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SUBJECT CODE	CATEGORY	SUBJECT NAME	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*	L	Т	Р	CREDITS
BTGF401	DCS	INTRODUCTION TO FASHION TECHNOLOGY		20	20	0	0	3	1	0	4

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit;

\***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

#### **Course Educational Objectives (CEOs):**

- 1. To develop the understanding of fashion and trends.
- 2. To understand the concept of colors and psychology.

#### **Course Outcomes (COs)**

Student will be able

- 1. To apply their knowledge in Apparel design and production processes effectively.
- 2. To analyse the factors involved to decide the trends of fashion.
- 3. Design a product to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.

#### **Course Contents:**

#### Unit I

Introduction to Fashion, definition and origin, terms & definitions, reasons for change in fashion, classification of fashion Style, fashion cycle.

#### Unit II

Design Definition, Types - Structural and decorative design. Elements of design, line, shape, form, colour & texture. Line varieties and their application in a design. Shapes, Types - Natural, stylized, geometrical and abstract.

#### Unit III

Colour Definition and origin Characteristics (hue, value and intensity) chart color harmony and colour schemes. Psychology of colour and its application in apparel market. Texture, types of texture and its application in clothing.



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#### Unit IV

Introduction to neck lines, waistlines, hemlines, collars, sleeves, cuffs, plackets and pockets. Fullness applied in apparel tucks, pleats, gathers, shirring, frills or ruffles, flounces.

#### Unit V

Draping, introduction to draping, equipment and dress forms. Preparation of muslin for draping, fabric behavior. Principles and techniques of draping. Draping of foundation patterns - Bodies (front and back), Skirts and pants.

#### **References:**

- 1. Helen Joseph Armstrong "Draping for Apparel Industry"
- 2. J.Chuter "Introduction to clothing production management"
- 3. Jacob Soliner "Apparel manufacturing hand book"
- 4. Herold Carr and Barbara Iatham "The technology of clothing manufacture", Om Book Service 1994.

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SUBJECT CODE	CATEGORY	SUBJECT NAME	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*	L	Т	Р	CREDITS
BTGF402	DCS	FUNDAMENTAL OF CHEMICAL	60	20	20	30	20	3	1	2	5
	200	PROCESSING			_0	20	-0				5

#### Name of Program: B.TECH (Garment and Fashion Technology)

**Legends**: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; **\*Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

#### **Course Educational Objectives (CEOs):**

- 1. It will provide effective use of principles and mechanisms of pre-treatment processes on textile goods.
- 2. It will provide knowledge to dye and print different types of fabric

#### **Course Outcomes (COs)**

Student will be able

- 1. To apply their knowledge on the chemical processing of various fabrics.
- 2. To find the reason of generation of defects on the fabric during dyeing.
- 3. To solve the complex problem of dyeing and printing
- 4. To design the print and combination of colours on the fabric.

#### **Course Contents:**

#### Unit I

Sequence of chemical processing of textiles, natural and added impurities in textiles, introduction to various preparatory processes e.g. singeing, desizing, scouring and bleaching of different natural and synthetic textile materials.

#### Unit II

Mercerization of cotton, Optical whitening agents and their use.



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#### Unit III

Brief introduction to dyeing of natural and synthetic fibre fabric with various dye classes e.g. Direct, Basic, Acid, Sulphur, Vat, Azoic, Reactive and Disperse

#### Unit IV

Introduction to printing, different methods and styles of printing on natural and synthetic fabrics. Detailed study of different types of printing methods e.g. block, flat screen. Different modern techniques of printing; paste preparation of different dyes and pigments, After treatment of different printing materials.

#### Unit V

Measurement of fastness properties of dyed textiles.

#### List of Practical (Expand it if needed):

- 1. Bleaching of given cotton fabric sample by using sodium hypochlorite.
- 2. Bleaching of given cotton fabric sample by using hydrogen peroxide.
- 3. Dyeing of given cotton fabric sample by using reactive dye.
- 4. Dyeing of given cotton fabric sample by using vat dye.
- 5. Dyeing of given silk fabric sample by using acid dye.
- 6. Printing of given cotton fabric sample using pigment by block printing method.
- 7. Printing of given cotton fabric sample using pigment by screen printing method.
- 8. Printing of given cotton fabric sample using reactive dye by block printing method.
- 9. Printing of given cotton fabric sample using reactive dye by screen printing method.
- 10. Printing of given silk fabric sample using acid dye by block printing method.

