

SEWING TECHNOLOGY

NSQF LEVEL- 6



SECTOR- APPAREL

COMPETENCY BASED CURRICULUM
CRAFT INSTRUCTOR TRAINING SCHEME (CITS)



GOVERNMENT OF INDIA

Ministry of Skill Development & Entrepreneurship
Directorate General of Training

CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE
EN-81, Sector-V, Salt Lake City, Kolkata – 700091

SEWING TECHNOLOGY (CITS)

(Non-Engineering Trade)

SECTOR – APPAREL

(Revised in 2019)

Version 1.1

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Developed By
Government of India
Ministry of Skill Development and Entrepreneurship

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1. COURSE OVERVIEW

The Craft Instructor Training Scheme is operational since inception of the Craftsmen Training Scheme. The first Craft Instructors' Training Institute was established in 1948. Subsequently, 6 more institutes namely, Central Training Institute for Instructors (now called as National Skill Training Institute (NSTI)), NSTI at Ludhiana, Kanpur, Howrah, Mumbai, Chennai and Hyderabad were established in 1960's by DGT. Since then the CITS course is successfully running in all the NSTIs across India as well as in DGT affiliated institutes viz. Institutes for Training of Trainers (IToT). This is a competency based course of one year duration. "Sewing Technology" CITS trade is applicable for Instructors of "Sewing Technology" Trade.

The main objective of Craft Instructor training programme is to enable Instructors explore different aspects of the techniques in pedagogy and transferring of hands-on skills so as to develop a pool of skilled manpower for industries, also leading to their career growth & benefiting society at large. Thus promoting a holistic learning experience where trainee acquires specialized knowledge, skills & develops attitude towards learning & contributing in vocational training ecosystem.

This course also enables the instructors to develop instructional skills for mentoring the trainees, engaging all trainees in learning process and managing effective utilization of resources. It emphasizes on the importance of collaborative learning & innovative ways of doing things. All trainees will be able to understand and interpret the course content in right perspective, so that they are engaged in & empowered by their learning experiences and above all, ensure quality delivery.

2. TRAINING SYSTEM

2.1 GENERAL

CITS courses are delivered in National Skill Training Institutes (NSTIs) & DGT affiliated institutes viz., Institutes for Training of Trainers (IToT). For detailed guidelines regarding admission on CITS, instructions issued by DGT from time to time are to be observed. Further complete admission details are made available on NIMI web portal <http://www.nimionlineadmission.in>. The course is of one-year duration. It consists of Trade Technology (Professional skills and Professional knowledge), Training Methodology and Engineering Technology/ Soft Skills. After successful completion of the training programme, the trainees appear in All India Trade Test for Craft Instructor. The successful trainee is awarded NCIC certificate by DGT.

2.2 COURSE STRUCTURE

Table below depicts the distribution of training hours across various course elements during a period of one year:

S No.	Course Element	Notional Training Hours
1.	Trade Technology	
	Professional Skill (Trade Practical)	640
	Professional Knowledge (Trade Theory)	240
2.	Soft Skills	
	Practical	100
	Theory	100
3.	Training Methodology	
	TM Practical	320
	TM Theory	200
	Total	1600

2.3 PROGRESSION PATHWAYS

- Can join as an Instructor in vocational training Institute/ technical Institute.
- Can join as a supervisor in Industries.

2.4 ASSESSMENT & CERTIFICATION

The CITS trainee will be assessed for his/her Instructional skills, knowledge and attitude towards learning throughout the course span and also at the end of the training program.

a) The Continuous Assessment (Internal) during the period of training will be done by **Formative Assessment Method** to test competency of instructor with respect to assessment criteria set against each learning outcomes. The training institute has to maintain an individual trainee portfolio in line with assessment guidelines. The marks of internal assessment will be as per the formative assessment template provided on www.bharatskills.gov.in.

b) The **Final Assessment** will be in the form of **Summative Assessment Method**. The All India Trade Test for awarding National Craft Instructor Certificate will be conducted by DGT at the end of the year as per the guidelines of DGT. The learning outcome and assessment criteria will be the basis for setting question papers for final assessment. The external examiner during final examination will also check the individual trainee's profile as detailed in assessment guideline before giving marks for practical examination.

2.4.1 PASS CRITERIA

S No.	Subject		Marks	Internal Assessment	Full Marks	Pass Marks	
						Exam	Internal Assessment
1.	Trade Technology	Trade Theory	100	40	140	40	24
		Trade Practical	200	60	260	120	36
2.	Soft Skills	Practical	50	25	75	30	15
		Theory	50	25	75	20	15
3.	Training Methodology	TM Practical	200	30	230	120	18
		TM Theory	100	20	120	40	12
Total Marks			700	200	900	370	120

The minimum pass percent for Trade Practical, TM Practical, Soft Skill Practical Examinations and Formative assessment is 60% & for all other subjects is 40%. There will be no Grace marks.

