	4
	important motions of weaving- shedding, picking, beat-up and let-off, take up motions- hand loom, power loom, shuttle loom, shuttle less loom.	4
II	Woven fabric and design- general characteristics of woven fabric, elements of woven design- design, draft plan, peg plan.	4
	Basic weave design- Plain weave and its derivatives. Twill weaves- types, Satin and Sateen weaves.	3
	Twill weaves- types, Satin and Sateen weaves. Crepe weave, Honey comb weave, Huck a back weaves, Mock leno, Extra warp and Extra weft.	4
	Dobby and Jacquard weave structure and types.	3
	Knitting- definition, Classification, terms used in knitting, knitting elements- types and its mechanism,	3
	knitting machine types- flat bed and circular knitting machine- mechanism.	3
III	Warp and Weft knitting- principle, types- structure, properties and uses	3
	Comparison of warp and weft knitting. Study on Jacquard knitting.	3
	Non woven- definition, Methods of manufacturing- web formation- types and mechanism.	3
IV	Fabric formation- bonding- mechanical, chemical and thermal bonding- types and mechanisms.	3
	Comparison between weaving, knitting and non woven. Comparison between woven, knitted and non woven fabrics, characteristics and end uses.	4
V	Decorative fabric construction, Bonding- Braiding and types- Two dimensional braiding, Circular braiding mechanism,	4
	3D braiding, Horn gear braiding, Cartesian, Bonded fabrics Netting, Lace, Knotting, Crocheting, Embroidery, Felting- its characteristics and end use.	4
	Total	55

Course code: 21TFDU0205

Credit: 0+2

Max. Marks: 100

Objectives:

- To impart skills in basic techniques of hand sewing.
- To provide the knowledge of various hand stitches.
- To impart skills in operating sewing machine.
- To provide the knowledge of stitching various garment parts.

Specific Learning Outcome:

By learning this paper the students will gain knowledge in taking measurements for preparing pattern. This paper will give way to understand parts and functions of a basic sewing machine and they will be able to know the mechanism and how to take care of a sewing machine. The students will also know to stitch starting from a simple seam to complex collars and yokes.

Unit I

Sewing Techniques: Definition-Sewing, Introduction to types of sewing machines, parts and functions of sewing machines of basic sewing machine. Special attachments in sewing machine. Stitches: Basic hand stitches – Basting, running, hand overcast, buttonhole, Hemming stitches – plain and blind hemming and slip stitch.

Unit II

Seams – plain, single top, double top, welt, flat fell, French seam, lapped, piped, slot and Mantua maker's seam. Seam finishes – (6). Fullness – darts (2), tucks (5), pleats (7), flares, godets, gathers and shirrs (4) and frills and ruffles (2).

Unit III

Yokes – partial, yoke without fullness, yoke with fullness within the yoke, yoke releasing fullness. Pockets- patch, set-in-pocket and pocket set in to a seam. Neckline finishes – true bias, facing, shaped facing, binding and piping.

Unit IV

Placket finishing – continuous one piece, two piece bound placket, Zipper placket and tailored placket. Fasteners – Press button, hook and eye, shirt button and button hole, button loop and decorative button and zips.

Unit V

Sleeves – Plain, puffed, Raglan, Kimono, Bell sleeves, circular, Cap, Cuff, Long, Petal Sleeves. Collars – Peter pan, shawl, Shirt collar, Sailor, cape, turtle neck, Puritan and Mandarin.

Text Books

- 1. Helen J Armstrong, Pattern Making for Fashion Design, Prentice Hall
- 2. Pattern + palette 2 Arrizabalaga
- 3. Pattern cutting and making up Martin .M, shoben 81-239-1373-7
- 4. Pattern cutting and making up Martin81-239-1373-7
- 5. Pattern Making of fashionAmstrong 978-81-317-2459-0, 978-317-2459
- 6. Mary Mathews. (1984). Practical clothing Construction Part-1. Madras Parrinpack. Prentice Hall Inc.

- 1. Harold Carr & Barbara Lathem, The Tachnology of Clothing Manufacture, Oxford Pub, USA, 1994
- 2. Gerry Cooklin, Introduction to Clothing Manufacture, Blackwell Science, UK, 1991
- 3. Metric Pattern cutting & Grading by Winfred Aldrich.
- 4. Bane Allyne, Flat pattern design. M.C. Graw Hill Pub. USA
- 5. Winfred Aldrich, "Metric Pattern Cutting". Black Well Science. UK
- 6. Helen J. Armstrong, "Pattern Making for fashion design" Prentice Hall.

Unit	Topics to be covered	Hours
	Sewing Techniques: Definition-Sewing, Introduction to types of sewing machines, parts.	3
	Functions of sewing machines, single needle, double needle	3
Ι	Over lock machine, button hole machine, button fixing machine.	3
	Suitability and function, commonly used and special attachments in sewing machine.	3
	Stitches: Basic hand stitches – Basting, running, hand overcast, buttonhole, Hemming stitches – plain and blind hemming and slip stitch.	5
II	Seams – plain, edge, single top, double top, Flat fell, French seam, lapped, piped, slot.	4
	Seam finishes- pinked, overcast, edge, herring bone	3
	Fullness and Yokes: Fullness – Darts, tucks pleats, gathers and style line.	4
	Yokes –and its types- Simple round Yoke, Full round yoke	4
	Square yoke, Pentagonal yoke, Side yoke, Yoke with and without Fullness.	4
IV	Sleeves and Collars: Sleeves – Plain, puffed, Raglan, Kimono, Bell sleeves, Butterfly, Cap.	4
	Angel, Bracelet, Cuff, Half, Long, Petal, and Slit Sleeves	4
	Collars – Peter pan, shawl, Shirt collar, Wing, Notched, Sailor, Ruff, Puritan and Mandarin.	5
V	Fasteners and Neckline Finishes: Fasteners – Press button, hook and eye, shirt button, button hole and zips.	4
	Finishes – Neckline finishes – Facing, shaped, piping / binding,	4
	Placket finishing – continuous one piece, two piece bound placket.	3
	Total hours	60

INDUSTRIAL TRAINING –II*

Course code: 21TFDU0206

Credit: 0+1

Max.Marks:50

Specific Learning Outcome:

After successful completion of a field visit in a reputed textile manufacturing concern the student will have a complete commercial knowledge on textiles, they will gain knowledge about the latest machineries and equipments.

Industrial Visit:

From a practical point of view, this approach also seems like it might be a very useful way to document the process of getting to grips with the literature on a subject – helping immensely when it comes to putting together. We have one week/ two week exposure visit at the beginning of first semester. During second semester, the students undertake needs assessment exercise at various textile/ fashion field sites. Documentation in the form of report should be submitted by the candidates for evaluation purpose. The field training component is spread over in all academic institutes to place the successful candidates.

SEMESTER

WET PROCESSING (M)

Course code: 21TFDU0307

Credit: 4+0

Max.Marks: 100

Objectives:

- To impart knowledge of textile and garments dyeing process.
- To introduce students to various chemicals, dyes and auxiliaries used for chemical processing.
- To impart the knowledge of textile coloring and various printing methods to the students.
- To bring an awareness on the industrial techniques of dyeing and printing

Specific Learning Outcome:

After learning this paper the students will gain thorough knowledge in Wet Processing of textile materials. They will be able to classify different finishing processes of textiles, preparatory process and different bleaching process. They will know different dyeing process, dyeing equipments, printing process and printing equipment.

Unit – I

Introduction to textile wet processing – preparatory process for woven and knitted fabric: Singeing- objective, types, Gas singeing. Desizing – objects of desizing, types, process. Scouring – objective. Bleaching- objective, types, bleaching agent, process. Degumming and mercerization – objective, process. Pre wet processing equipments – kier, j box, padding mangle.

Unit – II

Dyeing- Introduction to dyeing, classification of dyes- natural. Origin of natural dyes, Raw material, selection, Extraction (understanding concepts) mordant and mordant techniques. Synthetic dye – Direct, VAT, reactive dyes- cold & hot, acid dyes, basic dyes, Disperse dye, Naphthol, Sulphur dyes. Dyes suitable for different fibers, dyeing of cotton, silk, wool, nylon, acrylic and polyester.

Unit –III

Methods of dyeing – Principle and working. Dope dyeing, fibers dyeing machine. Yarn dyeing machines – types, Package dyeing machines. Fabric dyeing machine – jigger, padding mangle, winch, beam, jet, soft flow dyeing machine. Garment dyeing machines.

Unit – IV

Printing - Definition, Difference between dyeing and printing. Preparation of fabric for printing. Preparation of printing paste – Essential ingredients used in printing paste – Basic styles of printing – direct, discharge and Resist style. Printing of cellulosic fabrics. Printing of silk and wool fabric. Printing of polyester and nylon fiber.

Unit – V

Methods of printing - Hand screen, Rotary, Transfer, Stencil, Block, Tie and Dye, Batik. Types of texture used in painting – vegetables, leaf, lace, mesh, flower, thread crumble, thread pulling etc. Introduction of Digital printing.

Text Books

- 1. Text book- Textile Science- Deepali Rastogi, Sheetal Chopra.
- 2. A.J.Hall "The Standard Hand Book of "Textiles", Woodhead Publication, 2004
- 3. Natural dyeingJackie crooks978-1-85675-280-0
- 4. Needles: tuffed couplet textile fiber dyes 978-93-80931-82-1
- 5. Textile chemical processing Jaitendra kumar 8190402558
- 6. Textiles and Laundry Poonam Sinha
- 7. Toxity of Dyes and Intermediates Shenai
- 8. Dyeing printing and finishing Hust silk 81-8247-007-2
- 9. J.E. Smith "Textile Processing Printing, Dyeing, Abhishek Publishing 2003

- 1. Kate B Broughton, Textile Dyeing", Rockport publishers, 1996.
- 2. W.S. Murphy, "Textile Finishing", Abhishek Publication, 2000.
- 3. Rosi Robinson, "Creative Batik", Search Press, 2004
- 4. Janice Gunner, "Shibori for textile Artists", Batsford London
- 5..Textiles Ninth edition ,Sara J Radolph and Anna L Langford, Prentice hall, New Jersey (2002).
- 6. Textile processing J L Smith, Abhishek publications, Chandigarh (2003).
- 7. Textile Chemistry Peters R H, Vol I, & II, Textile Institute Manchester (1970)
- 8.Beginners Guide to fabric dyeing and printing Stuart & Robinson, Technical books,London (1982).
- 9. Thickening agents and Emulsion thickenings in textile printing Herbert Barthm, NewDelhi (1994).

Unit	Topics to be covered	Hours
	Wet processing- definition- classification- Basic preparatory process of finishing- Degumming, singeing, desizing, scouring	3
I	Bleaching, stiffening, mercerization, carbonizing, Enzymatic process.	3
	Equipments and machineries used for various types of finish suitable for various fibers wet processing.	4
	Dyeing- Introduction to dyeing, classification of dyes- natural.	6
	Origin of natural dyes, Raw material, selection, Extraction (understanding concepts) mordant and mordant techniques.	3
	Synthetic dyes– direct, basic, acid, vat, reactive and disperse dyes, sulphur	3
II	Methods of dyeing- stock, top, yarn, piece, dope, garment dyeing	3
	Printing methods- Definition-Classification-Styles-Direct- Screen, Block, Roller, Rotary,	4
	Transfer, Discharge- white and coloured, Resist- stencil,	4
III	Tie and dye, Batik. Identification of dyeing and printing defects	4
	Finishes – definition, classification of textile finishes, purpose of finishing	3
IV	Mechanical finishes- Calendaring, Durable press, Embossing, Napping, Shearing, Decating, Sanforizig,	3
	Sueding, Gigging, Beetting, Schrenrising, Stone wash, Tentering,	3
	Nano and microencapsulation process.	3
	Chemical finishes- Definition, types, Antiseptic, Antistatic, Antislip, Flame Retardant,.	4
V	Water Repellent, Stain Resistant, Water Proof. Moth proof, Anti Microbial, Plasma Finishes	4
	Total	57

CHILDRENS APPAREL (ML)

Course code: 21TFDU0308	Credit: 0+2	Max. Marks:100
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Objectives:

- To impart the knowledge in drafting and garment construction for children"s wear.
- To impart and develop creative skills in designing and constructing children's wear for different age groups.

Specific Learning Outcome:

This paper will enable the students to prepare patterns based on individual measurement and stitch garments for Children independently without any assistance. The students can develop complex patterns and designs based on the practical skill they acquire.

Unit I (each one construct 5 varieties)

Designing, patternmaking, layout planning, marking, cutting and finishing the garments, Infant Jabla, napkin, Towels for 0-1 years, Accessories - Infant bed, feeding bottle cover, Infant Bib, panty for 2-3 years.

Unit II (each one construct 5 varieties)

Designing, patternmaking, layout planning, marking, cutting and finishing the garments, Waist line frock for girl 2-4 years, Stapled petticoat, Baby A-line frock with variation of sleeve, yoke, pockets etc. 3-5 years.

Unit III (each one construct 5 varieties)

Designing, patternmaking, layout planning, marking, cutting and finishing the garments, Flared frock with Magyar sleeve 6-12 years with variation of tucks, gathering, pleates.

Unit IV (each one construct 5 varieties)

Designing, patternmaking, layout planning, marking, cutting and finishing the garments, Night wears for boys and girls 2-6 years with variation of neck design and pockets

Unit V (each one construct 5 varieties)

Designing, patternmaking, layout planning, marking, cutting and finishing the garments, Knickers, shorts, Bush shirt, T-shirt, slack shirt 6-8 years preparatory models and constructions any two garments.

