SYLLABUS OF SEMESTER SYSTEM
FOR THE TRADE OF

Sewing Technology

Under

Crafts Instructor Training Scheme (CITS)
Two Semesters (One Year)

Redesigned in
2014

By
Government of India

Ministry of Labour & Employment (DGE&T)

General Information

1. **Name of the Scheme** : Craft Instructor's Training Scheme

2. **Name of the Trade** : Sewing Technology

3. **N. C. O. Code No**. : 7433.05

4. **Duration of CITS Training** : One Year

5. **Entry Qualification** : One year NTC /NAC (NCVT) certificate in Cutting & Sewing/Sewing Technology Trade **or** Degree/ Diploma minimum 2 years duration Diploma /Degree in Costume Designing & Dress Making /Fashion Designing/Fashion Technology/ Apparel Technology / Garment Fabrication Technology approved by AICTE.

6. **Unit Strength (Batch Size)** : 20 Trainees

7. **Space required** : Theory Room : 65 sqm
   Computer Lab : 65 sqm
   Sewing Lab : 120 sqm
   Drafting Lab : 120 sqm

8. **Power Norms** : 8 KW

9. **Qualifications for Trainer Academic** : 12th passed

10. **Qualification for Trainer Technical** : Degree (4Yrs) in Fashion & Apparel Engineering/ Technology / Fashion Technology/Design from Recognized University with One year Experience in Sewing Technology
    OR
    Diploma (Minimum 2 years duration) /Degree in Costume Designing & Dress Making /Fashion Designing / Fashion Technology/ Apparel Technology / Garment Fabrication Technology approved by AICTE with Three years Experience in Cutting & Sewing/Sewing Technology

Course Objective :

        The objective of the course is to impart Training in advance areas of Computerized Pattern Making so that they can seek one of the following mode of employment

1. Pattern Master (Computerized)
2. Pattern Master (Manual)
3. Instructor in ITI'S /RVTI'S Or any other institutions
4. Run his/her own boutique
5. Sample coordinator

- **Training Methodology : Training in each Semester shall consist of**
  - O Lecture
  - O Practical Exercises in the work shops
  - O Market surveys of trends
  - O Visits to Export houses/Exhibitions/ Fairs

- **Trainees Exit Level :**
  On completion of training trainees are expected to be able to :

  - O Draft Pattern with Software
  - O Edit Pattern
  - O Grade Pattern
  - O Digitize Pattern
  - O Prepare Marker
  - O Drape & Check Pattern on Dummy

NOTE : NCVT Certificate in Crafts Instructor Course will be awarded after successful completion of both semesters

Syllabus for the trade of "**Sewing Technology" (CITS)** under craft instructor training scheme

First Semester (Common for Sewing Technology & Dress Making)

Duration: Six months

Week No.	Trade Practical 3 hrs	Trade Theory 1 hr
1.	Revision of the CTS contents Practice of Drafting Practice of Pattern making Practice of Grading Practice of Draping Practice of Stitching	Revision of the CTS contents Concepts of Drafting Concepts of Pattern making Concepts of Grading Concepts of Draping Concepts of Stitching
2.	• Familiarization with the working of computer, Paint and different software like Corel draw, Adobe Photoshop, etc.	• Trade Knowledge Role of CAD in garment industry • Basic knowledge about various aspects of CAD operations, Paint, Corel draw and Adobe Photoshop, etc. • Knowledge about importance of pattern • Safety precautions in garment industry.
3.	Creation of patterns with the help of Corel draw, Adobe Photoshop (Latest Software) etc. q	• Introduction of PDS (Create Pattern, Grade Pattern) • Introduction of Marker (Create Layout) • Introduction of 3D • Introduction of Digitizer (Digitize pattern) • Introduction of Plotter (Print Pattern) • Scope • Importance

4.	• software tools for Pattern Making
	• Familiarization with menu & Commands
	   o New Piece
	   o Select Tool
	   o Point marking
	   o Guide line
	   o Delete
	   o Move Piece
	   o Save
	   o New
	   o Open
		• Starting of System Soft ware Screen Menu