2.4.2 ASSESSMENT GUIDELINE

Appropriate arrangements should be made to ensure that there will be no artificial barriers to assessment. The nature of special needs should be taken into account while undertaking the assessment. While assessing, the major factors to be considered are approaches to generate solutions to specific problems by involving standard/non-standard practices.

Due consideration should also be given while assessing for teamwork, avoidance/reduction of scrap/wastage and disposal of scrap/waste as per procedure, behavioral attitude, sensitivity to the environment and regularity in training. The sensitivity towards OSHE and self-learning attitude are to be considered while assessing competency.

Assessment will be evidence based comprising of the following:

- Demonstration of Instructional Skills (Lesson Plan, Demonstration Plan)
- Record book/daily diary
- Assessment Sheet
- Progress chart
- Video Recording
- Attendance and punctuality
- Viva-voce
- Practical work done/Models
- Assignments
- Project work

Evidences and records of internal (Formative) assessments are to be preserved until forthcoming yearly examination for audit and verification by examining body. The following marking pattern to be adopted while assessing:

Performance Level	Evidence
(a) Weightage in the range of 60%-75% to be allotted during assessment	
For performance in this grade, the candidate should be well versed with instructional design, implement learning programme and assess learners which demonstrates attainment of an acceptable standard of crafts instructorship with occasional guidance and engage students by demonstrating good attributes of a trainer.	<ul style="list-style-type: none"> • Demonstration of fairly good skill to establish a rapport with audience, presentation in orderly manner and establish as an expert in the field. • Average engagement of students for learning and achievement of goals while undertaking the training on specific topic. • A fairly good level of competency in expressing each concept in terms the student can relate, draw analogy and summarize the entire lesson. • Occasional support in imparting effective training.
(b) Weightage in the range of 75%-90% to be allotted during assessment	
For performance in this grade, the candidate should be well versed with instructional design, implement learning	<ul style="list-style-type: none"> • Demonstration of good skill to establish a rapport with audience, presentation in orderly manner and establish as an expert

<p>programme and assess learners which demonstrates attainment of reasonable standard of crafts instructorship with little guidance and engage students by demonstrating good attributes of a trainer.</p>	<p>in the field.</p> <ul style="list-style-type: none"> • Above average engagement of students for learning and achievement of goals while undertaking the training on specific topic. • A good level of competency in expressing each concept in terms the student can relate, draw analogy and summarize the entire lesson. • Little support in imparting effective training.
<p>(c) Weightage in the range of more than 90% to be allotted during assessment</p>	
<p>For performance in this grade, the candidate should be well versed with instructional design, implement learning programme and assess learners which demonstrates attainment of high standard of crafts instructorship with minimal or no support and engage students by demonstrating good attributes of a trainer.</p>	<ul style="list-style-type: none"> • Demonstration of high skill level to establish a rapport with audience, presentation in orderly manner and establish as an expert in the field. • Good engagement of students for learning and achievement of goals while undertaking the training on specific topic. • A high level of competency in expressing each concept in terms the student can relate, draw analogy and summarize the entire lesson. • Minimal or no support in imparting effective training.

3. GENERAL INFORMATION

Name of the Trade	Sewing Technology (CITS)
Tradecode	DGT/4011
NCO – 2015	3122.3500, 2356.0100
NSQF Level	Level-6
Duration of Craft Instructor Training	One Year
Unit Strength (No. Of Student)	25
Entry Qualification	<p>Degree in Costume Designing & Dress Making /Fashion Designing/ Fashion Technology/ Apparel Technology / Garment Fabrication Technologyfrom recognized Board/ University.</p> <p style="text-align: center;">OR</p> <p>Diploma in Costume Designing & Dress Making /Fashion Designing/Fashion Technology/ Apparel Technology / Garment Fabrication Technologyfrom recognized Board/ University.</p> <p style="text-align: center;">OR</p> <p>National Trade Certificate in the Sewing Technologyor related trades.</p> <p style="text-align: center;">OR</p> <p>National Apprenticeship Certificate in the Sewing Technologyor related trades.</p>
Minimum Age	18 years as on first day of academic session.
Space Norms	120 Sq. m
Power Norms	8 KW
Instructor's Qualification for	
1. Sewing Technology (CITS) Trade	<p>B.Voc/Degree in Costume Designing & Dress Making /Fashion Designing/Fashion Technology/ Apparel Technology / Garment Fabrication Technologyfrom AICTE/ UGC recognized Board / University with two years experience in relevant field.</p> <p style="text-align: center;">OR</p> <p>Diploma (Minimum 2 Years)in Costume Designing & Dress Making /Fashion Designing/Fashion Technology/ Apparel Technology/ Garment Fabrication Technologyfrom recognized Board/ University or relevant Advanced Diploma (Vocational) from DGT with five years experience in relevant field.</p> <p style="text-align: center;">OR</p> <p>NTC/ NAC passed in Sewing Technology tradewith sevenyears experience in relevant field.</p>