Text Books

- 1. Practical Clothing Constructing-Part I and II, Mary Mathews, Cosmic Press, Chennai (1986)
- 2. Zarapker System of Cutting- Zarapker. K. R, Navneet Publications ltd.
- 3. Practical cutting and tailoring part II Eshwasri Anwahi, Lakhraj Hans R.B Publications, Delhi

- 1. Advanced drafting and draping Manmeet Sodhia
- 2. Metric pattern cutting for children's wear and babies wear Winifred Aloric
- 3. Singer sewing for children.

Unit	Topics to be covered	Hours
	Designing, patternmaking, layout planning, marking, cutting and finishing the garments, Infant Jabla, napkin,	6
I	Towels for 0-1 years, Accessories - Infant bed, feeding bottle cover, Infant Bib, panty for 2-3 years.	6
	Designing, patternmaking, layout planning, marking, cutting and finishing the garments, Waist line frock for girl 2-4 years	6
II	Stapled petticoat, Baby A-line frock with variation of sleeve, yoke, pockets etc. 3-5 years.	6
	Designing, patternmaking, layout planning, marking, cutting and finishing the garments,	4
	Flared frock with Magyar sleeve 6-12 years with variation of tucks, gathering, pleates.	6
III		
IV	Designing, patternmaking, layout planning, marking, cutting and finishing the garments, Night wears for boys and girls 2-6 years with variation of neck design and pockets	6
N7	Designing, patternmaking, layout planning, marking, cutting and finishing the garments, Knickers, shorts,	5
V	Bush shirt, T-shirt, slack shirt 6-8 years preparatory models and construct os any two garments.	5
	Total	50

RECENT ADVANCES IN APPAREL DESIGNING (A)

Course code: 21TFDU03A3

Credit: 4+0 Max. Marks: 100

Objectives:

- To gain knowledge about different types of sewing machines.
- To know about different spreading and cutting machines.
- To introduce students to aspects of fashion and recent advances in apparel industry.
- To impart knowledge about various product standards and product specifications and the process of product development towards market need.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in process carried out in each department in apparel industrial. Apparel design is the backbone of all industrial activity, with the entire production, fitting and importance's of apparel and gain knowledge in fabric and trims sourcing and will be able to prepare a cost effective garments.

Unit I

Introduction to garment industry: Brief study of sequence of process – Planning, spreading & cutting. Marking – Definition, requirements of marker planning, methods of marker planning and computerized marker planning. Spreading – Definition, requirements of spreading process, methods of spreading, spreading machine. Nature of the fabric packages.

Unit II

Introduction to cutting technology – Definition, objective of cutting. Methods of cutting – Cutting equipment and tools - Hand shears, straight knife cutting machine, band Knife cutting machine, round knife cutting machine, notchers, drills & thread markers, computer controlled cutting machine, Laser cutting, Plasma cutting, die cutting, water jet cutting and ultrasonic cutting.

Unit III

Sewing machine – parts and function of basic sewing machine: Needle – parts & types of needle, needle size, presser foot and its types. Classification of Industrial sewing machines: Applications and Description of working of various sewing machine - Single Needle Lock Stitch machine (SNLS), Double Needle Lock Stitch machine (DNLS), Over Lock , Flat Lock , Bar tacking , Button hole machine, Button fixing machine, Blind stitch machine and smocking making machine. Machine bed types – flat bed, cylinder bed, post bed and feed-off-the-arm.

Unit IV

Definition and types of stitches and seams as per federal standards. Study on various garment finishing industrial machines for Fusing, stain removing, Pressing, foreign particle detecting and Packing. Colour matching- importance, computerized colour matching cabinet. Efficiency of planning fabric wastage and utilization of fabric waste.

Introduction to Automatic sewing machine, Automatic embroidery machine and smocking making machine. Introduction to ultra sonic stone fixing machine. Introduction to computerized pattern development, Software's used for pattern development. Introduction to digitizer plotter scanner. Grading- computerized grading and software's used for grading. E-fitting, body scanner, 3D simulators.

Text Books

- 1. Fashion Design and Product Development, Harold Carr and John Pomeroy, Black well Science Inc, Cambridge (1992)
- 2. Fashion marketing, Mike Basey, Oxford University press, WynfordDrve, Don Mills, Ontario (1995)...
- 3. Introduction to Fashion, Patrick John, B T Batsford Ltd, Ireland, Fullham road, London (1992).
- 4. Fashion From Concepts to Consumer, Stephens Frings, Prentice Hall, 7th Edition 2002.
- 5. Marketing Management, Philip Kotler, Prentice Hall, 7th Edition 1996

- 1. Shenai V.A, Technology of Textile processing, Chemistry of dyes and principles of dyeing, A Sevak Publication, Bombay, 1993.
- 2. Nalankili. G., Textile Finishing, SSM Publications, Komarapalayam.
- 3. Prayag. R.S., Technology of Textile Printing, L.R. Prayag.
- 4. Manivasagam. N. Treatment of textile processing effluents, Sakthi Publications, Coimbatore 1995.
- 5. Mary Mathews, Practical Clothing Construction Part I Cosmic Press, Chennai.
- 6. Coles M Sew, "A complete guide for sewing", Heinemann Professional Publishing, Singapore.
- 7. Latham & Carr, The Technology of Clothing Manufacture.
- 8. Gerry Cooklin, Introduction to clothing Manufacture, Blackwell Science Lts., England, (1991).
- 9. Ruth. E. Glock and Grace.I.Kunz, Apparel Manufacturing, Pearson Education, New Delhi.

Unit	Topics to be covered	Hours
I	Foundation garment- introduction, materials used and types of fitting for Men"s and Women"s inner wear and swim wear.	4
	Fitting- principles of fitting, standards for a good fit, E- fitting, body scanner, 3D simulators. Interlining interfacing- materials, types, properties, application and machinery.	4
П	Introduction to manual/ computerized pattern development, mini- marker. Software''s used for pattern development. Introduction to digitizer plotter scanner.	4
	Grading- computerized grading and software"s used for grading. Spreading- definition, methods of spreading, spreading machine. Nature of the fabric packages.	4
III	Lay out- definition, importance and principles of layout, importance of fabric estimation, advantages, methods of estimation material requirement for garment- easy method and formula method of estimation.	4
	Handling special fabric - stretch fabric, knit, checks, braids, velvet, leather, fur and lace.	4
IV	Marking- definition, requirements of marker planning, methods of marker planning and computerized marker planning. Cutting- objective methods of cutting, cutting tools and equipments- hand shears, straight knife cutting machine, band knife,	4
	Round knife, notches, drills and thread markers, computerized cutting machine, laser cutting, plasma cutting, and ultrasonic cutting.	4
	Garment finishing industrial Equipment for fusing, stain removal, pressing, Detecting foreign particle and packing	4
V	Colour matching- importance, computerized colour matching cabinet. Efficiency of planning fabric wastage,	4
	Total	40

SURFACE EMBELLISHMENT (AP)

Course code: 21TFDU0309Credit: 0+ 2Max. Marks:50Objectives:

- To impart knowledge on various traditional embroideries of India
- To gain practical knowledge on different embroideries of India.

Specific Learning Outcome:

After completing this course the students will know how to stitch different embroidery stitches appropriate to a particular design. They will gain hands of knowledge in Traditional Indian embroideries, Tribal embroidery of India and many other needle techniques like gold and silver works and zardosi works. They will be able to design appliqués, prepare patch works and do smock work on fabric surface.

Unit I

Preparation of Samples-Embroidery –Definition- Classification– Basic hand embroidery stitches- chain stitch, running, back, satin, stem, cross, laisy daisy, herring bone, feather stitch, knotted- stitch- French knot, bullion knot- material, motifs, colour combination.

Unit II

Introduction of Traditional Indian embroidery – History, types of embroidery of different state of India – Kutch, Kathiwar, Pulkari, Kantha, kasuthi, Chambarumal, Gold & silver embroidery, Zardosi, Chikankari, Kashida.

Unit III

Tribal Embroidery – Introduction, Types – Nagaland, Manipuri, Lambadi, Thoda with their traditional influence, symbolism, techniques, fabric, stitches and colour combination- Preparation of samples

Unit IV

Patch work-Structure, Types of patch work-Traditional patchwork, Crazy patchwork, Crochet patchwork, Appliqué work, Quilting, cut work, eyelet work, shadow work - Introduction, tools, material and techniques

Unit V

Crochet – Introduction, tools, material, techniques and types. Knitting – Basic, Texture, Rib, Diagonal, lace pattern, cable pattern. Mirror work, fabric painting,

Text Books

- 1. Shaylaja; D. Naik, Traditional Embroideries of India APH corp, New Delhi 1996
- 2. Sheila paine: Embroidered Textile- Thames & Hudson Ltd. 1990
- 3. Usha Srikant: Ethnic Embroideries of India
- 4. Savithri Pandit: Indian Embroidery.
- 5. Aasha Kutch works Border Designers book, book no 142, Vol 2
- 6. Animal embroideries and patterns Serena
- 7. Basis crochet stitchesErika knight978-1843404040
- 8. Crochet holiday collection 53 crochet designsDonna Scott

References

- 1. Embroiders pattern book
- 2. Embroidery and stitch tools Amrit bajaj 978-81-8411-352-5
- 3. Embroidery designs for children"s garmentsNirmals .C Mistr
- 4. Embroidery Vol 5, Exclusive designer sarees
- 5. 100 First crochet Lesley stanfield978-1-84340-612-9
- 6. 101 Folk embroidery and traditional handloom weaving Shailaja D. Naik
- 7. Needle craft skills techniques 65 practical projects Lucinda Gandert
- 8. Surface designing of textile fabrics Shailaja 81-224-1860

Unit	Topics to be covered	Hours
Ι	Preparation of Samples-Embroidery –Definition- Classification– Basic hand embroidery stitches- chain stitch, running, back, satin, stem, cross, laisy daisy, herring bone, feather stitch,	6
	knotted- stitch- French knot, bullion knot- material, motifs, colour combination.	6
П	Introduction of Traditional Indian embroidery – History, types of embroidery of different state of India – Kutch, Kathiwar,	6
	Pulkari, Kantha, kasuthi, Chambarumal, Gold & silver embroidery, Zardosi, Chikankari, Kashida	5
ш	Tribal Embroidery – Introduction, Types – Nagaland, Manipuri,	4
III	Lambadi, Thoda with their traditional influence, symbolism, techniques, fabric, stitches and colour combination	4
	Patch work-Structure, Types of patch work-Traditional patchwork,	5
IV	Crazy patchwork, Crochet patchwork, Appliqué work,	5
	Quilting, cut work, eyelet work, shadow work - Introduction, tools, material and techniques	5
V	Crochet – Introduction, tools, material, techniques and types. Knitting – Basic, Texture.	5
v	Rib, Diagonal, lace pattern, cable pattern. Mirror work, fabric painting,	5
	Total	74

INDUSTRIAL TRAINING –III*

Course code: 21TFDU0310

Credit: 0+1

Max.Marks:50

Objectives:

- To expose students to experience and knowledge which is required in industry, where these are not taught in the lecture rooms.
- To apply the knowledge taught in the lecture rooms in real industrial situations.
- To use the experience gained from the "Industrial Training" in discussions held in the lecture rooms.
- To get a feel of the work environment.
- To gain experience in writing reports in works/projects.
- To expose students to the responsibilities and work ethics.
- With all the experience and knowledge acquired, it is hoped at the students will be able to choose appropriate work upon graduation.

Specific Learning Outcome:

After successful completion of a field visit in a reputed textile manufacturing concern the student will have a complete commercial knowledge on textiles, they will gain knowledge about the latest machineries and equipments.

Industrial Training

Industrial Training refers to work experience that is relevant to professional development prior to graduation. One of the requirements for the award of Bachelor of Science is that students must complete at least 2 weeks of Industrial Training. Industrial Training is normally accumulated during the semester breaks at the end of the second year. Students should note that Industrial Training is an essential component in the development of the practical and professional skills required of a candidate and an aid to prospective employment. Many employers regard this period as a chance to vet new employees for future employment.

All students should make considerable effort and give sufficient thought into obtaining the most relevant and effective Industrial Training. Whilst difficult, it is desirable to obtain experience in a range of activities, such as e.g. design office, laboratory and on-site situations. It should also be noted that developing an awareness of general workplace behavior and interpersonal skills are important objectives of the Industrial Training experience.

SEMESTER - IV

HISTORIC TEXTILES AND COSTUMES OF INDIA (M)

Course code: 21TFDU0411

Credit: 3+0

Max. Marks: 100

Objectives:

- To understand the various century"s costumes and historic textiles in India.
- To have concepts on colour, motif and specialization in different state costumes of India.
- To enhance the students knowledge regarding accessories and jewellery of different Eras.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in Historical textiles and Designs starting from the evolution to human to till date. The students will gain knowledge on traditional woven textiles of India and the Traditional embroideries of different states of India. They will even learn about the Traditional costumes of different states of India spread on varied diversity.

Unit I

Indian- History, India valley civilization-Vedic perio, Mauryan perio, Gupta perios, Mughal period, Rajput period, British periods

Unit II

Traditional attires of north India- Jammu and Kashmir- Climate condition costume, Colourful pherans shawls, Intricate embroidery, Goucha, Himachal Pradesh and Uttaranchal – Short ghaghras, kurti and chunder or chunri, Riwaaz, pagri.

Unit III

Clothing in western India- Rajasthan and Gujarat- climate condition costume, radiant costume, ghagra choli and odhnis, gota nad zari work. Rajasthani- Bandhini, tie-n-dye, head wear to toe ornaments, Maang-teeka, Matha-patti, Rakhdi or ghundi, banda, Dhabla, pachewara and Bugatari. Maharashtrian- Pheta or patka or Rumal, mega sleeve choli or blouse, Marathi look typical nathni.

