

### Name of Program: DPLOMA (Garment and Fashion Technology)

			TEACHING & EVALUATION SCHEME										
			TH	IEORY	<u>r</u>	PRAC							
SUBJECT CODE	CATEGORY	SUBJECT NAME	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*	L	Т	Р	CREDITS		
DTTX301	DCS	INTRODUCTION TO FASHION TECHNOLOGY- I	60	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 introduce about the concept of fashion in garments
- 2. To understand the designing terms and elements used in garments related to fashion
- 3. To demonstrate the effect and application of color psychology
- 4. To give basics idea of draping, darting and designing of different parts of garment

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

Students will be able:

- 1. To understand the fashion trends and forecast
- 2. To make the different designs applying elements of design
- 3. To apply colors according to the psychology
- 4. To make different parts and dresses using draping technique

#### **Course Contents:**

#### Unit I

Introduction to Fashion definition and origin terms & definitions, Traditional Indian garments and Embroidery, Ethical Garments, Classification of fashion style, fashion cycle and reasons for change in fashion.

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### Unit II

**Design:** Definition, Types - Structural and decorative design. **Elements of design:** line, shape, form, color & texture. **Line:** varieties and their application in 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.

#### 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 Bodice (front and back) Skirts and pants.

#### **References:**

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

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		TEACH THEORY	TEACHING & EVALUATION SCHEME											
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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			
DTTX302	DCS	YARN MAUFACTURING	60	20	20	30	20	3	0	2	4			

 $\label{eq:Legends: L-Lecture; T-Tutorial/Teacher Guided Student Activity; P-Practical; C-Credit;$ 

\***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 provide the basic knowledge of B/R and cards.
- 2. To provide the basic knowledge of D/F, S/F and ring Frame.

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

Student will be able:

- 1. To apply their knowledge on the production, processing of various fibers and analyse the problem of various faults occurring in B/R and carding m/c.
- 2. To apply their knowledge on the production, processing of various fibers and analyse the problem of various faults occurring in D/F, S/F and ring Frame.
- 3. To apply their knowledge for setting of m/c on the various fibers

## **Course Contents:**

#### Unit I

Concept of Ginning of cotton fibers, Objective of ginning, Blow Room, Objects of blow room, Different types of Opening Devices, Opening and cleaning machines, beating points for different materials. Calculation related to blow room machine production.

#### Unit II

**Carding:** Object of carding, principles of working, construction and working of different parts of the card, various defect generated in carding and their remedies.

## Unit III

**Draw frame**: Object of drawing, constructional details of draw frame, Defects generated in draw frame and remedies. Objects of combing, combing operation and concept, Lap

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preparation.

#### Unit IV

**Speed frame:** Object of speed frame, construction and principle of working, defects generated in speed frame and remedies.

#### Unit V

**Ring Frame:** objects of ring frame, constructional details of ring frame, drafting, twisting, winding. Common defects in ring yarn, causes and remedies. Environmental condition and its effects. General idea of Spinning of natural, synthetic and its blend in ring frame. Concept of ring doubling and TFO. Knowledge on rotor, air jet and friction yarn

#### **References:**

- 1. Manual of cotton Spinning Vol. I, II. Text Inst
- 2. Element of Raw Cotton and Blow room Khare A R
- 3. Elements of Carding and Drawing- Khare A R
- 4. Processing of Manmade and blends on Cotton System Salhotra K R
- 5. Cotton opening and picking Gilbert Merrill
- 6. Cotton carding Gilbert Merrill
- 7. Technology of Short Staple Spinning Klein

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

- 1. Preparation of complete flow charts for fibre to yarn conversion.
- 2. To Study the passage of material in Blow room.
- 3. To Study the passage of material in Carding.
- 4. To Study the passage of material in miniature Carding.
- 5. To Study the passage of material in Draw frame.
- 6. To Study the passage of material in miniature draw frame.
- 7. To Study the passage of material in miniature speed frame.
- 8. To Study the passage of material in ring frame.
- 9. To Study the passage of material in miniature ring frame.
- 10. To Study the passage of material in ring doublers.
- 11. To Study the various Yarn and Package Defects.

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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			
DTTX303	DCS	FABRIC MANUFACTURING	60	20	20	30	20	3	0	2	4			

 $\label{eq:Legends: L-Lecture; T-Tutorial/Teacher Guided Student Activity; P-Practical; C-Credit;$ 

\***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 describe the working principles of primary and secondary motions of the loom.
- 2. To describe the working principles of Auxiliary motions of the loom.

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

Student will be able:

- 1. To apply the knowledge of the working principles of primary and secondary motions of the loom and can manufacture fabrics as per the required quality and specifications.
- 2. To apply the knowledge of the working principles of Auxiliary motions of the loom and can manufacture fabrics as per the required quality and specifications.