	<p>Essential Qualification: Relevant National Craft Instructor Certificate (NCIC) in Sewing Technology trade, in any of the variants under DGT.</p>					
2. Soft Skills	<p>MBA/ BBA / Any Graduate/ Diploma in any discipline from AICTE/ UGC recognized College/ university with Three years' experience and short term ToT Course in Soft Skills from DGT institutes. (Must have studied English/ Communication Skills and Basic Computer at 12th / Diploma level and above).</p>					
3. Training Methodology	<p>B.Voc/ Degree in any discipline from AICTE/ UGC recognized College/ university with two years experience in training/ teaching field.</p> <p style="text-align: center;">OR</p> <p>Diploma in any discipline from recognized board / University with five years experience in training/teaching field.</p> <p style="text-align: center;">OR</p> <p>NTC/ NAC passed in any trade with seven years experience in training/ teaching field.</p> <p>Essential Qualification: National Craft Instructor Certificate (NCIC) in any of the variants under DGT / B.Ed /ToT from NITTTR or equivalent.</p>					
4. Minimum Age for Instructor	21 Years					
Distribution of training on Hourly basis: (Indicative only)						
Total Hrs /week	Trade Practical	Trade Theory	Soft Skills		Training Methodology	
			Practical	Theory	Practical	Theory
40 Hours	16 Hours	6 Hours	2.5 Hours	2.5 Hours	8 Hours	5 Hours

4. JOB ROLE

Brief Description of Job Roles:

Supervisors and Foremen, Tailoring and Dress Making; Supervisor and Foreman, Tailoring and Dress Making supervises and guides workers engaged in production of readymade garments and ensures standard fittings and finish at reasonable cost. Guides workers in making patterns for cutting, adjusting electrical and special purpose sewing machines, setting, joining and sewing parts, button matching, etc., and ensures standard fittings and finish. Checks work and directs or makes alterations where necessary and keeps machines and equipment in working order. Maintains production register and delivers goods against receipts. May copy or develop new designs to boost sale. May train new entrants. May be designated according to section or work supervised. (Excluded are Garment Designers and Cutters described elsewhere).

Manual Training Teacher/Craft Instructor; instructs students in ITIs/Vocational Training Institutes in respective trades as per defined job role. Imparts theoretical instructions for the use of tools & equipments of related trades and related subjects. Demonstrate process and operations related to the trade in the workshop; supervises, assesses and evaluates students in their practical work. Ensures availability & proper functioning of equipment and tools in stores.

Reference NCO 2015:

- a) 3122.3500 – Supervisors and Foremen, Tailoring and Dress Making.
- b) 2356.0100 – Manual Training Teacher/Craft Instructor.

5. LEARNING OUTCOMES

Learning outcomes are a reflection of total competencies of a trainee and assessment will be carried out as per the assessment criteria.

5.1 TRADE TECHNOLOGY

1. Appraise Drafting, Pattern making, Grading, Draping & Stitching.
2. Demonstrate pattern making using different software tools like Corel draw, Adobe Photoshop etc.
3. Check Drafting of Children Upper body & Lower Body Block.
4. Analyze Ladies Body Block & Trousers Block.
5. Assess Digitizing & Grading of Patterns.
6. Review designing of Skirts, Sleeves, Collars & Developing Patterns with Spec Sheet, Marker Tools & 3 D Tools.
7. Explain Apparel enterprises & Apparel Market requirements.
8. Ensure Quality control & inspection in garment industry.
9. Demonstrate Project Work on design/ development of pattern and garment stitching.
10. Demonstrate different sewing machines, industrial sewing machines and their functions including motorized industrial sewing machine.
11. Illustrate Pattern Making, Cutting, Stitching & finishing of Designer Blouses, Shirt/Safari, Designer Suits etc.
12. Demonstrate Pattern making for special needs of Jacket & Vest coat (Including Lining) etc.
13. Check the measurement, stitching etc. of finished Garments.
14. Demonstrate project on theme garment as per market demand.