Unit IV

Costumes of east and north-east Inda- Bengali- Dhoti-kurtha, Assam- mekhla chador, Meghalaya-Jainsen, Mizoram, Manipur-Phanek, potlois, Tripura, Nagaland and Arunachal Pradesh – Buddhist monpas tribal costume.

Unit V

Clothing styles of south India- Kerala- Lungis, Mundu and Neriathu, saree zari bordaered, Karnataka-Angavastram, Andhra Pradesh- long sleeve choli, kurta, Tamil Nadu- Knachipuram silk. Origin, History- brocades of Banaras, Baluchari, Chanderi, Pochampalli.

Text Books

- John Gillow & Nicholas Barnad, "Traditional Indian Textiles". Thames & Hudson, 1993
- 2. Martand Singh, "Saris" of India Bihar & West Bengal", Wiley Eastern Ltd. 1993
- 3. Rta Kapur chishti & Amba Sanyal, "Saris of India Madhya Pradesh," Wiley Eastern Ltd. 1989
- 4. Ancient Indian Costume, Roshen Alkazi, Art Heritage (1983)
- 5. Costumes and textiles of Royal India Ritu Kumar Published by Christie"s Books.
- 6. The Guide to Historic Costumes, Karen Baclawski, Drama Publishers (1995).
- 7. Ikat textiles of India G.K. Ghosh
- 8. Impressions a classic collection of Indian textiles design (with cd) Prakasha. K

References

- 1. India by design Boroian
- 2. Indian fashion designing Prakash
- 3. Indian Ikat textiles -Rosemary crill 1-85177-242-1
- 4. Indian textiles ethnic and beyond (with cd) R.M. Lehri
- 5. Jute handlooms of india 1-890206-18-0
- 6. Shifting sands Kutch Textiles Traditions : Transformation Archana Shah
- 7. Textiles and crafts of India, Arunachal Pradesh, Assam, Manipur Vandana Bhanda
- 8. Traditional Embroideries of IndiaShailaja D. Naik
- 9. Traditional Indian Costumes and Textiles Bhatnagar
- 10. Warli paintings, Traditional folk arts from India K. Prakash
- 11. Suvasas the beautiful costumes Vishnu arora978-81-8247-196-2
- 12. Textile and dress of Gujarat Eiluned Edwards
- 13. Textile art of India Kokyo Hatanaka
- 14. Madhu Priya, "An innovative Collection of Indian Textile designs," Honesty Publishers & Distributors
- 15. "Traditional Indian costumes & textiles", by Dr. Parul Bharnager, Abhishek Publication.
- 16. "The Costumes and textiles of India", by Jamila Brij Bhusan, Taraporevala Bombay.

Unit	Topics to be covered	Hours
	Indian- History, India valley civilization-Vedic perio, Mauryan perio	3
I	Gupta perios, Mughal period, Rajput period, British periods	3
II	Traditional attires of north India- Jammu and Kashmir- Climate condition costume, Colourful pherans shawls,	3
	Intricate embroidery, Goucha, Himachal Pradesh and Uttaranchal – Short ghaghras, kurti and chunder or chunri, Riwaaz, pagri.	4
III	Clothing in western India- Rajasthan and Gujarat- climate condition costume, radiant costume, ghagra choli and odhnis, gota nad zari work	3
IV	Rajasthani- Bandhini, tie-n-dye, head wear to toe ornaments, Maang-teeka, Matha-patti, Rakhdi or ghundi, banda, Dhabla, pachewara and Bugatari	4
	Maharashtrian- Pheta or patka or Rumal, mega sleeve choli or blose, Marathi look typical nathni.	4
	Costumes of east and north-east Inda- Bengali- Dhoti- kurtha, Assam- mekhla chador, Meghalaya-Jainsen, Mizoram,	4
	Manipur-Phanek,potlois, Tripura, Nagaland and Arunachal Pradesh – Buddhist monpas tribal costume.	3
	Clothing styles of south India- Kerala- Lungis, Mundu and Neriathu, saree zari bordaered,	4
V	Karnataka-Angavastram, Andhra Pradesh- long sleeve choli, kurta, Tamil Nadu- Knachipuram silk.	3
	Origin, History- brocades of Banaras, Baluchari, Chanderi, Pochampalli.	3
	Total	40

Course code: 21TFDU0412

Credit: 4+0

Objectives:

- To impart the knowledge of Testing of fiber, Yarn and Fabric to the students.
- Enables to know about different Textile Testing Instruments and Machines as well as their working principles.
- Helps in determining the Quality parameters and testing conditions required in a Textile testing Lab.

Specific Learning Outcome:

Textile Testing is an important paper dealing with different physical and functional parameters required for textiles. After learning the paper the students will be aware of testing principles and procedures for fiber, yarn and fabric. They can handle textile testing equipments without any external assistance and prepare testing data more effectively and accurately.

Unit I

Introduction to textile testing – Definition, important of textile testing. General aspects of textile testing. Routine test performed in industry. Benefits of testing. International standards for textile apparel testing. Terminology of testing – selection of samples for testing standard R H and temperature for testing - measurement of moisture regain conditioning oven – Shirley moisture meter.

Unit II

Identification of textile fiber – Burning, Solvent, Longitudinal and Cross section view of Different natural, semi-synthetic & mam-made fibres. Cotton fiber length – Definition, importance, Baer Sorter, Fibrograph. Fiber Fineness – Definition, importance, Methods of measuring fineness – air flow method. Fiber maturity - Definition, importance, Caustic Soda swelling method. Fiber Strength – terminology, pressley tester & Stelometer. Determination of trash, lint & Nep in cotton - Shirley trash analyzer.

Unit III

Yarn testing-Yarn count – Yarn numbering system, Instruments – Knowless Balance, quadrant balance, Beesley balance. Yarn strength – important fiber property for good strength yarn, Single strength tester & Lea strength tester. Yarn twist – Definition, direction of twist, straightened fiber method, Take up twist tester Tension type twist tester. Yarn evenness - Measurement of irregularity. Crimp - crimp percentage, Shirley crimp tester.

Fiber testing- Woven, Knitted, Nonwoven, Dimensions, Length, Width, Thickness, Determination of fabric weight, Cover factor. Fabric Strength - tensile strength, tearing strength, bursting strength. Fabric Abrasion - Martindale abrasion tester. Fabric Pilling – Introduction, I C I Pill box tester. Fabric drape - Drape meter. Fabric Stiffness - Shirley stiffness tester. Crease recovery – Introduction, Shirley crease recovery tester. Fabric permeability - Shirley air permeability tester.

Unit V

Evaluation of Colour fastness - Introduction, grey scale. Colour fastness to washing – Dry cleaning & bleaching – Launder o meter. Colour fastness to light – sunlight, Fadeometer. Colour fastness to Crocking, colour fastness to perspiration, colour fastness to pressing – wet and dry pressing. Colour fastness to abrasion, colour fastness to brunt gas Flame and Ozone. Whiteness index, matching cabinets, computer colour matching.

Text Books

- 1. J.E. Booth, "Principles of Textile Testing" CBS publishers and Distributors, 1996.
- 2. Textile testing Raul Jewel
- 3. B.P. Saville, "Physical testing of Textiles", Woodhead publishing Ltd. 1999.
- 4. Pradeep V. Mehta. "Managing quality in apparel industry", New Age international ltd.

References

- 1. J.N. Mandal, D.G. Divshikar, "A Guide to GEO Textiles Testing", New Age International Ltd.,
- 2. Arindam Basu, Textile Testing, SITRA Publications.
- 3. Warner, B.S., (1995), "Fibre science", New Jersey: Prentice Hall, Engle Wood Cliffs.

Unit	Topics to be covered	Hours
	Textile fiber test- Fiber identification by use of microscope,	3
	Burning test, Laboratory test- Length and Uniformity, Fineness and maturity.	3
I –	Chemical test for textile fibers, Objectives and selection of samples- Fiber, yarn, Fabric sampling.	3
	Moisture relations- Regain, Moisture content, Hunidity, Standard atmosphere,	3
II	Dry hygrometer, Fiber testing- measurement of fiber length, Comb sorter, Fibrograph,	3
	Measurement of fiber finness air flow instruments, measurement of maturity of cotton.	3
	Yarn evenness- Cause of irregularity, Effect of irregularity, Measurement of irregularity.	4
	Fiber testing- Woven, Knitted, Nonwoven, Dimensions, Length, Width, Thickness, Determination of fabric weight,	4
IV	Coverfactor, Air permeability, Stiffness, Crease recovery, Abrasion resistance, Pilling, Strength.	4
	Evaluation of Colour fastness (Cotton, Silk, Wool) laundering, Rubbing fastness wet crocking and Dry crocking,	4
V	Light fastness, Perspiration to acid, Perspiration to alkaline, Colour matching cabinent.	4
	Total	42

Course code: 21TFDU0413

Credit: 4+0

Max.Marks: 100

Objectives:

- To impart knowledge about advance technology in textile.
- To obtain knowledge in effluent treatment in various textile industry.
- To impart the knowledge of eco-friendly treatments to the textiles.
- To bring awareness on the industrial techniques of textile finishes.

Specific Learning Outcome:

After learning this paper the students will gain thorough knowledge in various finishes of textile materials. They will be able to classify different finishing processes of textiles, effluent treatments. They will know different finishing equipments and eco-friendly treatments.

Unit – I

Introduction to textile finishing – definition, importance, classification. Preparatory process for textiles for finishing.. Eco-friendly processing – definition & importance. Study of conventional processing with eco-friendly processing. Enzymes – characteristics, types, application of enzymes in textile processing.

UNIT – II

Mechanical finishing – methods and application. Sanforising – types and method and its application. Brushing – method and its application. Decating - types and methods of decating. Milling – methods and application. Calendering - introduction, its purpose, universal calendering. - moiré, schreiner, embossed. Drape – Crisp, transparent. Texture - pleated, flocked, sheared, plisse.

Unit – III

Special finishing – wash and wear finish. Anti-crease finish – methods and application. Durable press – methods and application. Stiff finish – classification, different natural, modified natural and synthetic stiffening agents, different starching methods and its application. Denim finish – stone wash finish and Enzyme wash. Application of silicones in finishing processes, Fragrance finish and its application.

Unit – IV

Functional finishes – water proof finish – chemical and methods used. Difference between water proof and water repellant finish. Water repellant finish – chemical used, classification, mechanism and its application. Flame retardant finish – importance, application area, classification and method. Soil release finish. Antimicrobial finish – rot and mildew proof finish, anti-bacterial finish. Anti-static finish and UV production finish.

Unit – V

Environmental pollution during chemical processing of textiles. **Effluent treatment** – effluents from various plants – various process for treating waste water. Recent trends in finishing – micro encapsulation techniques, Nano finishes, bio - polishing.

Text Books

- 1. Text book- Textile Science- Deepali Rastogi, Sheetal Chopra.
- 2. A.J.Hall "The Standard Hand Book of "Textiles", Woodhead Publication, 2004
- 3. 3. Natural dyeingJackie crooks978-1-85675-280-0
- 4. Textile chemical processing Jaitendra kumar 8190402558
- 5. Textiles and Laundry Poonam Sinha
- **6.** Dyeing printing and finishing Hust silk81-8247-007-2
- J.E. Smith "Textile Processing Printing, Dyeing, Abhishek Publishing 2003 References
- 8. W.S. Murphy, "Textile Finishing", Abhishek Publication, 2000.
- 9. Rosi Robinson, "Creative Batik", Search Press, 2004
- **10.** Janice Gunner, "Shibori for textile Artists", Batsford London
- **11.** Textiles Ninth edition ,Sara J Radolph and Anna L Langford, Prentice hall, New Jersey (2002).
- **12.** Textile processing J L Smith, Abhishek publications, Chandigarh (2003).
- 13. Textile Chemistry Peters R H, Vol I, & II, Textile Institute Manchester (1970)
- 14. Shenai, V.A, Technology of finishing, sevek publication, Mumbai (1996).
- 15. Manivasagam, N, Treatment of textile processing effluents, Sakthi publication (1995).
- **16.** Understanding Textiles 6th edition, Billie j.Collier, Phyllis G.Tortora, Prentice Hall Inc., New Jersey, 2001.
- 17. Textiles by sara.J.Kadolph and Anna .L.Langford, 2000.
- 18. Textiles Finishing by R.S.Prayag.
- **19.** Functional Finishes by Lewin and Sello.
- **20.** Technology of Finishing by J.T.Marsh.

Unit	Topics to be covered	Hours
	Introduction to textile finishing – definition, importance, classification. Preparatory process for textiles for finishing.	3
Ι	Eco-friendly processing – definition & importance. Study of conventional processing with eco-friendly processing.	3
II	Mechanical finishing – methods and application. Sanforising – types and method and its application. Milling – methods and application.	3
	Brushing – method and its application.	3
	Decating - types and methods of decating. Calendering - introduction, its purpose, universal calendering moiré, schreiner, embossed. Drape – Crisp, transparent. Texture - pleated, flocked, sheared, plisse.	3
III	Special finishing – wash and wear finish. Anti-crease finish – methods and application. Durable press – methods and application. Stiff finish – classification, different natural, modified natural and synthetic stiffening agents, different starching methods and its application.	5
	Denim finish – stone wash finish and Enzyme wash. Application of silicones in finishing processes, Fragrance finish and its application.	4
IV	Functional finishes – water proof finish – chemical and methods used. Difference between water proof and water repellant finish.	4
	Water repellant finish – chemical used, classification, mechanism and its application. Flame retardant finish – importance, application area, classification and method. Soil release finish. Anti-microbial finish – rot and mildew proof finish, anti-bacterial finish. Anti-static finish and UV production finish.	4
	Environmental pollution during chemical processing of textiles. Effluent treatment – effluents from various plants – various process for treating waste water.	4
V	Recent trends in finishing – micro encapsulation techniques, Nano finishes, bio – polishing	3
	Total	42

Course code: 21TFDU0414

Credit: 0+2

Max Mark:100

Objectives:

- To impart the practical knowledge in pattern drafting and construction of women"s garments.
- To the style variation in women's wear.
- To develop creative skills in construction for different age group of women"s wear.