#### **Course Contents:**

#### Unit I

Principles of weaving. Primary, Secondary and Auxiliary motions. Handloom and power loom. Shedding: positive and negative, tappets, Dobby and jacquard.

#### Unit II

Picking classification, Mechanism of Over and under pick motions, causes of shuttle flying and shuttle trap. Beat-up sley movement, Timing diagram of primary motions.

#### Unit III

Classification of take-up motion, 7 wheel take-up motion, Negative let-off motion Causes of pick spacing variation. Concept on Continuous type take up motion. Temples - types and uses, Different temples used in manufacturing different type of fabric.

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## Unit IV

Classification of weft stop motion, side and centre weft fork motion, Warp stop motion.

## Unit V

Automatic looms and General idea about shuttle less weaving like projectile, rapier air-jet and water jet loom.

### **References:**

- 1. Plain Weaving Motions Aswani
- 2. Weaving Mechanism Vol. -1 Bannerjee N N
- 3. Talukdar MK; Weaving
- 4. Principles of Weaving Marks & Robinson
- 5. Weaving Mechanism Fox
- 6. Woven Fabric Production Vol. I NCUTE Study Material.
- 7. Woven Fabric Production Vol. II NCUTE Study Material.

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

- 1. To Study the passage of warp yarn through plain loom.
- 2. To Study the construction and working of shedding motion
- 3. To Study the construction and working of picking mechanism.
- 4. To Study the construction and working beat-up mechanism
- 5. To Study the negative let-off mechanism.
- 6. To Study the take-up mechanism.
- 7. To Study the side weft fork motion.
- 8. To Study the center weft fork motion.
- 9. To Study the different types of Temples.
- 10. To Study the warp stop motion.
- 11. To Study the automatic loom.
- 12. To Study the shuttle less loom Rapier loom

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#### Name of Program: DPLOMA (Garment and Fashion Technology)

SUBJECT CODE			TEACHING & EVALUATION SCHEME														
			THEORY					PRACTICAL									
	CATEGORY	SUBJECT NAME	<b>END SEM</b>	University	Exam	Two Term	Exam	Teachers	Assessment*	END SEM University	Exam	Teachers	Assessment*	L	Т	Р	CREDITS
DTTX304	DCS	GARMENT CONSTRUCTION - I		60		20	0	20	)	3(	)	2	0	3	0	2	4

 $\label{eq:Legends: L-Lecture; T-Tutorial/Teacher Guided Student Activity; P-Practical; C-Credit;$ 

\***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 impart knowledge of sewing machines and types of stitches and work aids
- 2. To analyze the sizing of garments
- 3. To classify the sewing and cutting machine according to end use and application.
- 4. To understand different types used according to their application

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

Students will be able:

- 1. To stitch the garments
- 2. To check and detect the defect in dimensional measurements
- 3. To supervise the kind of needle and thread required according the type of fabric

#### **Course Contents:**

#### Unit I

Introduction to sewing, History of sewing machines, components and Basic parts of the sewing machine with their function, types of seams, stitches and their classification

#### Unit II

Elements and Functions of Clothing-Garment Analysis and Its Classification -Measurement and Size Charts for Men, Women, and Children - Requirement and Breakdown of Garments Flow Process

#### Unit III

Classification of sewing machine, cutting machines, and finishing equipments and their applications Defects and remedies.

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### Unit IV

Needles and threads, types of needle and their application, thread construction, thread count, ticket number, factors affecting characteristics of thread, thread finishes, thread packages, thread properties and seam performance, SPI

#### Unit V

Work aids- Machine beds, tables, chairs, Bundle clamp, Stackers etc.

#### **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

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

- 1. To study the flow chart of Garment Process Line
- 2. To study the spreading and layering techniques of fabric
- 3. To study the sewing machine and its parts
- 4. To study the types of stitches
- 5. To study the types of seams
- To study the tension variation and SPI regulation and its effect on different fabrics(Plain, Twill, Sateen, etc)
- 7. To study the work aids used in sewing machine
- 8. To study the breakdown of shirt flow process
- 9. To study the breakdown of trouser -flow process
- 10. To study the breakdown of jacket- flow process

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SUBJECT CODE	CATEG ORY	SUBJECT NAME	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*	L	Т	Р	CREDITS		
DTTX305	DCS	GARMENT CARE AND FINISHING	60	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 provide the requirements of water softness for garment processing at different steps
- 2. To gain knowledge laundry equipment used in industries
- 3. To provide the knowledge of garment finishing and its machines

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

Students will be able:

- 1. To Select the water according to its softness at different processing
- 2. To Supervise the requirement and need of laundry
- 3. To install and suggest the finishing machines for garments
- 4. To remove the various types of stains from the garment without damaging it

#### **Course Contents:**

#### Unit I

Water –soft water –hard water – methods of softening water. Garment dyeing, dye selection, garment-dyeing machinery. Washing: Stone washing, acid washing, enzyme washing, bio polishing, mesmerisation, bleaching, laser fading and ozone fading.

