



GOVERNMENT OF INDIA  
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP  
DIRECTORATE GENERAL OF TRAINING

**COMPETENCY BASED CURRICULUM**

# **CARPET WEAVING ARTISAN - HANDLOOM**

(Duration: One Year)

**CRAFTSMEN TRAINING SCHEME (CTS)**

**NSQF LEVEL- 3.5**



**SECTOR – HANDICRAFTS & CARPETS**



Directorate General of Training

# CARPET WEAVING ARTISAN - HANDLOOM

(Traditional Trade)

(Designed in 2024)

Version: 1.0

**CRAFTSMEN TRAINING SCHEME (CTS)**

**NSQF LEVEL –3.5**

Developed By

Ministry of Skill Development and Entrepreneurship

Directorate General of Training

**CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE**

EN-81, Sector-V, Salt Lake City,

Kolkata – 700 091

[www.cstaricalcutta.gov.in](http://www.cstaricalcutta.gov.in)

<b>S No.</b>	<b>Topics</b>	<b>Page No.</b>
1.	Course Information	1
2.	Training System	2
3.	Job Role	6
4.	General Information	8
5.	Learning Outcome	10
6.	Assessment Criteria	11
7.	Trade Syllabus	15
8.	Annexure I (List of Trade Tools & Equipment)	24
9.	Annexure II (List of Trade experts)	26
10.	Abbreviation	27

## **1. COURSE INFORMATION**

---

During the one-year duration of “Carpet Weaving Artisan - Handloom” trade a candidate is trained on professional skill, professional knowledge & Employability skill related to job role. In addition to this a candidate is entrusted to undertake project work and extra- curricular activities to build up confidence. The broad components covered under Professional Skill subject are as below:

This comprehensive course in Carpet Weaving Artisan - Handloom encompasses a diverse range of skills essential for individuals aspiring to excel in the textile industry. Participants will gain proficiency in the identification and safe usage of hand tools, machinery, and fibers related to carpet weaving. Practical training includes operating winding and reeling machines, conducting operations on warping drums, and utilizing traditional and modern carpet looms. Students will learn the art of preparing carpets with various yarns and colors, performing shearing for finishing, and executing coloring and designing for intricate patterns. The course integrates modern technology, covering the planning and execution of computer-aided design processes, including the application of CAD software and editing on computer systems. Participants will also be adept in demonstrating different design patterns, executing calligraphy patterns, and mastering the intricacies of carpet washing and dyeing. The curriculum extends to practical aspects such as calculating the cost of production, quality assessment, and identifying G.I tagged products for authenticity. Upon completion, individuals will possess a holistic skill set, positioning them as proficient professionals in the field of carpet weaving and design.

## **2. TRAINING SYSTEM**

---

### **2.1 GENERAL**

The Directorate General of Training (DGT) under Ministry of Skill Development & Entrepreneurship offers a range of vocational training courses catering to the need of different sectors of the economy/ labour market. The vocational training programs are delivered under the aegis of Directorate General of Training (DGT). Craftsman Training Scheme (CTS) with variants and Apprenticeship Training Scheme (ATS) are two pioneer programs of DGT for strengthening vocational training.

‘Carpet Weaving Artisan - Handloom’ trade under CTS is one of the newly designed courses delivered nationwide through a network of ITIs. The course is of one-year duration. It mainly consists of Domain area and Core area. In the Domain area (Trade Theory and Practical) impart professional skills and knowledge, while the core area (Employability Skill) imparts requisite core skills, knowledge, and life skills. After passing out the training program, the trainee is awarded National Trade Certificate (NTC) by DGT which is recognized worldwide.

#### **Candidates broadly need to demonstrate that they are able to:**

- Read and interpret parameters / documentation, plan and organize work processes, identify necessary materials and tools;
- Perform task with due consideration to safety rules, accident prevention regulations and environmental protection stipulations.
- Apply professional knowledge & employability skills while performing the job.
- Document the parameters related to the task undertaken.

### **2.2 PROGRESSION PATHWAYS**

- Can join industry as Carpet Weaving Artisan - Handloom and will progress further as Senior Artisan, Supervisor and can rise up to the level of Manager.
- Can become Entrepreneur in the related field.
- Can join Apprenticeship programs in different types of industries leading to a National Apprenticeship certificate (NAC).
- Can join Crafts Instructor Training Scheme (CITS) in the trade for becoming an instructor in ITIs.
- Can join Advanced Diploma (Vocational) courses under DGT as applicable.

## 2.3 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	Professional Skill (Trade Practical)	840
2	Professional Knowledge (Trade Theory)	240
3	Employability Skills	120
	<b>Total</b>	<b>1200</b>

Every year 150 hours of mandatory OJT (On the Job Training) at nearby industry, wherever not available then group project is mandatory

On the Job Training (OJT)/ Group Project	150
Optional Courses (10th/ 12th class certificate along with ITI certification or add on short term courses)	240

Trainees of one-year or two-year trade can also opt for optional courses of up to 240 hours in each year for 10th/ 12th class certificate along with ITI certification or add on short term courses.