Specific Learning Outcome:

This paper will enable the students to prepare patterns based on individual measurement and stitch garments for women independently without any assistance. The students can develop complex patterns and designs based on the practical skill they acquire.

Unit I

Each garment 5 varieties preparatory models

Measurements, designing, drafting and construction of Saree petticoat – Six Panel (or) Eight Panel (any one), Middi and Middi top with Waist Band, Plain Skirt, wrapron Skirt.

Unit II

Each garment 5 varieties preparatory models

Measurements, designing, drafting and construction of Salvar, Kameez for teenage girls, Night wear/Night garment, Maxie for teenage girls, Kurtis for teenage girls.

Unit III

Each garment 5 varieties preparatory models

Measurements, designing, drafting and construction of Saree Blouse with Plain Sleeve, Kattori Blouse with varieties of sleeve, Choli blouse.

Unit IV

Each garment 5 varieties preparatory model

Measurements, designing, drafting and construction of Ladies shirt half sleeve and full sleeve, House coat with shawl collar

Unit V

Each garment 5 varieties preparatory models

Measurements, designing, drafting and construction of Ladies pant and its varieties with side zipper attached using fabrics (leather, corduroy)

Text Books

- Scientific garment quality –K M Illege and Sons , Plot No. 43 , Somuvar Peth pune 411011 Easy cutting –Juvekar commercial Tailors Corporation p vt 166 Dr. Ambedkar Road dadar.
- 2. A stitch in time-Frederick0-19-512615-7
- 3. Aasha Blouse Design Vol 24, book no 209
- 4. Aasha Blouse Design Vol 28, book no 213
- 5. Aasha Blouse Design Vol 34, book no 220
- 6. Aasha Designer"s Blouse, book no 215
- 7. Aasha Golden Collection Blouse , Vol 3, book no 222

References

- 1. Cutting and tailoring course illustratedGayathri Verma
- 2. Cutting and tailoring theory Vol 1Eshwari Anwani
- 3. Cutting and tailoring theory Gayathri Verm,
- 4. Garment construction skillsPremalatha mullick 81-272-0267-3, 81-272-0267-3
- 5. Commercial system of cutting Juvekar commercial Tailors Corporation p vt 166 Dr. Ambedkar Road dadar.
- 6. Zarapker system of cutting –K.R Zarapker ,Navneet publication ltd.

Unit	Topics to be covered	Hours
	Saree petticoat – Six Panel (or) Eight Panel (any one), Middi and Middi top With Waist Band.	6
Ι	Plain Skirt, Rrapron Skirt.	6
п	Salvar, Kameez for Teenage girls, Night wear/Night garment	6
	Maxie for Teenage girls, Kurthis for Teenage girls.	6
	Saree Blouse with Plain Sleeve,	6
ш	Kattori Blouse with varieties of sleeve, Choli blouse.	6
	Ladies shirt half sleeve and full sleeve	6
IV	House coat with shawl collar	6
V	Ladies pant and its varieties with side zipper attached	6
	Total	54

COMPUTER APPLICATIONS IN TEXTILES AND FASHION INDUSTRY (A)

Course code: 21TFDU04A4

Credit: 4+0

Max Mark:100

Objectives:

- To understand about computers its parts and functions and its role in textile & garment industry.
- To learn about the applications of computer in planning, designing and manufacturing in textile & fashion industry.

Specific Learning Outcome

After learning this course students will understand computer application in production planning scheduling and administration. Learn computer aided designing (CAD) for garment designing, textile designing, pattern making and grading and marker planning. Will enable to develop knowledge on computer aided manufacturing (CAM) for all production process right from spreading to sewing

Unit-I

Classification of computers, computer generations, computer specification, organization of computer .Types of storage devices (primary and secondary), input devices, output devices.

Unit-II

Role of computers in fashion industry – Information flow – CAD, CAM,CIM,CAA,PDC – Definition and functions. Computers in production planning and production scheduling ,computerized colour matching system.

Unit-III

CAD in designing Textile designing – Weaving, Knitting and printing. Creating embroidery designs. Garment designing – 2D and 3D forms.

Unit-IV

CAD in pattern making and grading – system description – information flow – process involved in pattern making, process involved in pattern grading.

Unit-V

Computer application in fabric defect checking, laying / spreading, cutting marker planning, labeling – Parts and functions. Computerized sewing machines.

Text Books

- 1. Clothing Technology Hannelore Eberle et –al, Verlaag Europa Lehrmittel, Vollmer Gmbh & Co 4287, Haan Gruilen.
- 2. Computer Fundamentals P K Sinha, BPB Publications, Delhi (1992)
- 3. The technology of clothing manufacture Harold Carr and Barbara Latham, Blackwell Ltd (1994)
- 4. Pattern Grading for Women"s Cloths The Technology of sizing Gerry Cooklin, Blackwell Science Ltd (1990)

Unit	Topics to be covered	Hours
Ι	Classification of computers, computer generations, computer specification, organization of computer.	3
	Types of storage devices (primary and secondary), input devices, output devices	3
II	Role of computers in fashion industry – Information flow – CAD, CAM,CIM,CAA,PDC – Definition and functions.	4
	Computers in production planning and production scheduling, computerized colour matching system	4
III	CAD in designing Textile designing – Weaving, Knitting and printing. Creating embroidery designs.	3
	Garment designing – 2D and 3D forms.	3
IV	CAD in pattern making and grading – system description – information flow –.	3
	process involved in pattern making, process involved in pattern grading	3
V	Computer application in fabric defect checking, laying / spreading, cutting marker planning, labeling – Parts and functions. Computerized sewing machines.	4
	Total	30

Course code: 21TFDU0415

Credit: 0+2

Max Mark: 50

Objectives:

- To understand the Home Textiles and Furnishing concepts and production techniques.
- To enhance the knowledge on the types and uses of Home Furnishing to the textile students.
- To acquire knowledge and apply principles of design on interior decoration
- To identify and apply correct furniture
- To understand about the various fabrics used in the interiors.
- To gain information and understand the method of preparing basic soft furnishing.

Specific Learning Outcome:

This paper will enable the students to design Home Textiles based on different mapping, of home layout. They will be able to develop, design, and constructs different style of Home textiles. They will be able to coordinate the Home textiles to the Home Layout.

Unit I

Introduction to Table linens - Table cloth- table linen types- Square checks, Centre piece table cloth, White lace table linen, Crochet table covers, Contrast table linen, polka dots, Straw covers, Runner, Placemats, Glass mates and napkins. Developing, preparatory of models.

Unit II

Introduction to Bed linens – Top sheet, Bottom sheet, Coverlet, Bedspread, Blanket, Comforter, Duvet, Duvet cover, Euro or continental pillow, Sleeping pillow, Decorative pillow, Bolster pillow, pillowcase, Pillow sham, Bed skirt, Throw blanket. Developing, preparatory of models.

Unit III

Introduction to Kitchen linens – Apron definition- Bib apron, Server apron, Bistro apron, Cobbler apron, Tuxedo apron, Dishwasher apron, Pinafore, Tabard, Bungalow apron, Clerical apron, Mittens, Bread Basket and Pot holder. Developing, preparatory of models.

Unit IV

Introduction to Window textiles - curtains definition- Flat panel curtain, panel pair curtain, Tab top curtain, Grommet curtain, Rod pocket curtain, Thermal curtain, Curtain liners, Roman shades, Shutter, Solar shade, Wood blinds, Faux wood blinds, Panel track blinds, Roller shades, Pleated shades, draperies definition-any one variety. Developing, preparatory of models.

Unit V

Introduction to Upholstery definition, traditional upholstery, office upholstery, and home furnishing upholstery– three seated and two seated sofa covers. Cushions with decorative effect, Teapot Cover- printed and embroidered. Developing, preparatory of models.

Text Books

- 1. Carpets : Back to Front, Textile progress, Vol.19, No.3 by L Cegielka MA, The Textile Inst. Publication
- 2. Textile Floor coverings by G.H. Crawshaw, Textile Progress, Vol.9, No.2, The Textile Inst. Publisher.
- 3. Interior Furnishings, Textile Progress, Vol.11, No.1, By Mortimer O. Shea, The Textile Inst. Publication
- 4. Interior Furnishing by Mortimer O.Shea, Textile Progress, Vol.11, No.1, The Textile Institute, Publication.

References

- 1. Harriet Goldstein, Vetta Goldstein Art in everyday life Oxford & publishing & co
- 2. Anne van wyke The craft of soft furnishing Stanley paul, London
- 3. Jerry Kirschen Grosset and Dunlop How to make ties & table cloths A national general company, Newyork Pamela Wilson
- 4. Cullison New decorating book Meredith corporation, Lowa, USA
- 5. Alexander N G Designing Interior Environment
- 6. Mas court Brace covanorich Donserkery K G Interior Decoration in India Tarapoorwala & co

Unit	Topics to be covered	Hours
Ι	Introduction to Table linens - Table cloth- table linen types- Square checks, Centrepiece table cloth, White lace table linen, Crochet table covers,	5
	Contrast table linen, polka dots, Straw covers, Runner, Placemats, Glass mates and napkins. Developing, preparatory of models.	5
II	Introduction to Bed linens – Top sheet, Bottom sheet, Coverlet, Bedspread, Blanket, Comforter, Duvet, Duvet cover,	5
	Euro or continental pillow, Sleeping pillow, Decorative pillow, Bolster pillow, pillowcase, Pillow sham, Bed skirt, Throw blanket. Developing, preparatory of models.	5
III	Introduction to Kitchen linens – Apron definition- Bib apron, Server apron, Bistro apron, Cobbler apron, Tuxedo apron, Dishwasher apron.	5
	Disn'washer upron. Diy retro apron, Pinafore, Tabard, Bungalow apron, Clerical apron, Mittens, Bread Basket and Pot holder. Developing, preparatory of models.	5
IV	Introduction to Window textiles - curtains definition- Flat panel curtain, panel pair curtain, Tab top curtain, Grommet curtain, Sah curtain, Rod pocket curtain, Thermal curtain, Curtain liners,	6
	Roman shades, Shutter, Solar shade, Wood blinds, Faux wood blinds, Panel track blinds, Roller shades, Pleated shades, draperies definition-any one variety. Developing, preparatory of models.	6
	Introduction to Upholstery definition, traditional upholstery, office upholstery, home furnishing upholstery– three seated and two seated sofa covers.	6
V	Cushions with decorative effect, Teapot Cover- printed and embroidered. Developing, preparatory of models.	6
	Total	54

Course code: 21TFDU0416

Credit: 0+1

Max.Marks:50

Objectives

- To expose students to experience and knowledge which is required in industry, where these are not taught in the lecture rooms.
- To apply the knowledge taught in the lecture rooms in real industrial situations.
- To use the experience gained from the "Industrial Training" in discussions held in the lecture rooms.
- To get a feel of the work environment.
- To gain experience in writing reports in works/projects.
- To expose students to the responsibilities and work ethics.
- With all the experience and knowledge acquired, it is hoped at the students will be able to choose appropriate work upon graduation.

Specific Learning Outcome:

After successful completion of a field visit in a reputed textile manufacturing concern the student will have a complete commercial knowledge on textiles, they will gain knowledge about the latest machineries and equipments.

Industrial Training

Industrial Training refers to work experience that is relevant to professional development prior to graduation. One of the requirements for the award of Bachelor of Science is that students must complete at least 2 weeks of Industrial Training. Industrial Training is normally accumulated during the semester breaks at the end of the second year. Students should note that Industrial Training is an essential component in the development of the practical and professional skills required of a candidate and an aid to prospective employment. Many employers regard this period as a chance to vet new employees for future employment.

All students should make considerable effort and give sufficient thought into obtaining the most relevant and effective Industrial Training. Whilst difficult, it is desirable to obtain experience in a range of activities, such as e.g. design office, laboratory and on-site situations. It should also be noted that developing an awareness of general workplace behavior and interpersonal skills are important objectives of the Industrial Training experience.

SEMESTER APPAREL QUALITY CONTROL (M)

Course code: 21TFDU0517

Credit: 4+0

Max Mark:100

Objectives:

- Enables to know about different Textile Testing Instruments and Machines as well as their working principles.
- To gain knowledge about quality control.
- To gain information about types of control forms.
- To know about garment inspection system.
- To gain information about testing results of garment.
- Helps in determining the Quality parameters required in a Textile materials and garment.

Specific Learning Outcome:

Quality control is an important paper dealing with different physical and functional parameters required for textiles and garment. After learning the paper the students will be aware of quality principles and procedures for fabric and garment. They will be aware of quality standards for garments and sampling techniques.

Unit – I

Introduction And Inspection Methods - Quality control - Definition -Importance of quality - Raw material Inspection – Fabric Inspection - Four point System - Ten point System - Inspection of Sewing Thread - Zippers - Button, Buckles, Snap Fasteners - In process Inspection - Spreading - Cutting - Sewing -Pressing/Finishing - Final Inspection - Sampling Plans - Acceptance Sampling.