		o Help	
		o Zoom	
		o Cut	
		o Copy	
		o Paste	
		o Matching Curves (walk Tool)	
		o Mirror Line	
5.	o Seams o Select & move internals o Inserting Text o Rotate piece o Measuring o Adding fullness o Cut, Join, Build & Trace piece o Fold piece o Insert, Edit, close & cut Dart o Insert Pleat		o Details about the Tool Bars Command details
6.	Drafting of Children Upper bodies Block Drafting of Children Lower Body Block		Children Size Charts & Bodies Block.
7.	o Base line – change/Rotate o Adding Fullness o Change corner o Insert Button Add Notch o Align points o Circle, Arc & Wave o Trace & Trim o Extend, Join & split Contour o Swap segment o Practice of Cutting, Joining, Creating lines & Parallels of drafts.		Detailing of Tools
8.	Drafting of Ladies Bodice Block & Trousers Block		Ladies measurement chart & Ladies Blocks
9.	Digitizing of Pattern • Working with File, Edit, Piece, Design, Tool, View & Help menu. • Designing with darts • Insertion of Style Lines		Digitizing – Tools & Importance
10.	Grading of Patterns		Grading • Size Table • Grading Table • Grading Menu
11.	Drafting of Skirt Block Design insertion to the Block		Designing in Skirts
12.	Developing of Sleeve Blocks &		Designing in Sleeves & Collars

	Insertion of Design Developing Collars	
13.	Developing Patterns with Spec Sheet.	Spec Sheet Export Import of files Printing & plotting commands X & Y axis

14.	Practice of Marker Tools
	Practice of making marker
	General Tools
	Information – Piece, all size, Global
	Placement of pieces
	Fabric Pattern
	Measure Tool
	Plot order
	Flaw
	Alignment
	    o Shoot
	    o Flip & Rotate
	    o Auto Nesting
	    o Batch
	    o Merge
	    o Import Export
		Marker
		  o Introduction
		
		  o Knowledge about spreading techniques and equipment
		
		  o Marker modes and marker efficiency
		
		  o Knowledge about spreading and material handling

15.	3 D Tools Model Property Open, Save & Customize. Place cloth, Clear cloth, Single Draping, Show & Hide. Stitch Property 3 D Property	Introduction to 3D Use of 3D Tools of 3D software Draping technique Brief description of Model drawing, draping and grading on dummies.
16.	Exercise on each topic , collection of samples ,survey work in market & industry, Preparation of sample folders & survey reports	Apparel enterprises Apparel career, consulting, reporting, buying offices, promotion agencies, organization & trade association in apparel industry
17.	Exercise on each topic , collection of samples ,survey work in market & industry, Preparation of sample folders & survey reports	Apparel Market Sourcing, market, changing trends in fashions, domestic & international market, primary & secondary market. Retail business, retail management , fashion retailing, departmental stores, chain stores, shopping centers & mall Globalization

18.	Findings
	  • Identification of defects in fabrics & accessories
	  • Measurements Checking as per
		Quality control
		  • Introduction
		  • Meaning
		  • Need

	Spec. Sheet. • Preparation of cost Sheet.	• Cost of quality control system • Concepts • Identification of critical factor
19.	Exercise on various sheets used in garment export house by Quality Controllers	Inspection • Definition ,need, planning place, time , method • Type of Inspection • Stages of inspection • Role of inspector
20.	Exercise on various sheets used in garment export house by Quality Controllers	• Benefits of quality control in garment industry • Quality assurance system • Statistical quality control process • TQM
21.	Trainees will design/ develop pattern and stitch garments on the basis of skills developed under CTS & CITS and present the same. Selection of the projects will be according to the need of the industries as well as the choice & interest of the trainees.	
22.		
23.		
24.		
25.	Industrial Visits	
26.	Examination	

TRADE : Sewing Technology (CITS)

LIST OF TOOLS & EQUIPMENT

	A. Computer Laboratory			
	Name of the Tool/Equipment	Quantity	Approx. Price	Life In years
1.	Computer with multimedia System (Latest Configuration) with Pattern Making software & UPS (0.5 VA with 15 minute back up)	21	50,000	07
2.	Server system (Latest Configuration) with software	01	60,000	07
3.	LAN Connectivity & Internet facility to the computers	As per requirement	50,000	06
4.	CAD-Pattern Making Software(3D) C Draw Latest Version	05 each	50,000	
5.	CAD-Fashion Design Software(Fashion Studio)	05	50,000	
6.	Antivirus Software	21	2000	01
7.	Laser Printer color A4	01	30,000	05
8.	Colored laser Printer A3	01	45,000	05
9.	Scanner	01	8,000	05
10.	Computer Table for server	01	8,000	08
11.	Printer Table	02	8,000	08
12.	Table for Scanner	01	8,000	08
13.	White Magnetic Board with Felt board & accessories	01	11,000	05
14.	Digitizer	01	2,50,000	10
15.	Plotter	01	1,00000	10
16.	Display Board	02	11,000	05
17.	Storage Almirah (Size as per requirement)	02	12,000	08
18.	Air Conditioner unit type 2 Ton capacity with Stabilizer	02	35,000	06
19.	Wall Clock	01	400	03
20.	Modular Workstation with chair	20	20,000	08
21.	LCD Projector	01	40,000	05
22.	Vacuum Cleaner	01	5,000	05
23.	Trainer's Table & Chair	01 set	6,000	12
24.	Laptop For Faculty(with latest configuration)	01 set	40,000	07
	B. Theory Room			
25.	Single desks for trainees with	20	6000.00	10