#### **References:**

- 1. Technology of dyeing, Volume-3, Dr V. A. Shenai
- 2. Technology of printing, Volume-4, Dr V. A. Shenai
- 3. Textile scouring and bleaching, E.R. Trotman
- 4. Dyeing and Chemical Technology of Textile fiber, E.R. Trotman
- 5. Bleaching mercerizing and dyeing of cotton materials, R. S. Prayag
- 6. Technology of printing, R.S. Prayag
- 7. Textile Fiber, Gohl and Velenskey
- 8. Textile preparation and dyeing, Asim Kumar Rai Choudhury

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SUBJECT CODE	CATEGORY	SUBJECT NAME	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*	L	Т	Р	CREDITS
BTGF403	DCS	SURFACE ORNAMENTATION OF FABRIC	60	20	20	30	20	3	1	2	5

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;

\***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

#### **Course Educational Objectives (CEOs):**

- 1. Explain the fundamentals of hand and machine embroidery.
- 2. Describe the procedure and types of stitching hand embroidery stitches and Indian traditional embroideries.
- 3. Describe the procedure of making specialised hand and machine embroidery.

#### **Course Outcomes (COs)**

Student will be able

- 1. To Develop different samples of Indian Traditional embroideries.
- 2. To Develop different samples of specialized hand and machine embroidery.
- 3. To Discuss about the application of computer in design generation of embroidery and explain about the computerised embroidery machineries and attachments..
- 4. To Derive the cost for the finished embroidery material and also describe the maintenance care for finished embroidery sample.

#### **Course Contents:**

#### Unit I

Introduction to embroidery, Hand Embroidery: Introduction, Origin of embroidery, General rules for hand embroidery, Tracing of Embroidery design, Precautions to be taken for proper maintenance of embroidery articles. Selection of needle, Threads and fabrics for hand Embroidery; Machine Embroidery: Introduction, Overview of machine embroidery, General rules for machine embroidery, Attachments in sewing machines for

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embroidery, Selection of needle, Threads and fabrics for machine embroidery, Causes and remedies

#### Unit II

Hand embroidery stitches: Knowledge, Classification and practice of Running, Couching, Button hole, Satin, Long and short, Wheat, Chain, Stem, Herringbone, Cross stitch, Knotted stitches, Fish bone. Indian traditional embroideries: The type of stitches, Designs, Colours and materials used for Phulkari, Kasuti, Kashmiri embroidery, Kutch work, Chikkankari, Kantha, Tribal embroideries, Causes and remedies.

#### Unit III

Specialised embroidery: Knowledge and practice of surface ornamentations - Eyelet work, Cutwork, Richelieu work, Lace work, Drawn thread and fabric work, Patch work, Mirror work, Appliqué, Shaded embroidery, Zardosi work, Shadow work, Stone (Kundan) work, Badla work, Bead and sequins work, Bobbin-thread embroidery, Causes and remedies

#### Unit IV

Introduction to CAD in embroidery, Selection of thread, colour and suitable stitches for embroidery using computer, Advantages and limitations of CAD in embroidery, Design preparation: CAD software used for embroideries - Process of designing, Types of stitches in CAD, Its applications, Punching procedure. Computerised Embroidery Machine: Types of embroidery machines and their working - Vertical embroidery machines, Multi-head embroidery machines, Special attachments in embroidery machines, Types and purposes of Frames and backing materials, Causes and remedies.

#### Unit V

Costing: Estimating and costing of materials and job, marketing of finished embroidery goods Care and maintenance of embroidery articles – Washing and pressing of embroidery articles



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#### List of Practical (Expand it if needed):

- 1. To Prepare sample with basic hand stitches.
- 2. To Prepare sample with basic machine stitches.
- 3. To Prepare one sample with Phulkari Indian traditional embroidery.
- 4. To Prepare one sample with Kantha, Indian traditional embroidery.
- 5. To Prepare one sample with Kasuti, Indian traditional embroidery.
- 6. To Prepare one sample with Chikankari Indian traditional embroidery.
- 7. To Prepare each samples with Lace work.
- 8. To Prepare each samples with patch work.
- 9. To Prepare decorative samples with yarn and fabric tie and dye.
- 10. To Prepare two samples with Block printing.

#### **References:**

- 1. Sheila Paine, Embroidered Textiles, Thames and Hudson Ltd., London, 1990
- 2. Gail Lawther, Inspirational Ideas for Embroidery on Clothes and Accessories, Search Press United Kingdom, 1993
- Shailaja D. Naik, Traditional Embroideries of India, A. P. H Publishing Corporation, New Delhi, 1996

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SUBJECT CODE	CATEGORY	SUBJECT NAME	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*	L	Т	Р	CREDITS
BTGF404	DCS	GARMENT CONSTRUCTION - II	60	20	20	30	20	3	1	2	5

#### Name of Program: B.TECH (Garment and Fashion Technology)

**Legends**: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; \***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

#### **Course Educational Objectives (CEOs):**

- 1. To introduce fusing technology and equipments
- 2. To demonstrate the feed mechanism used in different sewing machines
- 3. To introduce different parts of sewing machine and their function
- 4. To understand the spreading, cutting and production of garments.