6. COURSE CONTENT

SYLLABUS FOR SEWING TECHNOLOGY – CITS TRADE			
TRADE TECHNOLOGY			
Duration	Reference Learning Outcome	Professional Skills (Trade Practical)	Professional Knowledge (Trade Theory)
Practical 16 Hrs Theory 06 Hrs	Appraise Drafting, Pattern making, Grading, Draping & Stitching.	1. Revise the CTS contents. 2. Demonstrate Drafting, Pattern making, Grading, Draping & Stitching.	Revision of the CTS contents. Concepts of Drafting, Pattern making, Grading, Draping & Stitching.
Practical 64Hrs Theory 24Hrs	Demonstrate pattern making using different software tools like Corel draw, Adobe Photoshop etc.	3. Familiarize with the working of computer, Paint and different software like Corel draw, Adobe Photoshop etc. 4. Create patterns with the help of Corel draw, Adobe Photoshop (Latest Software) etc. 5. Software tools for Pattern Making 6. Familiarize with menu & Commands – <ul style="list-style-type: none"> • New Piece • Select Tool • Point marking • Guide line • Delete 	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. 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. Starting of System Software Screen Menu. Details about the Tool Bars Command details.

		<ul style="list-style-type: none"> • Move Piece • Save • New • Open • Help • Zoom • Cut • Copy • Paste • Matching Curves (walk Tool) • Mirror Line • Seams • Select & move internals • Inserting Text • Rotate piece • Measuring • Adding fullness • Cut, Join, Build & Trace piece • Fold piece • Insert, Edit, close & cut Dart • Insert Pleat 	
<p>Practical 32 Hrs</p> <p>Theory 12Hrs</p>	<p>Check Drafting of Children Upper body & Lower Body Block.</p>	<p>7. Analyze Drafting of Children Upper body Block</p> <p>8. Analyze Drafting of Children Lower Body Block</p> <ul style="list-style-type: none"> • Base line - change/Rotate • Adding Fullness • Change corner • Insert Button • Add Notch • Align points,Circle, Arc & Wave • Trace & Trim • Extend, Join & split Contour • Swap segment 	<p>Children Size Charts & Bodies Block.</p> <p>Detailing of Tools.</p>

		<ul style="list-style-type: none"> • Demonstration of Cutting, Joining, • Creating lines & Parallels of drafts. 	
Practical 16 Hrs Theory 06 Hrs	Analyze Ladies Body Block & Trousers Block.	9. Check Ladies Body Block & Trousers Block.	Ladies measurement chart & Ladies Blocks.
Practical 32 Hrs Theory 12Hrs	Assess Digitizing & Grading of Patterns.	10. Assess Digitizing of Pattern <ul style="list-style-type: none"> • Working with File, Edit, Piece, Design, Tool, View & Help menu. • Designing with darts. • Insertion of Style Lines. 	Digitizing - Tools & Importance.
		11. Assess Grading of Patterns	Grading <ul style="list-style-type: none"> • Size Table • Grading Table • Grading Menu
Practical 80 Hrs Theory 30Hrs	Review designing of Skirts, Sleeves, Collars & Developing Patterns with Spec Sheet, Marker Tools & 3 D Tools.	12. Examine drafting of Skirt Block Design insertion to the Block.	Designing in Skirts
		13. Monitor developing of Sleeve Blocks & Insertion of Design Developing Collars.	Designing in Sleeves & Collars.
		14. Developing Patterns with Spec Sheet.	Spec Sheet Export Import of files Printing & plotting commands X & Y axis.
		15. Demonstrate Marker Tools, making marker General Tools Information. 16. Piece, all size, Global 17. Placement of pieces 18. Fabric Pattern 19. Measure Tool 20. Plot order 21. Flaw Alignment <ul style="list-style-type: none"> • Shoot • Flip & Rotate • Auto Nesting 	Marker <ul style="list-style-type: none"> • Introduction • Knowledge about spreading techniques and equipment. • Marker modes and marker efficiency.. • Knowledge about spreading and material handling.

		<ul style="list-style-type: none"> • Batch • Merge • Import Export 	
		22. 3 D Tools 23. Model Property 24. Open, Save & Customize. 25. Place cloth, Clear cloth, Single 26. Draping, Show & Hide. 27. Stitch Property 28. 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.
Practical 32 Hrs Theory 12Hrs	Explain Apparel enterprises & Apparel Market requirements.	29. Monitor 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. 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.
Practical 32Hrs Theory 12Hrs	Ensure Quality control & inspection in garment industry.	Findings 30. Identification of defects in fabrics & accessories 31. Measurements checking as per Spec. Sheet. 32. Preparation of cost Sheet.	Quality control <ul style="list-style-type: none"> • Introduction • Meaning • Need • Cost of quality control system • Concepts • Identification of critical factor.
		33. Exercise on various sheets used in garment export house by Quality Controllers.	Inspection <ul style="list-style-type: none"> • Definition, need, planning place, time, method • Type of Inspection • Stages of inspection • Role of inspector • Benefits of quality control in garment industry