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#### Unit II

Study of laundry equipment and reagents, soaps, detergents, cleaning action of soaps, study of modern and industrial cleaning agents. Finishing; Optical brightening, mercerization, liquid ammonia, treatment, stiffening, softening, crease resistant and crease retentive finish, anti-static finish, anti-bacterial finish, water proofing, flame proofing, soil release finish, mildew and moth Proofing.

#### Unit III

Study of garment finishing room equipments, steam iron, steam busters, vacuum ironing tables, form finishing equipments, trouser topper, shirt press, collar/cuff press, form finisher for jackets and coats, study of boiler and related equipment for finishing room. Fusing machines for interlinings.

#### Unit IV

Principles of laundering – stain removal – various solvents for stain removing blood, tea, rust, oil/grease etc. – different methods of washing – application of friction by hand rubbing – scribing – tumble wash.

#### Unit V

Stain removal – Oil, colour matter, chemicals. Use of care labels and standards / norms for care labels. Garment laundering equipments and procedures. Study of different types of house hold/industrial washing machines- rotary –swirling – pressure – tumble wash etc

#### **References:**

- 1. Fundamentals of Textile and their care Dantyagi S., Oriental longmans Ltd, New Delhi, 1980.
- 2. Household Textiles & laundry work Denlkar, Atma Ram & Sons, Delhi, 1993.
- 3. Garment Dyeing: Ready to wear fashion from the dye house Harrison. P (Editor), The Textile Institute, U.K. 1988.
- 4. Fabric Care Noemia D' Souza., New Age International (P) Ltd. Publisher, Chennai, 1998.
- 5. An Introduction to Textile Finishing Marsh, J.T., Chapman and Hall Ltd., London, 1979.
- 6. Technology of Textile Finishing Shenai, V.A., Sevak Publications, Bombay, 1995.
- 7. Textile Finishing Hall, A.J., Elsevier Publishing Co. Ltd., 1986.

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			TEACHING & EVALUATION SCHEME											
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SUBJECT CODE	CATEGORY	SUBJECT NAME	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	T eachers Assessment*	L	Т	Р	CREDITS			
DTTX306	DCS	APPAREL QUALITY CONTROL	0	0	0	30	20	0	0	2	1			

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 $\label{eq:Legends: L-Lecture; T-Tutorial/Teacher Guided Student Activity; P-Practical; C-Credit;$ 

\***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 provide knowledge on the process of quality control and its Principle
- 2. To assess the fabric as per the end use.

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

Student will be able:

- 1. To demonstrate their knowledge on flow process of quality control.
- 2. To identify, analise and solve the various defects in the garment.
- 3. To identify the effect of thread tension on the seam strength.
- 4. To solve problem occur during garment inspection.
- 5. To improve the quality of the fabric.

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

- 1. To study the process of apparel quality control.
- 2. To study the tensile properties of given fabric.
- 3. To study the sewability and calculate seam efficiency of given fabric.
- 4. To test the sewing threads and interlinings.
- 5. To study inspection system
- 6. To inspect the zipper, buttons and fastners.
- 7. To study the different check points of garment manufacturing.
- 8. To study the various types of garment defects.

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- 9. To study and assess the apparel quality
- 10. To study the latest garment testing system

## **References:**

- 1. Managing Quality in the Apparel Industry Pradip V. Mehta, S. K. Bharadwaj
- 2. Progress in Textiles Science and Technology Vol.I Testing and QM; V. K. Kothari
- 3. Knitted Clothing Technology Terry Brackenbury
- 4. Sewing for fashion Design, Relis, Nuris and Strauss Gail, PHI 1997
- 5. Innovation and technology of woman's intimate apparel, Yu W Fan J & Harlock S C, Woodhead

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			TH	IEOR	Y	PRAC								
SUBJECT CODE	CATEGORY	SUBJECT NAME	END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*	L	Т	Р	CREDITS			
DTTX307	DCS	SEMINAR AND GROUP DISSCUSSION	0	0	0	0	50	0	1	0	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. Learn to give a presentation
- 2. Help student to develop knowledge

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

Students will be able to:

- 1. Demonstrate their skill of communications
- 2. Create a presentations using ICT
- 3. Collect various about latest development on some specific topics.

#### **Course Contents:**

Each Student is required to give four power point presentations on the various topics allotted to them separately.

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