#### **Course Outcomes (COs)**

Student will be able

- 1. Students will be able to fuse the parts as per requirement of the garment
- 2. Can effectively use type of feeding mechanism based on fabric type
- 3. Can use and suggest the additional part of sewing machine wherever required
- 4. Monitor the spreading, cutting and production of the garment products in the industry

#### **Course Contents:**

#### Unit I

Marker planning, different methods of marker planning, marker efficiency, different types of blocks, blocks and patterns, grading, methods of grading, grains lines.

#### Unit II

Spreading, sorting, plying, spreading modes, method of spreading, fabric control device, requirement of spreading, cutting methods, cutting accessories and instruments, cutting defects and remedies.

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#### Unit III

Feed system, differential feed system, Adjustable feed system, needle feed system, compound feed system, unison feed system and puller feed system

#### Unit IV

Machine attachments, feet, folders, binders, stitching and edge guides, right angle double fold binders, lap seam folders, yoke setter, flat stitching guide, sewing arm stitching guide, cylindrical stitching guides

#### Unit V

Fusing technology, Base cloth, resins, coating system, fusing machine and equipments, Quality control. Production technology manual system, make through section or process system, Progressive bundle system, straight line, conveyor belt transport, quick response system.

#### List of Practical (Expand it if needed):

- 1. To study marker planning of garment.
- 2. To study cutting instruments used in garment industry.
- 3. To study puller feed mechanism.
- 4. To study drop feed mechanism.
- 5. To study differential feed mechanism.
- 6. To study adjustable top feed mechanism.
- 7. To study needle feed mechanism.
- 8. To study fusing of garment pieces.
- 9. To study time and motion study of shirt.
- 10. To study time and motion study of trouser.

#### **References:**

- 1. Pattern making for fashion design h.g. Armstrong
- 2. Metric pattern cutting Winifred Aldrich
- 3. Pattern making made easy gollian Holman
- 4. Technology of clothing manufacture Carr & Latham
- 5. Apparel manufacturers handbook Jacob solinger

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	CATEGORY	SUBJECT NAME	END SEM University Exam	Ter	Teachers Assessment*	END SEM University Exam	Teachers Assessment*	L	Т	Р	CREDITS
BTGF405	DCS	GARMENT PRODUCTION MACHINARY & EQUIPMENT	60	20	20	30	20	3	1	2	5

**Legends**: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; **\*Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

#### **Course Educational Objectives (CEOs):**

- 1. Discuss various types of fabric packages encountered in fabric spreading and explain the various methods in use for spreading.
- 2. Describe the types and functions of various fabric cutting machines
- 3. Understand the various types of needles, sewing threads, seams and stitches

#### **Course Outcomes (COs)**

Student will be able

- 1. Explain the types and functions of various fabric cutting machines.
- 2. Explain the functions and working principles of different sewing machines
- 3. Monitor the spreading, cutting and production of the garment products in the industry

#### **Course Contents:**

#### Unit I

Spreading: Types of fabric packages; types of fabrics: one way, two way fabrics; their effect on spreading; methods of fabric spreading; spreading equipment; computerized spreaders; marker making; marker efficiency; factors affecting marker efficiency; marker duplicating methods; computer aided marker making

#### Unit II

Cutting Machines: Introduction to cutting machines; types and functions of cutting machines; straight knife, round knife, bent knife cutting machines; notches, drills, die



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cutting machines; computerized cutting machines; maintenance of cutting machines; common defects in cutting and their remedies

#### Unit III

Parts of Sewing Machine: Types of needles, parts of needles and their function, needle size, sewing thread, properties of sewing threads, ticket number, fabric sewability; Basic parts of a sewing machine: needle, bobbin case / bobbin hook, loopers, loop spreader, threading fingers, throat plate, tongue chaining plates, take up devices, tensioners, feed dog, presser foot, folders and attachments

#### Unit IV

Sewing Machine Settings: Classification of sewing machines; basic SNLS machine: parts and their functions, adjustments, stand height, pedal, needle bar, presser foot, feed dog, differential feed ratio, reverse feed, stitch length selection, feed timing, needle and bobbin thread tension, stitch cycle timing diagram; Maintenance of SNLS machine; Common defects and remedies

#### Unit V

Specialised Sewing Machines: Special purpose sewing machines: Feed-off-the-arm, button-hole sewing, button-sewing, bar tack, blind stitch machines, over-lock machine, double-needle lock stitch machine, elastic-band attaching machine, multi-needle chain stitch machine, single-needle machine with under-bed trimmer; Automation in sewing machines: automatic pocket sewing machine; Unit production system; Computerised sewing machines

#### List of Practical (Expand it if needed):

- 1. To study the method of spreading and generation of probable defects.
- 2. To study and compare the laser cutting and straight knife cutting machine.
- 3. To study the various parts of sewing machine.
- 4. To study the setting of various parts of the sewing machines.
- 5. To practice the method of refilling and greasing of various machines.
- 6. To study the mechanism and setting of lock stitch and fabric cutter machine.
- 7. To study the mechanism and setting of Feed-off-the-arm machine.
- 8. To study the mechanism and setting of button-hole sewing machine.