			<ul style="list-style-type: none"> • Quality assurance system • Statistical quality control process • TQM.
<p>Practical 32 Hrs</p> <p>Theory 12Hrs</p>	Demonstrate Project Work on design/ development of pattern and garment stitching.	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.	Various pattern development and garment stitching.
<p>Practical 64 Hrs</p> <p>Theory 24Hrs</p>	Demonstrate different sewing Machines and their functions including motorized industrial sewing machine.	<p>34. Revise different sewing machines, their working, stitches, seams, sewing needles, working aids etc.</p> <p>35. Demonstrate samples on motorized industrial sewing machine.</p>	<p>Introduction & scope of Apparel Industry, sewing machines, their models, parts and their functions. Ergonomics for effective work.</p> <ul style="list-style-type: none"> • Technical Terms & their use in the trade • Safety during work • First Aid • First Aid Box • Fusing Technology
		<p>36. Machinery & Equipment Basic Sewing machines for</p> <ul style="list-style-type: none"> • General Sewing • Over locking • Safety Stitching • Blind Stitching • Button Holes • Bar Tacking • Button Sewing • Double Needle • Zigzag machine 	<p>Sewing Technology</p> <ul style="list-style-type: none"> • Components of Sewing • Stitches & Seams • Feed System • Pressure Foot • Throat Plate • Feed Dog • Needles • Threads • Types of Motor & Belt
<p>Practical 144Hrs</p> <p>Theory 54Hrs</p>	Illustrate Pattern Making, Cutting, Stitching & finishing of Designer Blouses, Shirt/Safari, Designer Suits etc.	<p>37. Show Pattern Making, Cutting, Stitching & finishing of Designer Blouses as per Fashion.</p> <p>38. Explain Pattern Making,</p>	<ul style="list-style-type: none"> • Estimation of cloth for <ul style="list-style-type: none"> • Different width • Different Size • Different Fabric Pattern • Cutting Technology • Drafting of Ladies Blouse <p>Drafting and Pattern Making of</p>

		Cutting, Stitching & finishing of Shirt/Safari Shirt/Pathani Shirt as per Fashion.	Shirt/Safari Shirt/ Pathani Shirt <ul style="list-style-type: none"> • Special Sewing Machines • Work Aids • Machine Beds • Machine Tables • Work Chairs • Machine Attachments
		39. Demonstrate Cutting, Stitching & Finishing of following <ul style="list-style-type: none"> • T Shirt • Safari Shirt • Pathani Suit 	Drafting & Pattern Making of <ul style="list-style-type: none"> • Shirt • Bush shirt • T Shirt • Safari Shirt • Pathani Shirt
		40. Show 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
		41. Explain Cutting, Stitching & Finishing of anyone - <ul style="list-style-type: none"> • Shorts • American(Two Piece Trouser) 	Drafting & Pattern Making of <ul style="list-style-type: none"> • Shorts • English/One piece Trousers • American/Two Piece Trousers • Jeans
Practical 48Hrs Theory 18Hrs	Demonstrate Pattern Making for special needs of Jacket & Vest coat (Including Lining) etc.	42. Demonstrate Pattern Making for special Needs - <ul style="list-style-type: none"> • Deformed figures • Abnormal figures 	Balance of Garment according to Structure of Human Body & itsimportance Deformed Figure
		43. Show Pattern Making of Jacket & Vest coat (Including Lining)	Drafting of Nehru Jacket & Vest Coat various style.
		44. Explain Pattern Making of - <ul style="list-style-type: none"> • Single Breast • Double Breast • Sherwani/Achakan 	Drafting of Coat - <ul style="list-style-type: none"> • Single Breast • Double Breast • Sherwani /Achakan
Practical 16 Hrs Theory 06 Hrs	Check the measurement, stitching etc. of finished Garments.	45. Check Garments in respect of- <ul style="list-style-type: none"> • Measurements • Stitching • Stains • Defects 	Accessories for Jackets & Coats. Inspection of Garments Finishing of Garments
Practical	Demonstrate project	Each trainee will work on a	Scope of applying themes while

32 Hrs Theory 12Hrs	on theme garment as per market demand.	theme and select garment as per market demand and develop the same with innovative ideas and creativity.	stitching garments. Existing themes for preparing garments.