Unit – II

Packing Quality & Quality Control Program - Classification of Packing - Stand up pack - Flat pack - Hanger pack – Hanger with sandwich pack - Dead man pack - its importance - packing materials required -Different types of packing materials - Quality Control Program - Seven tools of quality controls - ISO 9000 series standards - Procedure of obtaining ISO 9000 series standards - Total Quality management in Garment Industry.

Unit – III

Testing Of Garments – I- Seam strength Testing - Testing of Fabric Stretch properties - Dimensional changes due to Laundering, Dry cleaning, and Steaming & Pressing - Durable Press Evaluation of Fabrics and Apparel - Needle cutting / yarn severance - Sewability of fabrics - Bow and Skewness in Woven and Knitted fabrics - Distortion of yarn in Woven Fabrics – Fabric Streak Analysis.

Testing Of Garments – II - Soil/Stain release testing - Wrinkle Recovery -Water Resistance and Water Repellency - Testing of Fusible Interlinings - Testing of Zippers - Elastic Waist Band Testing – Testing of Sewing Threads - Pantyhose Testing - Wear Testing.

Unit – V

Care Labeling, Shade Sorting & Flammability -Introduction to Care labels - its importance - Different systems of Care labeling - American - British - Canadian - Japanese - and International labeling – Eco-labeling. Shade sorting - Introduction importance - Fundamentals of colours - Colour measuring instruments - Instrumental shade sorting. Flammability - Introduction – Degree Flammability Test method - 45° and Vertical Flammability Tests - Process of Fabric Ignition - Factors affecting Fabric Flammability.

Text Books

1. J.E. Booth, "Principles of Textile Testing" CBS publishers and Distributors, 1996.

2. Textile testing Raul Jewel

3. B.P. Saville, "Physical testing of Textiles", Woodhead publishing Ltd. 1999.

4. Pradeep V. Mehta. "Managing quality in apparel industry", New Age international ltd.

References

- 1. Pradip V Mehta An Introduction to Quality control for The Apparel Industry ASQC Quality press New York.
- 2. Terry Brackenbary Knitted cloth Technology Black well science Ltd II 1996
- 3. Pradip V Mehta Managing Quality in Apparel Industry New Age International Publishers 1998
- 4. R.Senthil kumar Total Quality Management in Garment Industry Project Work, SSMITT & pc,Komarapalayam.
- 5. Solinger, Jacob, (1961), "Apparel manufacturing analysis", New York, textile books,.
- 6. Solinger, Jacob, (1988)"Apparel Manufacturing Hand book," Analysis, Principles and Practice, Columbia Media Corp.

Unit	Topics to be covered	Hours
I	Introduction And Inspection Methods - Quality control - Definition - Importance of quality - Raw material Inspection – Fabric Inspection - Four point System - Ten point System -	4
	Inspection of Sewing Thread - Zippers - Button, Buckles, Snap Fasteners - In process Inspection - Spreading - Cutting - Sewing - Pressing/Finishing - Final Inspection - Sampling Plans - Acceptance Sampling	4
II	Packing Quality & Quality Control Program - Classification of Packing - Stand up pack - Flat pack - Hanger pack – Hanger with sandwich pack - Dead man pack - its importance - packing materials required.	5
	Different types of packing materials - Quality Control Program - Seven tools of quality controls - ISO 9000 series standards - Procedure of obtaining ISO 9000 series standards - Total Quality management in Garment Industry.	5
III	Testing Of Garments – I- Seam strength Testing - Testing of Fabric Stretch properties - Dimensional changes due to Laundering, Dry cleaning, and Steaming & Pressing	4
	Durable Press Evaluation of Fabrics and Apparel - Needle cutting / yarn severance - Sewability of fabrics - Bow and Skewness in Woven and Knitted fabrics - Distortion of yarn in Woven Fabrics – Fabric Streak Analysis	5
IV	Testing Of Garments – II - Soil/Stain release testing - Wrinkle Recovery - Water Resistance and Water Repellency -	4
·	Testing of Fusible Interlinings - Testing of Zippers - Elastic Waist Band Testing – Testing of Sewing Threads - Pantyhose Testing - Wear Testing.	4
V	Care Labeling, Shade Sorting & Flammability - Introduction to Care labels - its importance - Different systems of Care labeling - American - British - Canadian - Japanese - and International labeling – Eco-labeling. Shade sorting - Introduction - importance - Fundamentals of colours - Colour measuring instruments - Instrumental shade sorting. Flammability - Introduction – Degree Flammability Test method - 45° and Vertical Flammability Tests - Process of Fabric Ignition - Factors affecting Fabric Flammability	6
	Total	40

DRAPING TECHNIQUES (ML)

Course code: 21TFDU0518 Objectives:

Credit: 0+2

Max.Marks: 100

- To learn the basic steps involved in draping of various garment parts.
- To understand the draping of variations.
- To developing knowledge in the field of draping yokes and collars.
- To learn the draping of knit garments.
- To teach the students the basics principles, and interpret and analyze complex drapes.
- To enable students to create their original designs on a three dimensional form using draping method.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in basic bodice block and bodies parts, developing various parts of the garment using draping techniques. To gain information about draping techniques of ladies" apparel.

Unit – I

Prepare the following samples using the Draping Method

- Basic waist Front and Back
- Sleeves & its types
- Collars & its types

Unit – II

Create and construct the following garments for a girl child

- Yoke frock
- Baba suit with bib
- Middi and middi top

Unit – III

Create and construct the following garments for a boy child

- T-shirt and shorts
- Kurta and Pyjama
- ³⁄₄ pants and Tops

Unit – IV

Create and construct the following garments for an Adolescent girl

- Full Gown
- Salwar Kameez Churidhar
- Lachaas Flowing skirt and short tops
- Middi and Tops
- Wrap around and Tops

Unit – V

Create and construct the following garments for an adolescent boy

- Night gown with shawl collar
- T-shirt and Bermudas
- Shirt and Pant

Text Books

- 1. Draping for Fashion Design, Hilde Jaffe, Nurie Relis.
- 2. Dress Design Draping and Flat Pattern, Hill House MS, Houghton Miffin Co, London, USA.
- 3. The theory of Fashion Design, Brockman, Magritha, John Wiley Sons, New York. **References**

4. Design through Draping, Sheldon, Marhta, Burgers Publishing company, Minneapolis, USA.

- 5. Modern Pattern Design, Popin, Hariet, Funk and Wagnalls, New York and London.
- 6. Connie AmadenRawford "The Art of FashionDraping" Fair Child Publication.
- 7. Hilde Jaffe & NurieRelis "Draping for Fashion Design" Prentice Hall career & Technology, Englewood Cliffs, USA

Unit	Topics to be covered	Hours
Ι	Prepare the following samples using the Draping Method	3
	Basic waist - Front and Back	
	• Sleeves & its types	
	Collars & its types	3
II	Create and construct the following garments for a girl child Yoke frock ,Baba suit - with bib ,Middi and middi top	4
III	Create and construct the following garments for a boy child T-shirt and shorts, Kurta and Pyjama, ³ / ₄ pants and Tops	4
IV	Create and construct the following garments for an Adolescent girl ,Full Gown ,Salwar Kameez Churidhar Lachaas - Flowing skirt and short tops ,Middi and Tops Wrap around and Tops	5
V	Create and construct the following garments for an adolescent boy Night gown with shawl collar ,T-shirt and Bermudas ,Shirt and Pant	5
	Total	24

TEXTILES AND THEIR CARE (M)

Course code: 21TFDU0519

Credit: 4+0

Max. Marks: 100

Objectives:

• The subject focuses on the improvement on the aesthetic values of the textile material.

• To impart knowledge in laundry, laundering agents and their proper use.

Specific Learning Outcome:

After learning this paper the students will gain thorough knowledge in Care and maintenance of textile materials. They will be able to classify different finishing processes of textiles, preparatory process and different bleaching process. They will know different dyeing process, dyeing equipments, printing process, laundering process, soap and detergent manufacturing process, Fusing technology and fusing process.

Unit I

Laundry Equipment- Principles of laundering, methods of washing – Application of friction - hand friction, Rubbing and scrubbing - Application of light pressure, kneading and squeezing suction – washing – use of washing machine. Purchase and maintenance of equipment.

Unit II

Water – hard and soft water – Methods of softening water. Soaps and detergents – manufacture of soap, Quality of good soap, cleansing action of soap and uses of soap.

Unit III

Detergents-manufacturing process of detergents, soap less detergents, indigenous cleaning agents like Rita nuts. Shikkakai – green gram- bran solutions and their application.

Unit IV

Optical brighteners and starching – stiffening agents – Natural and commercial starches – Preparation of starch; use blueing agents – their application – optical blues, bleaches, types of bleaches and other laundry reagents.

Unit V

Dry cleaning and laundering - Methods of finishing damping – Ironing Methods of ironing different garments - Drying equipments. Dry cleaning and storage. Stain removal -definition, different types of stain removal, methods of stain removal and their applications.

Text Books

1. Textiles fabric & Their Selection, Wingate, I.B. Allied Publications Pvt. Ltd.,

Chennai.

2. Fundamentals of Textiels and Their care. Dantyagi.S. Orient Longman Ltd., New

Delhi 1980.

References

- 1. Family clothing taste of Glession John wiley & Sons Inc., Illionois latest Edition.
- 2. Household textiles and laundry work durga Deulkar, Alma Ram & Sons, Delhi.

Unit	Topics to be covered	Hours
Ι	Laundry Equipment- Principles of laundering, methods	4
	of washing – Application of friction - hand friction,	
	Rubbing and scrubbing	
	Application of light pressure, kneading and squeezing	4
	suction – washing – use of washing machine.	
	Purchase and maintenance of equipment	
II	Water – hard and soft water – Methods of softening	5
	water. Soaps and detergents – manufacture of soap,	
	Quality of good soap, cleansing action of soap and	
	uses of soap.	
III	Detergents-manufacturing process of detergents, soap	6
	less detergents, indigenous cleaning agents like Rita	
	nuts. Shikkakai – green gram- bran solutions and	
	their application.	
IV	Optical brighteners and starching – stiffening agents –	6
	Natural and commercial starches – Preparation of starch; use	
	blueing agents – their application – optical blues, bleaches,	
	types of bleaches and other laundry reagents	
V	Dry cleaning and laundering - Methods of finishing damping	6
	- Ironing Methods of ironing different garments - Drying	
	equipments. Dry cleaning and storage. Stain removal -	
	definition, different types of stain removal, methods of stain	
	removal and their applications	
	Total	31

Course code: 21TFDU0520

Objectives:

- To impart the practical knowledge in pattern drafting and garment construction skills in men"s wear for the students.
- To develop creative skills in designing and constructing men's wear for different age groups.

Specific Learning Outcome:

This paper will enable the students to prepare patterns based on individual measurement and stitch garments for men independently without any assistance. The students can develop complex patterns and designs based on the practical skill they acquire.

Unit I

Each garment 5 varieties preparatory models

Measurement, Designing, Pattern making and constructing -T - Shirt with U neck (or) V Neck, Slack Shirt - With Shirt Collar and Patch Pocket.

Unit II

Each garment 5 varieties preparatory models

Measurement, Designing, Pattern making and constructing -Full sleeve shirt with yoke and cuff, Shorts and knickers.

Unit III

Each garment 5 varieties preparatory models

Measurement, Designing, Pattern making and constructing -Pyjama with Side pockets, Pleated trousers with zipper fly and bound pockets.

Unit IV

Each garment 5 varieties preparatory models

Measurement, Designing, Pattern making and constructing -kalidhar kurtha with continuous bound placket (5 varieties), Nehru kurtha with pocket, Band collar and Tailored placket.

Unit V

Each garment 5 varieties preparatory models

Measurement, Designing, Pattern making and constructing -S.B. Vest coat with (or) without Bound Pocket (5 varieties), Men's S.B. Coat with shawl / collar and Ticket Pockets.

Text Books

- 1. Garment quality -K M Illege and Sons , Plot No. 43 , Somuvar Peth pune 411011
- 2. Easy cutting –Juvekar commercial Tailors Corporation p vt 166 Dr. Ambedkar Road dadar.

- 3. Commercial system of cutting Juvekar commercial Tailors Corporation p vt 166 Dr. Ambedkar Road dadar.
- 4. Zarapker system of cutting –K.R Zarapker ,Navneet publication ltd. **References**
- 1. Dress making- Smt Thangam Subramaniam Bombay Tailoring and embroidery college ,32 North park street ,Ambattur , channi. Pratical clothing construction Part I and II Mary Mathews, cosmic Press Chennai.
- 2. Garment construction skillsPremalatha mullick 81-272-0267-3, 81-272-0267-3

Unit	Topics to be covered	Hours
Ι	Measurement, Designing, Pattern making and constructing -T - Shirt with U neck	5
	V Neck, Slack Shirt - With Shirt Collar and Patch Pocket.	5
II	Measurement, Designing, Pattern making and constructing -Full sleeve shirt with yoke	5
	Cuff, Shorts and knickers.	5
	Measurement, Designing, Pattern making and constructing -Pyjama with Side pockets.	5
III –	Pleated trousers with zipper fly and bound pockets.	5
IV	Measurement, Designing, Pattern making and constructing -kalidhar kurtha with continuous bound placket.	5
	Nehru kurtha with pocket, Band collar and Tailored placket	5
V	Measurement, Designing, Pattern making and constructing -S.B. Vest coat with (or) without Bound Pocket (5 varieties),	5
	Men"s S.B. Coat with shawl / collar and Ticket Pockets	5
	Total	50

INTERNSHIP – I*

Course code: 21TFDU0521

Credit:0+1

Max.Marks:50

Specific Learning Outcome:

After successful completion of an internship in a reputed textile manufacturing or garment manufacturing concern the student will have a complete commercial knowledge on textiles and garments, they will gain knowledge about the latest machineries and equipments.