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- 9. To study the mechanism and setting of button-sewing machine.
- 10. To study the mechanism and setting of bar tack machine.

#### **References:**

- Harold Carr and Barbara Latham, "The Technology of Clothing Manufacture", Om Book Service, 1994
- 2. Laing R.M., Webster J, "Stitches and Seams", The Textile Institute, Manchester, UK, 1998
- 3. Shaeffer Claire, "Sewing for the Apparel Industry", Prentice Hall, New Jersey, 2001
- Singer Sewing Reference Library, "Sewing Lingerie", Cy DeCosse Incorporated, Minnesota, 1991
- 5. Jacob Solinger, "Apparel Manufacturing Handbook", Reinhold Publications, 1998

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	CATEGORY	SUBJECT NAME	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*	L	Т	P	CREDITS
BTGF406	DCS	GARMENT COMPONENET LAB	0	0	0	30	20	0	0	2	1

**Legends**: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; **\*Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

#### **Course Educational Objectives (CEOs):**

- 1. To give exposure about the various stitches and seams, seam finishes, darts, tucks and pleats to acceptable quality levels
- 2. To gain knowledge on various components on various garment components

#### **Course Outcomes (COs)**

Student will be able

- 1. Design the various component of garment as per requirement.
- 2. Create latest fashionable garment components.
- 3. Solve the various problem incur during design of components.

#### List of Practical (Expand it if needed):

- 1. Preparing samples of various stitches.
- 2. Preparing samples of basic seams, seam finishes, darts, tucks and pleats
- 3. Preparing samples of plackets like Continuous bound placket, 2 piece placket.
- 4. Preparing samples of plackets like tailors placket, fly opening and zipper
- 5. Preparing the sample of fasteners and buttons.
- 6. Preparing samples of necklines like Bias facing, bias binding and shaped facing
- 7. Preparing samples of collars like Peter Pan collar, shirt collar, shawl collar, sailor collar
- 8. Preparing samples of pockets like Patch, bound and front hip pocket

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- 9. Preparing samples of Sleeves like Plain, puff, raglan kimono, bell sleeve
- 10. Preparation of embroidery samples.

#### **References:**

- Cooklin Gerry, "Garment Technology for Fashion Designers", Blackwell Science Ltd., 1997
- 2. Laing, Webster J "Stitches and Seams" Woodhead Publishing Ltd., 1998
- 3. Leila Aitken, "Step by Step Dress Making Course", BBC Books, 1992

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TEACHING & EVALUATION SCHEME											
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SUBJECT CODE	CATEGORY	SUBJECT NAME	END SEM University Exam	Exam	Teachers Assessment*	am	Teachers Assessment*	L	Т	Р	CREDITS
BTHU301	ODS	COMMUNICATION SKILLS - II	0	0	0	0	50	0	0	2	1

#### Name of Program: B.TECH (Garment and Fashion Technology)

**Legends**: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; \***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

#### **Course Educational Objectives (CEOs):**

- 1. To develop the second language learners' ability to enhance and demonstrate LSRW Skills.
- 2. To enable students to acquire English Language Skills to further their studies at advanced levels.

#### **Course Outcomes (COs)**

The students will be able:

- 1. To enhance confidence in their ability to read, comprehend, organize, and retain written information.
- 2. To write grammatically correct sentences for various forms of written communication to express oneself.

#### List of experiment: (Language Lab)

- 1. Self Introduction
- 2. Reading Skills
- 3. Role plays
- 4. Interview skills



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- 5. Listening Skills
- 6. Reading Skills
- 7. Debate
- 8. Group discussion
- 9. Oral Presentations

#### **References:**

- 1. Business Communication, Mc Graw Hill Education, Matthukutty M. Monippally.
- 2. Effective Business Communication, Mc Graw Hill Education, Neera Jain, Shoma Mukherji.
- 3. Technical Communication, Cengage, P. Subba Rao, B. Anita Kumar, C. Hima Bindu.
- Business Correspondence & Report Writing, Mc graw Hills., R.C. Sharma & Krishna Mohan
- 5. Business Communication- Mc graw Hills, Peter Cordom.
- 6. Communication Skills, Oxford, Sanjay Kumar & Pushpa TMH.
- 7. Effective Technical Communication, M. Ashraf Rizvi ,Mc Graw Hill Education.

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