SYLLABUS FOR CORE SKILLS

1. Soft Skills (Common for all Non-Engineering CITS trades) (100 Hrs + 100Hrs)
2. Training Methodology (Common for all trades) (320Hrs + 200Hrs)

Learning outcomes, assessment criteria, syllabus and Tool List of above Core Skills subjects which is common for a group of trades, provided separately in www.bharatskills.gov.in

7. ASSESSMENT CRITERIA

LEARNING OUTCOME	ASSESSMENT CRITERIA
TRADE TECHNOLOGY	
1. Appraise Drafting, Pattern making, Grading, Draping & Stitching.	Demonstrate Drafting.
	Show Pattern making.
	Demonstrate Grading.
	Illustrate Draping & Stitching.
2. Demonstrate pattern making using different software tools like Corel draw, Adobe Photoshop etc.	Familiarize with various aspects of CAD operations.
	Explore different softwares like Paint, Corel draw and Adobe Photoshop etc.
	Create patterns with the help of Corel draw, Adobe Photoshop (Latest Software) etc.
	Point out Safety precautions in garment industry.
	Create Pattern, Grade Pattern by PDS.
	Create Layout by Marker.
	Digitize pattern by Digitizer.
	Print Pattern by Plotter.
	Select & demonstrate various Software tools for Pattern Making.
3. Check Drafting of Children Upper body & Lower Body Block.	Review Drafting of Children Upper body Block.
	Check Drafting of Children Lower Body Block.
	Change/Rotate Base line, add Fullness, change corner, Insert Button, Add Notch, Align points, Circle, Arc & Wave.
	Trace & Trim, Extend, Join & split Contour.
	Swap segment.
	Demonstrate Cutting, Joining.
	Create lines & Parallels of drafts.
4. Analyze Ladies Body Block & Trousers Block.	Check Ladies Body Block.
	Analyze Trousers Block.
	Show Ladies measurement.
	Monitor Chart & Ladies Blocks.
5. Assess Digitizing & Grading of Patterns.	Assess Digitizing of Pattern.
	Explore File, Edit, Piece, Design, Tool, View & Help menu.
	Design with darts.
	Insert Style Lines.
	Assess Grading of Patterns.

	Grade Size Table, Grading Table, Grading Menu.
6. Review designing of Skirts, Sleeves, Collars & Developing Patterns with Spec Sheet, Marker Tools & 3D Tools.	<p>Examine drafting of Skirt Block Design.</p> <p>Insert to the Block.</p> <p>Design Skirts.</p> <p>Monitor developing of Sleeve Blocks.</p> <p>Insert Design Developing Collars.</p> <p>Developing Patterns with Spec Sheet.</p> <p>Demonstrate Marker Tools & 3D Tools.</p>
7. Explain Apparel enterprises & Apparel Market requirements.	<p>Monitor exercise on Apparel enterprises & Apparel Market requirements.</p> <p>Plan collection of samples, survey work in market & industry.</p> <p>Monitor preparation of sample folders & survey reports.</p>
8. Ensure Quality control & inspection in garment industry.	<p>Identify defects in fabrics & accessories.</p> <p>Check measurements as per Spec. Sheet.</p> <p>Prepare cost Sheet.</p> <p>Exercise on various sheets used in garment export house by Quality Controllers.</p>
9. Demonstrate Project Work on design/ development of pattern and garment stitching.	<p>Demonstrate Project Work on design of pattern and garment stitching.</p> <p>Demonstrate Project Work on development of pattern and garment stitching.</p>
10. Demonstrate different sewing machines, industrial sewing machine and their functions including motorized industrial sewing machine.	<p>Demonstrate different sewing machines, their working, stitches, seams, sewing needles, working aids etc.</p> <p>Monitor samples on motorized industrial sewing machine.</p> <p>Demonstrate Basic Sewing machines for General Sewing, Over locking, Safety Stitching etc.</p>
11. Illustrate Pattern Making, Cutting, Stitching & finishing of Designer Blouses, Shirt/Safari, Designer Suits etc.	<p>Estimate cloth for Different width, Different Size & Different Fabric Pattern.</p> <p>Show Pattern Making, Cutting, Stitching & finishing of Designer Blouses as per Fashion.</p> <p>Explain Pattern Making, Cutting, Stitching & finishing of Shirt/Safari Shirt/Pathani Shirt as per Fashion.</p> <p>Demonstrate Cutting, Stitching & Finishing of T Shirt, Safari Shirt, Pathani Suit.</p> <p>Show Pattern Making, Cutting, Stitching & finishing of Designer</p>

	Suits according to latest trend & innovated idea.
	Explain Cutting, Stitching & Finishing of Shorts, American (Two Piece Trousers).
12. Demonstrate Pattern making for special needs of Jacket & Vest coat (Including Lining) etc.	Demonstrate Pattern Making for special needs for Deformed figures, Abnormal figures etc.
	Show Pattern Making of Jacket & Vest coat (Including Lining).
	Explain Pattern Making of Single Breast, Double Breast Sherwani/Achakan etc.
13. Check the measurement, stitching etc. of finished Garments.	Check Measurements of finished garments.
	Analyze Stitching, Stains, and Defects of finished Garments.
	Inspect Garments.
14. Demonstrate project on theme garment as per market demand.	Select garment based on a theme for project.
	Choose garment as per market demand for project.
	Develop the project with innovative ideas and creativity.