Internship

Period of supervised training required for qualifying for a profession. It follows a specified number of academic credits or classroom years. To provide a valuable opportunity to gain work experience in a student's chosen field before graduation. A student or a recent graduate undergoing supervised practical training. Since relevant work experience is one of the key qualifications companies look for when comparing candidates for a job or internship, completing several internships during college greatly increases the chances of being selected for a job after graduation. Even though college students learn the knowledge required for succeeding in a specific career through their college courses and curriculum, internships are one of the best ways to develop the required skills necessary to gain the experience required to be successful in the field.

Completing an internship can help a student decide if a particular career is actually the right fit for them, and through an internship, students can establish contacts or even earn college credit while working in a part-time, temporary position. Additionally, in a competitive job market, internships for college students give recent graduates an edge over other potential candidates who do not have any relevant work experience. **SEMESTER**

ENTREPRENEURSHIP DEVELOPMENT IN TEXTILES AND FASHION (M)

Course Code: 21TFDU0621

Credit:4+0

Max Marks:100

Objectives:

- To develop entrepreneurship skills among the students in textile field.
- To familiarize the students with the process and procedure of setting up, new enterprises.

Specific Learning Outcome:

After learning this course the students will have a basic understanding about entrepreneurship and the types and role of an entrepreneur. This paper will enable the students to know how to become an independent entrepreneur, various financial agencies available to acquire funds and asset benefits, they will have knowledge on world trade practices, and several other managerial aspects that are required by a successful entrepreneur.

Unit I

Scope of Entrepreneurship - Introduction to entrepreneurship, development of entrepreneurship, role of entrepreneurs in development of apparel and fashion industry, entrepreneurship with reference to fashion and apparel industry in India. **Unit II**

Definition, role and expectation – entrepreneurial styles and types – characteristics of entrepreneur – functions of an entrepreneur – promotion of entrepreneurship – role of socio- culture, growth of entrepreneurial culture. Entrepreneurial motivation theories – entrepreneurship competencies – developing competencies

Unit III

Organizations - Entrepreneurial support by state, central financial institutions, organizations. Government policies with reference to textile and apparel industry.. Institution for entrepreneurial development –ITC, NPC, ITCOT, COMMERCIAL BANK and entrepreneurial development. Entrepreneurship and financial support

Unit IV

Entrepreneurship in apparel industry: Business planning – Starting a new venture related to apparel industry, essentials of a successful centre; Location & plant layout-factors, influencing plant location, building, structure, lighting, ventilation, material handling, availability of labour, material management and transportation. Industrial sickness and remedies,

Unit v

Identification of business opportunity in Textiles and Fashion Business - preparation of feasibility report – financial and evaluation – project formulation – common errors in project formulation – specimen project report.SWOT Analysis. Women entrepreneurship needs – growth of women entrepreneurship.

Text Books:

- 1. RajaGopal, Entrepreneurship & Rural markets
- 2. H.B.S. press, Harward Business Review on Entrepreneurship Harward business review, USA
- 3. Fashion Design and Product Development, Harold Carr and John Pomeroy, Black well Science Inc, Cambridge (1992)
- 4. Fashion marketing, Mike Basey, Oxford University press, Wynford Drve, Don Mills, Ontario (1995)

References:

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- 1. Introduction to Fashion, Patrick John, B T Batsford Ltd, Ireland, Fullham road, London (1992).
- 2. Fashion From Concepts to Consumer, Stephens Frings, Prentice Hall, 7th Edition 2002.
- 3. Marketing Management, Philip Kotler, Prentice Hall, 7th Edition 1996

Unit	Topics to be covered	Hours
Ι	Scope of Entrepreneurship - Introduction to	4
	entrepreneurship, development of entrepreneurship,	
	role of entrepreneurs in development of apparel and fashion industry, entrepreneurship with reference to fashion and apparel industry in India.	4
II	Definition, role and expectation – entrepreneurial styles and types – characteristics of entrepreneur – functions of an entrepreneur – promotion of entrepreneurship –	4
	role of socio- culture, growth of entrepreneurial culture. Entrepreneurial motivation theories – entrepreneurship competencies – developing competencies	4
III	Organizations - Entrepreneurial support by state, central financial institutions, organizations. Government policies with reference to textile and apparel industry	4
	Institution for entrepreneurial development –ITC, NPC, ITCOT, COMMERCIAL BANK and entrepreneurial development. Entrepreneurship and financial support	4
IV	Entrepreneurship in apparel industry: Business planning – Starting a new venture related to apparel industry, essentials of a successful centre;	3
	Location & plant layout-factors, influencing plant location, building, structure, lighting, ventilation, material handling, availability of labour, material management and transportation. Industrial sickness and remedies,	4
V	Identification of business opportunity in Textiles and Fashion Business - preparation of feasibility report – financial and evaluation –	4
	project formulation – common errors in project formulation – specimen project report.SWOT Analysis. Women entrepreneurship needs – growth of women entrepreneurship	4
	Total	39

PORTFOLIO PRESENTATION (M)

Course code: 21TFDU0622	Credit:0+2	Max Mark: 100
Objectives:		

- To make students understand the importance and concepts of Portfolio presentation.
- To impart practical skills for portfolio presentation

Specific Learning Outcome:

Portfolio is the collection of designs by a designer organized systematically. After gaining handful knowledge in the paper the student will be able to create portfolio on any theme that is provided to them. An effective and creative portfolio is required by each and every student to get into fashion designing career. Hence portfolio will act as mind of the student and will enable every recruiter to judge the students designing skill based on the portfolio they have prepared.

Unit I

Portfolio- meaning, Definition, Illustrate the portfolio flats, Mood boarddefinition, Story board, Fabric board- Rendering techniques for portfolio flats, Colour board-meaning, Types using combinations.

Unit II

Fabric development, Design development and presentation in portfolio sketching and rendering the fabric effects, Croquis mixed with flats. Figure composition for layout, Figures and Accessories, Space and Shapes in the layout, Grouping figures, Layout choice, Spontaneous layout.

Unit III

Design a portfolio garment Indian- Prints and Embrodiery, Ethnic, Classic wear garments for Men, Women, Childern (each 5 varieties).

Unit IV

Design a portfolio garment western- prints and Embroidery, Ethnic, Classic wear garments for Men, Women, Childern (each 5 varieties).

Unit V

Display ideas- Visual, planning background, lighting, space planning, Display planning with and without mannequin and board items etc

Text Books

- 1. Comdex Fashion Design- Vol-1 Fashion Concepts
- 2. J Jarnow and KG Dickenson, "Inside the fashion Business" Prentice Hall
- 3. Be stylish with Bernia Quleshi Bernia Gureshi

- 4. Comdex Fashion Design Vol -1 Fashion Concepts Vikas Gupta
- 5. Cooklins garment tech note for fashion design Steven 978-81-265-3537-8

References

- 1. Costumes and textiles of Awadh Sushana Swarup
- 2. Fashion designingRitu bal 817573776
- 3. Comdex Fashion Design Vol -2 Esembles for your body type Vikas Gupta
- 4. Gini stephens Frings "Fashion from concept to consumer" Pearson Education
- 5. Jerligan Easterling "Fashion Merchandising and Marketing" Person Education
- 6. Polly Guerin "Creative fashion Presentation" Fairchild Publications
- 7. Drake / Spoone/ Greenwald "Retail fashion promotion and Advertising"

Lecture Schedule

Unit	Topics to be covered	Hours
	Portfolio- meaning, Definition, Illustrate the portfolio flats, Mood board-definition, Story board,	5
I	Fabric board- Rendering techniques for portfolio flats, Colour board-meaning, Types using combinations.	5
	Fabric development, Design development and presentation in portfolio sketching and rendering the fabric effects, Croquis mixed with flats.	5
	Figure composition for layout, Figures and Accessories, Space and Shapes in the layout, Grouping figures, Layout choice, Spontaneous layout.	5
II		
	Measurement, Designing, Pattern making and constructing -Pyjama with Side pockets.	5
III	Pleated trousers with zipper fly and bound pockets.	5
IV	Design a portfolio garment Indian- Prints and Embrodiery, Ethnic, Classic wear garments for Men, Women, Childern (each 5 varieties).	5
V	Display ideas- Visual, planning background, lighting, space planning, Display planning with and without mannequin and board items etc	5
	Total	40

TECHNICAL TEXTILES (M)

Course code: 21TFDU0623

Credit: 4+0

Max. Marks: 100

Objectives:

- To acquaint students with the application of Non woven & technical textiles in industry.
- To impart knowledge of technical textiles with their properties and applications.
- To understand the concepts of smart textiles, nano textiles and other technical textiles.

Specific Learning Outcome:

After learning the paper the students will understand the complexity of the textile industry. They will gain knowledge in Technical textiles its classifications, technical fibers and its applications. They will have a lot of options for their project during their final semester and also learn about different career options they have got in various different fields of textile application.

Unit I

Technical textiles definition and classification- Introduction, scope of technical textiles. Application of technical textiles- function and uses. High performance fibres- selection, property and its function.

Unit II

Medical textiles definition and classification- introduction, fibers selection for medical textile- types, requirements of fibres used in medical field. Specialized area for textile application in medical. Non- implantable materials, extra corporal devices, implantable material and health care/ hygiene products- fibre selection, fabrics used, property, products and its function. Eco-textiles- definition, application of eco textiles.

Unit III

Geo textiles definition and classification- introduction, geo synthetics- geo textile types and fibre forming polymers. Essential properties of geo textilesmechanical, filtration and chemical resistance property. Natural fibres used in geo textiles- application of natural geo textiles performance of natural fibres geo textiles for soil strengthening and frictional resistance of geo textiles.

Unit IV

Protective textiles definition and classification- introduction, protective clothing- requirements of fibre selection, fabric construction, finishes for protection. Ballistic protective material. Water proof fabrics, flame retardant fabric and extreme weather condition fabric.

Unit V

Textiles for automatic industry- introduction, textile fibres required for automatic industry. Textiles in cars, train, air crafts, marine- functional application. Nano technology- definition, application of nano technology in the field of textiles. Smart textiles- definitions, application of smart textiles. Intelligent textilesdefinition, area of application of intelligent textiles.

Text Books

- 1. Meachm Lewin & Jack Preston, and book of Fiber Science & Technology. Volume I, High technology fibers part A; Marcel Dekker. Inc 1993
- 2. Menachem Lewin & Jack Preston; Handbook of Fiber Science & Technology Volume II, High technology fibers, part B; Marcel Dekker Inc 1993
- 3. Menachem Lewin & Jack Preston, Hand book of Fiber Science & Technology Volume III, High technology fibers part C Marcel Dekker. Inc 1993

References

- 1. Sarah. E Braddock and Marie O" Mahony" Techno textiles Revolutionary fabrics for fashion & design", Thames & Hudson 2002.
- 2. Handbook of technical textiles A R Morrocks and S C Anand, Wood head publishing itd, England 2000.
- 3. P.W Harrison, The design of textiles for industrial application.
- 4. Bajaj.P & Sengupta.A.K, protective clothing.
- 5. Corbman. B.P, Textiles: Fibre to Fabric, Mc Graw Hill, 1983.
- 6. Johnson J.S & Man"sdork sc, Performance of Protective clothing.
- 7. Srinivasan, J, Raw kumar.S.S. High performance textiles & Apparels, Interline publications, 2004.

Lecture Schedule

Unit	Topics to be covered	Hours
	Technical textiles definition and classification- Introduction, scope of technical textiles.	4
I	Application of technical textiles- function and uses. High performance fibres- selection, property and its function.	4
II	Medical textiles definition and classification- introduction, fibers selection for medical textile- types, requirements of fibres used in medical field.	4
	Specialized area for textile application in medical	3
	Non- implantable materials, extra corporal devices, implantable material and health care/ hygiene products- fibre selection, fabrics used, property, products and its function.	4
	Eco-textiles- definition, application of eco textiles.	3
	Geo textiles definition and classification- introduction, geo synthetics- geo textile types and fibre forming polymers	3
ш	Essential properties of geo textiles- mechanical, filtration and chemical resistance property	3
	Natural fibres used in geo textiles- application of natural geo textiles performance of natural fibres	3
	geo textiles for soil strengthening and frictional resistance of geo textiles.	3
IV	Protective textiles definition and classification- introduction, protective clothing- requirements of fibre selection, fabric construction, finishes for protection.	4
	Ballistic protective material. Water proof fabrics, flame retardant fabric and extreme weather condition fabric.	3
	Textiles for automatic industry- introduction, textile fibres required for automatic industry.	3
V	Textiles in cars, train, air crafts, marine- functional application.	3
	Nano technology- definition, application of nano technology in the field of textiles.	3
	Smart textiles- definitions, application of smart textiles	3
	Intelligent textiles- definition, area of application of intelligent textiles	3
	Total	56

CAD FOR TEXTILES AND FASHION DESIGN (ML)

Course code: 21TFDU0624

Credit:0+2

Max. Marks:100

Objectives:

- To acquaint students with CAD and CAM based applications in Textiles and Apparel industry.
- To impart knowledge of computer applications in design, draft, cut, production and management information systems.
- To bring the awareness of computer application to the field of fashion designing.
- To provide the knowledge about fashion software's and its application.

Specific Learning Outcome:

Computer aided designing is an important skill that is required by a fashion designer, textile designer or a graphic designer at the present Era. After completion of this course the students will have hands on skills in sketching, colouring, rendering and various other techniques involved in sketching using CAD software. They will be able to illustrate human figures in different postures and garments. They will be able to create design patterns; do texture mapping, 3d Visualization and simulation of fabrics on garments.