	arrangements of keeping Books etc.			
26.	Revolving Chairs without arms	20	3000.00	10
27.	Faculty Table & Chair set	01	10,000.00	10
28.	Computer set with UPS & multimedia projector	01	50,000.00	7
29.	White Magnetic Board with Felt board & accessories	01	11000.00	10
30.	Display Board	02	5500.00	10
31.	Storage Almirah	01	12000.00	12
32.	Book Shelf	01	10000.00	10
33.	A/C unit type 2 TR capacity with Stabilizer	As per requirement	35000.00	6

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6.	**Unit Strength (Batch Size)**	:	20 Trainees
7.	**Space required**	:	Theory Room : 65 sqm Computer Lab : 65 sqm Sewing Lab : 120 sqm Drafting Lab : 120 sqm
8.	**Power Norms**	:	8 KW
9.	**Qualifications for Trainer Academic**	:	12th passed
10.	**Qualification for Trainer Technical**	:	Degree (4Yrs) in Fashion & Apparel Engineering/ Technology / Fashion Technology/Design from Recognized University with One year Experience in Sewing Technology OR Diploma (Minimum 2 years duration) /Degree in Costume Designing & Dress Making /Fashion Designing / Fashion Technology/ Apparel Technology / Garment Fabrication Technology approved by AICTE with Three years Experience in Cutting & Sewing/Sewing Technology

Syllabus for the trade of "**Sewing Technology" (CITS)** under craft instructor training scheme

Second Semester

Duration: Six months

Week No.	Trade Practical 3hrs	Trade Theory 1 hr
1.	Revision of different sewing machines, their working, stitches, seams, sewing needles, working aids etc.	Introduction & scope of Apparel Industry, sewing machines, their models, parts and their functions
2.	Making samples on motorised industrial sewing machine	• Technical Terms & their use in the trade • Safety during work • First Aid • First Aid Box • Fusing Technology
3. 4.	Pattern Making, Cutting, Stitching & finishing of Designer Blouses as per Fashion	• Estimation of cloth for o different width o Different Size o Different Fabric Pattern • Cutting Technology • Drafting of Ladies Blouse
5. 6.	Machinery & Equipment Basic Sewing machines for o General Sewing o Over locking o Safety Stitching o Blind Stitching o Button Holes o Bar Tacking o Button Sewing o Double Needle o Zigzag machine	• Sewing Technology o Components of Sewing o Stitches & Seams o Feed System o Pressure Foot o Throat Plate o Feed Dog o Needles o Threads o Types of Motor & Belt
7. 8.	Pattern Making, Cutting, Stitching & finishing of Shirt/Safari Shirt/ Pathani Shirt as per Fashion	Drafting and Pattern Making of Shirt/Safari Shirt/ Pathani Shirt • Special Sewing Machines • Work Aids • Machine Beds • Machine Tables • Work Chairs • Machine Attachments
9. 10.	Pattern Making for special Needs – • Deformed figures • Abnormal figures	Balance of Garment according to Structure of Human Body & its importance Deformed Figure
11.	Cutting, Stitching & Finishing of	Drafting & Pattern Making of

12. 13.	following • T Shirt • Safari Shirt • Pathani Suit	o Shirt o Bush shirt o T Shirt o Safari Shirt o Pathani Shirt
14. 15. 16.	Pattern Making, Cutting, Stitching & finishing of Designer Suits according to latest trend & innovated idea	Drafting of Ladies Shirt Trimmings & Accessories Estimation of Material for different width, size & Texture Garniture for a garment Costing of Garment
17. 18.	Cutting, Stitching & Finishing of any one - • Shorts • American(Two Piece Trouser)	Drafting & Pattern Making of • Shorts • English/One piece Trousers • American/Two Piece Trousers • Jeans
19.	Pattern Making of Jacket & Vest coat (Including Lining)	Drafting of Nehru Jacket & Vest Coat various style.
20.	Checking of Garments in respect of – • Measurements • Stitching • Stains • Defects	Accessories for Jackets & Coats. Inspection of Garments Finishing of Garments
21. 22.	Pattern Making of – • Single Breast • Double Breast • Sherwani/Achakan	Drafting of Coat - • Single Breast • Double Breast • Sherwani /Achakan
23. 24. 25.	Each trainee will work on a theme and select garment as per market demand and develop the same with innovative ideas and creativity.	
26.	Examination	