8. INFRASTRUCTURE

LIST OF TOOLS AND EQUIPMENT FOR SEWING TECHNOLOGY - CITS			
For batch of 25 candidates			
Sl.No	Name of the Tool & Equipment	Specification	Quantity
A. Computer Laboratory			
1.	Desktop computer	CPU: 32/64 Bit i3/i5/i7 or latest processor, Speed: 3 GHz or Higher. RAM:-4 GB DDR-III or Higher, Wi-Fi Enabled. Network Card: Integrated Gigabit Ethernet, with USB Mouse, USB Keyboard and Monitor (Min. 17 Inch. Licensed Operating System and Antivirus compatible with trade related software.	26 Nos.
2.	Pattern Making software		26 Nos.
3.	UPS		As required
4.	Server system (Latest Configuration) with software		01 No.
5.	LAN Connectivity & Internet facility to the computers		As per requirement
6.	CAD-Pattern Making Software(3D) C Draw Latest Version		05 each
7.	CAD-Fashion Design Software(Fashion Studio)		05 Nos.
8.	Antivirus Software		26 Nos.
9.	Laser Printer color	A4	01 No.
10.	Colored laser Printer	A3	01 No.
11.	Scanner		01 No.
12.	Computer Table for server		01 No.
13.	Printer Table		02 Ns.
14.	Table for Scanner		01 Ns.
15.	White Magnetic Board with Felt board & accessories		01 No.
16.	Digitizer		01 No.
17.	Plotter		01 No.
18.	Display Board		02 Nos.
19.	Storage Almirah (Size as per requirement)		02 Nos.
20.	Air Conditioner	2 Ton capacity with Stabilizer	As per requirement
21.	Wall Clock		01 No.
22.	Modular Workstation with chair		25 Nos.

23.	LCD Projector		01 No.
24.	Vacuum Cleaner		01 No.
25.	Trainer's Table & Chair		01 set
26.	Laptop For Faculty (with latest configuration)		01 set
B. Theory Room			
27.	Single desks for trainees with arrangements of keeping Books etc.		25 Nos.
28.	Chairs without arms		25 Nos.
29.	Faculty Table & Chair set		01 No.
30.	Computer set with UPS & multimedia projector	CPU: 32/64 Bit i3/i5/i7 or latest processor, Speed: 3 GHz or Higher. RAM:-4 GB DDR-III or Higher, Wi-Fi Enabled. Network Card: Integrated Gigabit Ethernet, with USB Mouse, USB Keyboard and Monitor (Min. 17 Inch. Licensed Operating System and Antivirus compatible with trade related software.	01 No.
31.	White Magnetic Board with Felt board & accessories		01 No.
32.	Display Board		02 Nos.
33.	Storage Almirah		01 No.
34.	Book Shelf		01No.
C. Drafting/Cutting /Sewing Room Tools & Equipment			
35.	Scissors	25 cm	26 Nos.
36.	Pinking Shears		05 Nos.
37.	Tailors Square		26 Nos.
38.	Leg Shaper		26Nos.
39.	Garment Hangers		25 Nos.
40.	Screw Driver Set		04 Nos.
41.	Cart chop		02 Nos.
42.	Table Sharpener		04 Nos.
43.	Pressing Table		05 Nos.
44.	Blanket for padding of Pressing Table		05 Nos.
45.	Rubber mat	Size as per requirement	05 Nos.
46.	Sprayer		05 Nos.
47.	Waste Bin	Big / Small	13 Nos.
48.	Pattern Punch		26 Nos.
49.	Pattern Notcher		26 Nos.
50.	Pattern Hanging Stand		04 Nos.
51.	Water Tub	60 cm dia.	01 No.
52.	Stand for hanging dresses		05 Nos.