Unit I

Motifs development – Symmetrical / asymmetrical, Balanced / Unbalanced repeat (arrangements), Drop reverse and placement of design in borders, pallu, and all over, Developing Small Designs, Motifs for necklines, embroidery designs for hand kerchiefs.

Unit II

Texture Mapping- in fashion apparel, texture mapping in home furnishings, 2D Designing, slides with color changes in garment, design changes in garment

Unit III

Software applications in production department, Garment design using jindex software, Label Designing, Logo designing for branded apparel.

Unit IV

Developing- Patterns making- Grading and manual planning, Developing Women"s and Men"s Garments, Casual dressings 5 varieties), Party wears -5 varieties).

Unit V

Formal wear (Any One) using jindex and Corel draw, Kid"s wear- frock (5 varieties), Design the slack shirt-Middi and Middi top (any two) (5 varieties).

Text Books

- 1. Mikell. P. Groover, Emory W. Zimmers; Jr, "CAD /CAM computer aided design and maufacturing", Printice Hall of India PVL. Ltd.
- 2. Veinsinet D D, "Computer aided drafting and Design Concept & Applications, 1987
- 3. Digital fashion illustration Kesin Tallon978-0-7134-9058-9
- 4. Alison Beazley & Terry bond", Computer Aided pattern Design and Product development" Blackwell Science, 2004.

References

- 1. Carr H & Barbara Latham B, "Technology of clothing manufacture." 3rd edition, Black well sciences Publication 2000
- 2. winfred Aldrich, "CAD In clothing,, and textiles, Blackwell science, 1994
- 3. Taylor P, "Computers in Fashion industry", Heineman publishers 1990.

Lecture Schedule

Unit	Topics to be covered	Hours
	Motifs development – Symmetrical / asymmetrical, Balanced / Unbalanced repeat (arrangements), Drop reverse and placement of design in borders.	6
I	pallu, and all over, Developing Small Designs, Motifs for necklines, embroidery designs for hand kerchiefs	6
II	Texture Mapping- in fashion apparel, texture mapping in home furnishings,	6
	2D Designing, slides with color changes in garment, design changes in garment	6
III	Software applications in production department, Garment design using jindex software, Label Designing, Logo designing for branded apparel.	6
	Label Designing, Logo designing for branded apparel.	6
IV	Developing- Patterns making- Grading and manual planning, Developing Women"s.	6
	Men"s Garments, Casual dressings 5 varieties), Party wears -5 varieties)	6
V	Formal wear (Any One) using jindex and Corel draw, Kid"s wear- frock (5 varieties), Design the slack shirt-Middi and Middi top (any two) (5 varieties).	6
	Total	54

Course code : 21TFDU0625 Credit: 4 Max

Max.Marks: 100

Final year under graduate students at the end of final semester under goes a miner research work. Based on the curriculum/ area of interest by the individual has been focused with objectives, and detailed work on literature, methodology, result analysis and submitting as bound work with summary ,conclusion with evidence of tools used, appendix. This will be evaluated as per the scheme.

INTERNSHIP -- II*

Course code: 21TFDU0626

Credit: 0+3

Max.Marks:50

Specific Learning Outcome:

After successful completion of an internship in a reputed textile manufacturing or garment manufacturing concern the student will have a complete commercial knowledge on textiles and garments, they will gain knowledge about the latest machineries and equipments.

Internship

Period of supervised training required for qualifying for a profession. It follows a specified number of academic credits or classroom years. To provide a valuable opportunity to gain work experience in a student's chosen field before graduation. A student or a recent graduate undergoing supervised practical training. Since relevant work experience is one of the key qualifications companies look for when comparing candidates for a job or internship, completing several internships during college greatly increases the chances of being selected for a job after graduation. Even though college students learn the knowledge required for succeeding in a specific career through their college courses and curriculum, internships are one of the best ways to develop the required skills necessary to gain the experience required to be successful in the field.

Completing an internship can help a student decide if a particular career is actually the right fit for them, and through an internship, students can establish contacts or even earn college credit while working in a part-time, temporary position. Additionally, in a competitive job market, internships for college students give recent graduates an edge over other potential candidates who do not have any relevant work experience.

FASHION FORECASTING AND MERCHANDISING

Course code: 21TFDU04D1

Credit: 3+0

Max.Marks: 100

Objectives:

- To acquire knowledge in forecasting a design.
- To be familiar with Retailing.
- To gain information about fashion marketing.
- To mould the students to become merchandising.
- To create interest in knowing various Brands.

Specific Learning Outcome:

After learning the paper the students will understand the forecasting system of new fashion. They will get the acquired knowledge about the fashion marketing and various brands.

Unit – I

Fashion forecasting – definition, types of forecasting – long term, short term, trend forecasting. Fad, classic, visualization, trend, fashion cycle, steps for forecasting. Tools for forecasting. Fashion forecasting- sources of fashion forecasting – Fashion forecasting agencies- role and importance - Fashion forecasting packages and magazines- fashion trade fairs- designers collection.

Unit – II

Fashion Retailing - Scope and importance of fashion retailing. Retail Strategy, Classifications of retail store, Retail Store Functions, Retail Marketing Channels – supply chain, and Retail Adaptation. Retailing Structures - Factors influence the retail structure. General Merchandise Chains - Shopping Malls and Boutiques. Fashion marketing - Structure and size of fashion marketing. Marketing management – definition and function.

UNIT – III

Brand – Definition, Trade mark, difference between Brand and trade mark. Functions of brands – Types of brands – Branding strategies. Famous apparel retail brands. Introduction - Copy right, patent and service mark. E-Commerce - Global Retailing, Retail Competition, E-Retailing, Online Marketing Communication – Strategies of Fashion Communication.

Unit – IV

Visual Merchandising - Introduction – Visual Merchandising - store planning, store location, store design, renovation and store image & environment.

Principles and techniques. Elements of visual merchandising. Promotion - Introduction. Promotion Mix: Advertising – kinds of advertising, advertising agencies and advertising through media. Publicity – publicity campaigns, Personal selling, Sales promotion.

Unit – V

Merchandiser – definition, types. Team of merchandiser. Principles of merchandiser. Merchandiser plan. Role of merchandiser in an apparel industry. Function of merchandiser. Introduction about - Spec sheet, Route card, sampling - sampling techniques. Inspection – types of inspection. Buying house.

Text book

- 1. Fashion Advertising and Promotion, *Jay and Ellen Diamond*, Fair Child Publishers, NewYork, 1999.
- 2. Retailing Principles, *Lynda Gamans Poloian*, Fair Child Publishers Inc., New York, 2003.
- 3. Jaico Books, "Retail Management Functional Principles & Practices", Gibson G.Vedamani.
- 4. Gini stephens Frings "Fashion from concept to consumer", Pearson Publications, 2005.

Reference book

- 1. Sharon Lee Tate Inside the Fashion Business Pearson education Pte . Ltd, Delhi. 2004
- 2. Leslie Davis /Nancy O. Bryant The Business of Fashion Faurchild Publications, New York.2002
- 3. Ellen Diamond Fashion Retailing Dorling Kindersley (India) Pvt. Ltd , Delhi. 2007
- 4. Helen goworek Fashion Buying Om Book Service Delhi. 2001
- 5. Jeannette A. Jarnow Miriam Guerreiro Beatrice Judelle Inside the Fashion Business
- 6. Macmillan Publishing Company1987
- 7. Philip . Kotler Marketing Management Prentice Hall.Stephens Frings Fashion from Concept to Consumer Prentice Hall.

BOUTIQUE PLANNING

COURSE CODE : 21TFDU04D2

Unit-I

How to start a boutique, creating a business plan, finding a ideal location, financial planning.

Unit-II

Government norms to run a boutique, interior designing, sourcing of raw materials, and inventory planning.

Unit-III

Buyer supplier relationships, consumer relationship, tips and tricks to attract customers.

Unit-IV

Essential technology to run a boutique and labour management and warehouse.

UNIT-V

Quality control, research and development and analysis, marketing and promotion ,maintenance of boutique.

REFERENCE;

1. Opening a boutique store: how to start your own boutique, Briana Stewart Bull City Publishing, 2014.

2. Fabjob guide to become a boutique owner, Tag Goulet, Debbra Mikaelsen, Catherine Goulet, Fabjob incorporated,2011.

3. Fashion unraveled: How to start ,run and manage an independent Fashion Label,Jennifer Lynne Mathews, 2009.

GARMENT COSTING

Course code: 21TFDU05D1

Credit: 3+0

Max.Marks: 100

Objectives:

- 1. To gain knowledge about costing skills.
- 2. To gain information about cost control.
- 3. To acquire knowledge about techniques for costing.
- 4. To know about different estimation of cost.

Specific Learning Outcomes

After learning this course the students will have an understanding about the garment cost and sampling cost and accessories used in the garments.

UNIT - I

Principles of Costing - Requirements of Good Costing System - Cost Unit - Types of Costs: Fixed Cost, Variable Cost, Semi Variable Cost, Conversion Cost, Replacement Cost, Differential Cost, Imputed Cost, Sunk Cost, Research Cost , Development Cost , Policy Cost , Shutdown Cost– Cost sheet and its components – Cost sheet format.

$\mathbf{UNIT}-\mathbf{II}$

Elements of Cost: Direct Material Cost, Direct Expenses, Direct Wages, Indirect Materials, Indirect Expenses, Indirect Expanses, Labour cost, Production Overhead, Administrative Overhead, Selling and Distribution Overhead, Total cost.

UNIT – III

Cost Estimation of Fiber, Yarn, Fabric, Knitting, Dyeing, Printing & Finishing - Cost Estimation for cutting, Stitching, pressing, Packing, Shipping, Forwarding and etc., - – Cost control measures in apparel industry.

$\mathbf{UNIT}-\mathbf{IV}$

Cost control - function of cost control, cost of product development- product cost, analysis of design cost, development cost, profit of design, apparel manufacturing cost control, sales cost control, purchasing cost control, production cost control, administration cost control, cost ratio policy, manufacturing budget, cash flow control, standard cost sheet, break even chart, cash break even chart, analysis (or) detailed break even chart.

UNIT – V

Costing of Apparels – Estimation of cost for various garment styles in children's wear, - Estimation of cost for various garments styles in Women's wear, Estimation of cost for various garments styles in Men's wear.

Text Books

- 1. Apparel Costing M. Krishnakumar, Abhishek Publication, Chandigarh.
- 2. Principles of Textile Testing J.E. Booth
- 3. Hand book of textile Testing & Quality Control Elliot b. Grover & D.S. Hamby
- 4. Textile testing P. Angappan & R. Gopalakrishnan

References

- 1. Managing Quality in Apparel Industries Pradeep V Metha & Satish k. Bhardwaj
- 2. ISI standards [BIS] / AATCC / ASTM Technical manuals Concept of entrepreneurship:

Course code: 21TFDU05D2

Credit: 3+0

Max. Marks: 100

Objectives:

- To learn and understand the scenario in the fashion psychology.
- To upgrade the clothing trends and fashion according to the age groups.

Specific Learning Outcome:

By learning this subject the students will acquire handful knowledge in the latest developments and trends in fashion. Development is subjected to all the clothing, selection of cloth, factors affecting in fashion.

Unit I

Clothing Definition, Classification, Introduction to Clothing understanding clothing, Purpose of clothing:- Protection, Modesty, Attraction etc. Clothing Values, Clothing Culture, men and women clothing and ornamentation, groups, Role and status of clothing. Clothing according to climatic conditions,- Arctic region- African, Asia and Arabs etc.

Unit II

Selection of clothes:Clothes for children, middle age, adults, Types of clothes according to human figure, Different materials for different clothes. Colors suitable for different garments. Kids to teenage clothing.

Unit III

Modern Clothing-Youth style and fashion, Teddy boy, skins modes, hippies, punks, taste of youth and their life style. Ancient to modern clothing, minis maxis, unisex, fit women, glamorous woman. Casual and formal clothing. Fashion for all, ready to wear fashion, mass marketing of fashion.

Unit IV

Planning for clothing for children- school, parties, sports, casual, Wardrobe Planning, Factors for clothing selection- Social Factors- Place, cultural, gender, occupation, occasion and social status. Economic Factors- Social economic condition, economic status, Availability of technology, Availability of technology.

Unit V

Environmental factors- Climate condition, protection from extreme condition and unusual places. Physiological factors- Age, Health condition, Physical structure of body or personality, Thermo physiological and Activity level.

Text Books

1. Black A.J. (1985), "A History of Fashion", USA Orbits Publishing Ltd.

2. Rouse E. (1989), "Understanding Fashion",UK, Blackwell Science.

SKILLED BASED ELECTIVE

TEXTILE CRAFTS

Course code: 21TFDU05S1

Credit 0+2 Max Mark=50

Objectives:

- To provide opportunity for skill development in textile craft.
- To impart knowledge on handi craft textile products and it's varieties.

Specific Learning Outcome:

This paper will enable the students to learn the craft and its types like floral desgning, lace making, ruge making for decorative purpose.