TRADE : SEWING TECHNOLOGY (CITS)
LIST OF TOOLS & EQUIPMENT

Sl No	Name of the Tool/Equipment	Quantity	Approx. Price	Life In years
	A. Drafting/Cutting /Sewing Room Tools & Equipment			
34.	Scissors 25 cm	21	250	05
35.	Pinking Shears	05	250	05
36.	Tailors Square	21	150	01
37.	Leg Shaper	21	150	01
38.	Garment Hangers	20	30	03
39.	Screw Driver Set	04	250	03
40.	Cart chop	02	700	03
41.	Table Sharpener	04	250	03
42.	Pressing Table	05	8000	10
43.	Blanket for padding of Pressing Table	05	500	03
44.	Rubber mat (Size as per requirement	05	500	03
45.	Sprayer	05	50	03
46.	Waste Bin Big / Small	10	150/100	01
47.	Pattern Punch	21	100	05
48.	Pattern Notcher	21	80	05
49.	Pattern Hanging Stand	04	1000	05
50.	Water Tub 60 cm dia	01	200	01
51.	Stand for hanging dresses	05	2000	08
52.	Trial room with 3 side mirrors of size 150 cm X 60 cm each with arrangements of hanging Dresses	01	10,000	03
53.	Electric Automatic steam press	02	4,000	03
54.	Electric automatic iron	03	2,000	03
55.	Sewing Machine – Single Needle Lock stitch Industrial model	21	17,500	15
56.	Over Lock Machine 3 Thread	01	15,000	15
57.	Over lock Machine 5 Thread	01	17,000	15
58.	Blind Stitching Machine	01	75,000	15
59.	Button Hole Machine	01	50,000	15
60.	Bar Tacking Machine	01	1,00,000	15
61.	Safety Stitch Machine	01	50,000	15
62.	Pick Glass	05	1000	5
63.	Zig Zag Multi Purpose Machine	01	2,00,000	15
64.	Machine attachments	As per requirement	5000	04
65.	Chairs with low back rest or stools for	27	7,500	08

	the machines (one for each machine)			
66.	Drafting Table	10	15,000	12
67.	Display board covered with glass or acrylic sheet 120X90cm	02	5,000	12
68.	Instructor Table	01	7,000	10
69.	Instructor Chair	02	3,000	10
70.	Steel Almirah 195 X 90 X 60 cm	02	12,000	12
71.	Pigeon hole Almirah 10 lockers & separate locking arrangements for trainees	02	12,000	12
72.	Locks for above pigeon hole	20	50	02
73.	Wall Clock	03	400	03
74.	Calculator Desk Type	01	250	03
75.	White Board with accessories (size as per requirement)	02	11,000	10
76.	Dummy (Lady)	02	8,000	10
77.	Mannequins(lady)	02	8,000	10
78.	Mannequins(Kids)	02	8,000	10
79.	Mannequins(Gents)	02	8,000	10
80.	Air Conditioner unit 2 Ton capacity with Stabilizer	04	35,000	06
B THEORY ROOM				
44.	Single desks for trainees with arrangements of keeping Books etc.	20	6000.00	10
45.	Revolving Chairs without arms	20	3000.00	10
46.	Faculty Table & Chair set	01	10,000.00	10
47.	Computer set with UPS & multimedia projector	01	50,000.00	7
48.	White Magnetic Board with Felt board & accessories	01	11000.00	10
49.	Display Board	02	5500.00	10
50.	Storage Almirah	01	12000.00	12
51.	Book Shelf	01	10000.00	10
52.	A/C unit type 2 TR capacity with Stabilizer	As per requirement	35000.00	6
TRAINEES' TOOL KIT FOR 20 TRAINEES + 1 Instructor(consumable)				
53.	Measuring Tape 150 cm	21	20	01
54.	Seam Ripper	21	20	01
55.	Thimble	21	25	01
56.	Drafting Card Scales(set of six scales)	21	20	01
57.	Tailors Square – Plastic	21	5	01
58.	French Curve Set of six	21sets	70	01
59.	Thread Cutter	21	20	01

60.	Scale plastic 24"	21	25	01
61.	Paper Cutter	21	50	01
62.	Loop Turner	21	25	01
63.	Drafting Pins(set)	21	50	01
64.	Draping Pins	21 pkt	50	01
65.	Draping Fabric Muslin	5 m	40	01
66.	Muslin for Sewing Practice	3 m	40	01

Note:

1. Due to the rapid changes in the technologies frequent Modernization of equipment and technologies is necessary.
2. Training Programme for Staff should be organized in the new fields added in the curriculum for the proper implementation of the same.
3. Experts from the Industry may be called for special lectures and demo's as and when required.

Further Learning Pathways:

On successful completion of the course trainees can opt for -

- Following MES courses to improve their skill areas –
  - Software application in pattern making
  - Apparel Production supervisor
  - Production supervisor & quality control.
  - Courses as required by Centre for Global Skill foundation