53.	Trial room	3 side mirrors of size 150 cm X 60 cm each with arrangements of hanging Dresses	01 No.
54.	Electric Automatic steam press		02 Nos.
55.	Electric automatic iron		03 Nos.
56.	Sewing Machine -	Single Needle Lock stitch Industrial model	26 Nos.
57.	Over Lock Machine	3 Thread	01 No.
58.	Over lock Machine	5 Thread	01 No.
59.	Blind Stitching Machine		01 No.
60.	Button Hole Machine		01 No.
61.	Bar Tacking Machine		01 No.
62.	Safety Stitch Machine		01 No.
63.	Pick Glass		05 Nos.
64.	Zig Zag Multi Purpose Machine		01 No.
65.	Machine attachments		As per requirement
66.	Chairs	low back rest or stools for the machines (one for each machine)	27 Nos.
67.	Drafting Table		10 Nos.
68.	Display board	covered with glass or acrylic sheet 120X90cm	02 Nos.
69.	Instructor Table		01 No.
70.	Instructor Chair		02 Nos.
71.	Steel Almirah	195 X 90 X 60 cm	02 Nos.
72.	Pigeon hole Almirah	10 lockers & separate locking arrangements for trainees	02 Nos.
73.	Locks for above pigeon hole		25 Nos.
74.	Wall Clock		03 Nos.
75.	Calculator Desk Type		01 No.
76.	White Board with accessories (size as per requirement)		02 Nos.
77.	Dummy (Lady)		02 Nos.
78.	Mannequins(lady)		02 Nos.
79.	Mannequins(Kids)		02 Nos.
80.	Mannequins(Gents)		02 Nos.
D. TRAINEES' TOOL KIT FOR 25 TRAINEES + 1 Instructor(consumable)			
81.	Measuring Tape	150 cm	26 Nos.
82.	Seam Ripper		26 Nos.
83.	Thimble		26 Nos.
84.	Drafting Card Scales	(set of six scales)	26 Nos.
85.	Tailors Square -	Plastic	26 Nos.
86.	French Curve	Set of six	26 sets

87.	Thread Cutter		26 Nos.
88.	Scale plastic	24"	26 Nos.
89.	Paper Cutter		26 Nos.
90.	Loop Turner		26 Nos.
91.	Drafting Pins(set)		26 Nos.
92.	Draping Pins		26 pkt.
93.	Draping Fabric Muslin		5 m.
94.	Muslin for Sewing Practice		3 m.

ANNEXURE - I

The DGT sincerely acknowledges contributions of the Industries, State Directorates, Trade Experts, Domain Experts and all others who contributed in revising the curriculum.

Special acknowledgement is extended by DGT to the following expert members who had contributed immensely in this curriculum.

List of Expert Members participated/ contributed for finalizing the course curriculum of Sewing Technology (CITS) trade			
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2.	SanjeevMohanty Managing Director	Bennetton India Pvt. Ltd., Gurgaon	Member
3.	AnimeshSaxena	UdyogVihar Industries Association, Gurgaon B-40, Phase 5, UdyogVihar Gurgaon-122017	Member
4.	Dr.Darlie Koshy Director General and CEO	IAM & ATDC Apparel Export Promotion Council Gurgaon	Chairman
5.	Arindam Das	National Institute of Fasion Technology, New Delhi	Member
6.	Dr. Kushal Sen Professor	D/o Textile Technology IIT Delhi	Member
7.	Bhattacharya. G HOD Textiles Department	Institute for Textile Technology, CHOUDWAR	Member
8.	Poonam Thakur Professor & Academic Head	NIIFT, Mohali	Member
9.	L.N. Meena, Lecturer	Arya Bhatt Polytechnic, Delhi	Member
10.	PrabhasKashyap , General Manager- Planning & Production Co-ordination	Gokaldas Export Ltd., Bangalore	Member
11.	BishwanathGanguly	Madura Fashion & Retail, Aditya Birla Centre for Retail Excellence (A B C R E)	Member
12.	K.N. Chatterjee, HOD Fashion and Apparel Engineering	THE TECHNOLOGICAL INST. OF TEXTILE &SCIENCES, Bhiwani, Haryana, INDIA-127021.	Member
13.	Tapas Kumar Adhikari, Sr. Manager	Reliance Industries Ltd.	Member
14.	VikasVerma, Asst. Vice President	Welspun India Ltd.	Member

15.	NavjotWalia, Vice President	Maral Overseas Ltd., Noida	Member
16.	Rajeev Mehani, Vice President	Vardhaman Textiles	Member
Mentor			
17.	R.P. Dhingra, Director (P)	DGE&T	Mentor
Core Group			
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19.	SubhankarBhowmik, DPA Gr. B	NIMI, Chennai	NIMI Representative
20.	Rajendra Kumar, JDT(WT)	DGE&T	Member
21.	Ms. D. Shanthi, ADT	RVTI, Trivendrum	Member
22.	Ms. AbhaRastogi, TO	RVTI, Panipat	Member
23.	Chitra, TO	RVTI, Panipat	Member
24.	RinkuSoni, TO	RVTI, Jaipur	Member
25.	Babita, TO	NVTI, Noida	Member
26.	Bhagyashree, TO	RVTI, Indore	Member
27.	L. R. Ramesh Babu, TO	RVTI, Trivendrum	Member
28.	S.S. Meena, TO	NVTI, Noida	Member
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