Unit I

- Quilting and quilt art -5 varieties
- Ceramics and glass craft 5 varieties
- Floral Design 5- varieties. Bouquet (Each sample five varieties preparation models)

Unit II

- Lace making
- Leather carving
- Leather crafting Bouquet (Each sample five varieties preparation models)

Unit III

- Rope making,
- Beadwork
- Paper craft– paper marbling, Quling work
- Canvas work (Each sample five varieties preparation models)

Unit IV

- Tatting work
- Applique work
- Patch work
- Macrame (Knotting) paracord (Each sample five varieties preparation models)

Unit V

- Rug making
- Embroidery and its varieties
- Handi crafts wall hangers/pot decoration (Each sample five varieties preparation models)

REFERENCE

1. Interior decorating effects, Stewart and sally Walton, Lorenz books – 2000.

- 2. The book of upholstery, Candace ord manroe, Pub 1987 present books.
- 3. Design and detail, the Practical guide to sayling a house, Tricia Guild of Elizabeth Wilhide. 1 st pub conran octopus limit.
- 4. Sunset slip cover and bed spreads step by step instruction decorating ideas, Editor Christian barne and Maureen Williams.
- 5. Dr.D.K.Aggarwal, House keeping management Amman publication, New Delhi.

Course code: 18TFDU05S2 Credit: 0+2 Max Mark:50

Objectives:

• To provide opportunity for skill development in soft toy making.

Specific Learning Outcome:

This paper will enable the students to make toys and its types, to give the knowledge about the soft toy making.

Unit I

Making of Toys – Classification of Toys – materials used – socks , cotton materials , Tery cloth, Felt materials and fur materials

Unit II

Designing – Measurement used – Pattern Making and developing Toys, Fish, Frog, Small Toys forcase

Unit III

Designing – Tracing of patterns – Construction of soft Toys – dogs, duck, snaks

Unit IV

Preparation and hand made Toys – Monkey, parrot, squirel

Unit V

Making of Soft Toys- Teddy bear, Dolpins and Elephant

Text Books

- 1. Making soft toys for children's British book originally published in 1988. Pamela Peake
- 2. Little Blue Pamela's books for a dollar or two on <u>Alibris</u>.
- 3. 101 Soft toys from 1984 and was published in the U.S. by Arco.
- 4. <u>Scrap Saver's Stitchery</u> and <u>More Scrap Saver's Stitchery</u> (by Sandra Lounsbury Foose)

MODULAR COURSES

FASHION GROOMING

Course Code : 21TFDU06M1

Credit : 2+0 Max: marks : 50

Objectives

- To develop knowledge and skills on grooming
- To acquire knowledge on basic personal care.
- To apply various techniques on self grooming and styling

Specific learning outcome

After learning this course students will be able to do self grooming on their own . Develop different appearance related to fashion and then styling . Developing portfolio on styling.

Unit - I

Self Rolling of thread. Different types of waxes,- tools and equipments needed their work and process.

Unit -II

Self bleach, clean ups and product knowledge and skin care - Materials required , uses and process followed.

Unit - III

Different types of hair cutting - tools and equipments needed and procedures to be followed.

Unit - IV

Self manicure and pedicure - - tools and equipments needed and procedures to be followed. Different types of Facials procedures to be followed.

Unit - V

Self Make Up For Different Occasions - Different types of Saree draping, Make up tools and equipments used.

Text Books

- 1. Style & Grooming- Felix oberman.
- 2. Hand book of Attire and grooming by Cyrus .M.Gonda
- 3. Careers in Beauty and Grooming by Lerner and mark.

Course code: 21TFDU06M2

Credit: 2+0

OBJECTIVES:

- To impart the knowledge on the costumes of different countries of the world
- To provide a theoretical understanding on different cultural and customary costumes of world nations.
- SOL (Specific Objective Learning): In this paper important costumes and textiles from different selective nations from different Continents will be discussed. After learning this subject the students will gain access to the costumes, designs, stitching principles, embroidery, dyeing and printing works that has been done on the costume. The students will gain knowledge on traditional woven textiles of India and the Traditional embroideries of different states of India. They will even learn about the Traditional costumes of different states of India spread on varied diversity.

UNIT - I

Costumes of European countries - Egypt, Greece, Roman, Sweden, Germany, Poland.

UNIT - II

Costumes of Far Eastern Countries – Japan, Hong Kong , Korea, Srilanka, Pakistan, Malaysia, China, Burma, Thailand & Philippines.

UNIT-III

Costumes of Africa- Mens, Womens, and Children Costumes.

UNIT-IV

Costumes of Asia- India, Bangladesh and Nepal.

UNIT-V

America costumes- Men"s, Women"s, and Children costumes of different states of America.

References & Text Books :

- 1. Costumes of India and Pakistan, Das S.N, DB Taraporevala sons & Co, Mumbai 1958.
- 2. Costumes through the ages lever, Jamession and Schuster, Newyork, 1968.
- 3. Traditional Indian textiles, Gillow or Barnard, Thames and Hudson, London, 1994.
- 4. History of Fashion, Anderson Black J, orbis publishing Ltd, USA 1985.
- 5. Costumes & textiles of Royal India, Ritukumar, Christies Book Ltd, London 1999.

Course code: 21TFDU06M3

Credit: 2+0

Objectives:

- 1. To gain knowledge about garment wardrobe.
- 2. To gain information about clothing and accessories.
- 3. To acquire knowledge about women and men clothing.
- 4. To know gain knowledge about special wardrobe planning.

Specific Learning Outcome:

After learning this course the students will have an understanding about the deigning of wardrobes, panning the wardrobe according to the age, sex and size.

Unit-I

Wardrobe planning-definition functions of clothing factors to consider in wardrobe planning. Needs for planning wardrobe benefits of planning a wardrobe.

Unit-II

Clothing-Classification of clothing –clothes, Accessories & cosmetics. Wardrobe planning for new born babies, toddler, pre schooler, schooler, Adolescence-(boys & girls).

Unit-III

Wardrobe planning for women-college going girls, office going women, pregnant women and lactating women aged women.

Unit-IV

Wardrobe planning for men"s-college going boys office going men"s adult men"s, old age man. Special wardrobe planning for physically challenged men & women.

Unit-V

Accessories & Cosmetics-Definition, wardrobe planning for Accessories –headdress, jeweler, footwear, carried objects, bells, hosiery, watch and eye glasses wardrobe planning for cosmetics –pomade, powder, perfume, body paint, make up kit, skin care and hair care.

Text Books

- 1. Elements of design & apparel design, sumathy new age international pvt.ltd, 2002
- 2.Art and fashion is clothing selection,M.C.Gimsely and harriot.T.,Novety,press,new York
- 3. Suzanne G.Marshall,hazel o.jockson M.Sue Stanley,mary ketgan(2000) Indindualiy in clothing selection and personal Appearance"Phullis touchie specnt.New jersey,2nd edition.

References

- 1. Tentiles fabrics and their selection-wingate IB,Allied publishers ltd,Chennai.
- 2. Family clothing Tate of glession, john wileys son Inc. illionis.

Course code: 21TFDU06M4 Credit: 2+0 Max. Marks:50

Objectives:

- To create awareness on Export and Import policies among the students.
- To impart knowledge on shipment policies and procedures
- To understand world trade policies and mutual trade agreements among exporting nations
- To impart knowledge on how to become a successful exporter.

Specific Learning Outcome:

After learning this course the students will have an understanding about the economics and knowledge about shipment policies and procedures. This paper will enable the students to know how to become an independent successful exporter.

Unit I

Introduction Concepts of Textile Economics, Textile Economics of demand and supply, elasticity of demand, working of textile market mechanism, Theory of Production in textiles short run & long run. Textile environment of business: Introduction to concept of textile business environment and other factor.

Unit II

Concepts of different types of textile costs and Cost Functions, determination of price and output in perfect and imperfect market conditions, price discrimination. Demand forecasting with reference to different textiles and fashion industries.

Unit III

Textile industries component of environment: economic, political, legal, social, technological & international Economic systems, economic planning in India, objectives, strategies and evaluation of year plan for domestic and international marketing.

Unit IV

Textile industrial policy and industrial licensing. New textile economic policies, textile Company regulatory legislations in India, MRTP, FEMA, EXIM in light of liberalization policies. Public sector in India: concepts, philosophy and objectives, performance, problems and constraints, Industrial Sickness, Privatization.

Unit V

Textile Management: Textile industries planning, Organizing, Staffing, Leading, Communicating, Controlling. Marketing Management, Trade practices, promotion, Theory of textile business cycles, Concept causes and Measures to control business cycles. Theories of inflation: causes and control of inflation, monetary and fiscal policy. Balance of Payments: concept, causes of disequilibrium and remedial methods

Text Books

1. International trade and export management (2008) Francis Cherunilam, Himalaya

publishing house - New Delhi.

- 2. Foreign Trade (2005) Jeevanandam. C, Sultan Chand & Sons New Delhi.
- 3. Principles of management- Dinakarpagare, sultan chand and sons, delhi.

References

1. Entrepreneurship Development in India – Dr. C.B Gupta , Dr N.P . Srinivasan, sultan Chand and sons delhi 1997.

VALUE ADDED COURSES

Basic Embroidery

Course Code: 21TFDU0VA1 Credit - 2

Objectives.

- To develop knowledge on basic hand embroidery techniques.
- To enhance the skills and uses of tools and materials.
- To develop knowledge on different types of hand embroidery and process involved.

Specific Learning Out come

After completing this course the students will know how to stitch different hand embroidery stitches appropriate to a particular design. Developing various motifs and color combinations etc.,

Unit -I

Hand embroidery - Prepare the samples using the following stitches running stitch, back stitch, chain stitch, lazy daisy, stem stitch.

Unit- II

Design and develop samples using the hand stitches - satin stitch, cross stitch , double cross stitch and fly stitch.

Unit -III

Prepare the samples using French knot, bullion knot, feather stitch and couching stitch.

Unit -IV

Prepare the samples using Patch work and appliqué work.

Unit - V

Design and develop a cushion covers using hand embroidery stitches

Course Code: 21TFDU0VA2

Credit - 2

Objectives.

- To develop knowledge on basic hand painting techniques.
- To enhance the skills of various painting techniques.
- To develop knowledge on different types of painting and their uses.

Specific Learning out come:

After completing this course students will gain knowledge on different techniques of painting and how to create various shades of paintings.

Unit -I

Hand painting - Introduction - Tools and equipments used - Hand painting - Single strokes- Double stokes and multi strokes.

Unit - II

Water color painting - Tools and techniques used.

Unit - III

Poster color painting - Types of shadings and methods used for shading.

Unit - IV

Acrylic color painting - methods - developing natural and abstract paintings.

Unit - V

Oil color painting - Methods - developing various styles of painting.

BASIC SKETCHING AND RENDERING

Course code: 21TFDU0VA3Credit : 0+2Max Mark:50

Objectives :

- To learn and convey the principles that relate to drawing .
- To learn the use of perspective and demonstrate knowledge of basic human proportion and anatomy. ¬
- To illustrate the various garment parts, ornaments and accessories

Specific Learning Outcome:

Sketching is an important skill that is required by a fashion designer, textile designer or a graphic designer. After completion of the course the students will have hands on skills in sketching, colouring, rendering and various other techniques involved in sketching. They will be able to illustrate human figures in different postures and garments.

Unit -I

Lines and line drawings - object drawing and perspective view drawings

Unit -II.

Enlarging and reducing motifs.

Unit -III.

Drawing a stick figure for 7.5, 8.5 & 10 Heads. Forming a fleshy figure over a stick figure.

UNIT -IV.

Dividing the figure into various parts using lines like plumb line, center front line, Princess line, waistline, side seam, armholes, jewel neckline, panty line, bust line etc.Practicing the art of creating textures

Unit -V

Illustrating different type of ornaments and accessories. 8. Illustrating details of ruffles, cowls, shirring, smocking, quilting, draping, gathers, pleats, frills and flounces.

Text Books

11. Comdex Fashion Design- Vol-1 Fashion Concepts

12. Advanced Fashion Sketch Book, Bina Abling, OM Book Service, India (2007)

- 13. Basic fashion design Styling 978-2-940411-39-9
- 14. Sapna sarkas "Fashion and sketch book" 978-93-81031-39-1
- 15. Harold Carr "Fashion design and product development"
- 16. Fashion Design illustration Children Ireland
- 17. verekes "Fashion designers hand book for adobe illustration Centers" 978-1-4051-6055-1
- 18. Anmol Roy "Fashion designing and technologies" 978-81-8411-304-4
- 19. Figure Drawing for Fashion, Isao Yajima, Graphic-Sha; First Edition (1987)
- 20. Fashion Art for the Fashion Industry, Rita Gersten, Fairchild Books (1989)

BASICS OF FASHION ILLUSTRATIONS

Course code: 21TFDU0VA4 Credit : 0+2 Max Mark:50

Objectives :

- To develop knowledge and skill about basic figure drawing and illustration of human features.
- To enable students to sketch their imagination into reality by using stylish figure and fashion figures.
- To apply various types of textures and mediums in the figures.

Specific learning out come

After learning this subject students will gain knowledge on figure drawings, season wise illustrations etc.

Unit - I

Illustrate Human features (Eyes,Ears,Nose,Hands & Legs) and Hairstyles . Analyzing a normal figure into fashion figure – front face to be done using pictures from magazines.

Unit - II

Analyzing profile using of a normal figure into fashion figure to be done using pictures from magazines.

Unit -III

Analyzing back of a normal figure into fashion figure using magazine to be done using pictures from magazines.

Unit - IV

Creating illustrations with various garment styles for Men, Women and Children – fabric rendering Leather and non- leather

Unit - V

Drawing garments for different seasons – summer, winter, autumn and spring – for Men, Women and Children.

TEXT BOOKS

1. Fashion Design Drawing & Presentation, Ireland Patrick John.

2. Fashion design Illustration: Children, Ireland Patrick John,

3. Fashion Design Illustration : Men, Ireland Patrick John

4. Foundation in fashion design and illustration – Julian Seaman.

5. Fashion Sketch Book, Fair child publication, New York