## 2.4 ASSESSMENT & CERTIFICATION

The trainee will be tested for his skill, knowledge and attitude during the period of course through formative assessment and at the end of the training programme through summative assessment as notified by the DGT from time to time.

a) The Continuous Assessment (Internal) during the period of training will be done by **Formative Assessment Method** by testing for assessment criteria listed against learning outcomes. The training institute has to maintain an individual trainee portfolio as detailed in assessment guideline. The marks of internal assessment will be as per the formative assessment template provided on [www.bharatskills.gov.in](http://www.bharatskills.gov.in)

b) The final assessment will be in the form of summative assessment. The All India Trade Test for awarding NTC will be conducted by Controller of examinations, DGT as per the guidelines. The pattern and marking structure is being notified by DGT from time to time. **The learning outcome and assessment criteria will be the basis for setting question papers for final assessment. The 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 REGULATION

For the purposes of determining the overall result, weightage of 100% is applied for six months and one year duration courses and 50% weightage is applied to each examination for two years courses. The minimum pass percent for Trade Practical and Formative assessment is 60% & for all other subjects is 33%.

### 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. Due consideration should 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 the following:

- Job carried out in labs/workshop
- Record book/ daily diary
- Answer sheet of assessment
- Viva-voce
- Progress chart
- Attendance and punctuality
- Assignment
- Project work
- Computer based multiple choice question examination
- Practical Examination

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

Performance Level	Evidence
(a) Marks in the range of 60%-75% to be allotted during assessment	
For performance in this grade, the candidate should produce work which demonstrates attainment of an acceptable standard of craftsmanship with occasional guidance, and due regard for safety procedures and	<ul style="list-style-type: none"> <li>• Demonstration of good skills and accuracy in the field of work/ assignments.</li> <li>• A fairly good level of neatness and consistency to accomplish job activities.</li> </ul>

**Carpet Weaving Artisan - Handloom**

practices	<ul style="list-style-type: none"> <li>• Occasional support in completing the task/ job.</li> </ul>
(b) Marks in the range of 75%-90% to be allotted during assessment	
For this grade, a candidate should produce work which demonstrates attainment of a reasonable standard of craftsmanship, with little guidance, and regard for safety procedures and practices	<ul style="list-style-type: none"> <li>• Good skill levels and accuracy in the field of work/ assignments.</li> <li>• A good level of neatness and consistency to accomplish job activities.</li> <li>• Little support in completing the task/job.</li> </ul>
(c) Marks in the range of more than 90% to be allotted during assessment	
For performance in this grade, the candidate, with minimal or no support in organization and execution and with due regard for safety procedures and practices, has produced work which demonstrates attainment of a high standard of craftsmanship.	<ul style="list-style-type: none"> <li>• High skill levels and accuracy in the field of work/assignments.</li> <li>• A high level of neatness and consistency to accomplish job activities.</li> <li>• Minimal or no support in completing the task/ job.</li> </ul>



**Carpet Weaver (Carpet and Rug):** operates one or more looms equipped with pilewire mechanism to weave carpeting: Moves lever to open shed and inserts specified number of pile wires through shed in sequence to produce pile. Forces cop of filling into shuttle, using mallet, and inserts shuttle into loom. Places wax in holder to lubricate pile wires as wires enter and are withdrawn from shed. Starts loom and observes weaving to detect exhausted filling packages, mispicks, and irregular cutting of pile. Replaces exhausted filling, inserts pile wires into missed loops, and replaces dull cutting blades. May be designated according to type of carpet woven as Velvet Weaver (carpet and rug).

**Carpet Weaver, Hand Knitting:** weaves woollen or cotton carpets and druggets on handloom. Studies design and colour combination from chart. Determines number of knots involved in pattern by counting graphical squares as instructed. Counts and determines number and length of warp strands required in single colour weaving of particular size of carpet. Prepares cotton yarn for warp by processes of bleaching, dyeing as required. Wind by hand requisite number of cotton strands on warp beam according to quality and number of stitches required. Draws ends from warp-beam and ties them to carpet beam. Collects woollen yarn and winds it by hand into balls. Hands woollen balls from roof near loom to facilitate pulling and weaving of yarn. Sets and adjusts loom. Determines number of weavers required according to size of carpet. Passes and draws weft yarn through alternate warp strands by hand to weave fringe of carpet. Ties knots of woollen yarn on each strand of warp. Cuts yarn after each knot at fixed length to maintain required thickness. Moves heald (part of loom mechanism) through control string for interlacement of warp; Passes and adds two layers of thread or jute yarn through warp sheds for holding woollen knots or pile; presses knots and weft filling by hand work to ensure even stiffness. Trims off extra fibre at intervals using hand shears.

**Reference NCO-2015: -**

- (a) 7318.0300 - Carpet Weaver (Carpet and Rug)
- (b) 7318.5900 - Carpet Weaver, Hand Knotting

**Reference NOSs:**

- |                |                 |
|----------------|-----------------|
| i. AMH/N9447   | vi. AMH/N9457   |
| ii. AMH/N9450  | vii. AMH/N9458  |
| iii. AMH/N9454 | viii. AMH/N9459 |
| iv. AMH/N9455  | ix. AMH/N9460   |
| v. AMH/N9456   | x. AMH/N9461    |

## 4. GENERAL INFORMATION

<b>Name of the Trade</b>	<b>CARPET WEAVING ARTISAN - HANDLOOM</b>
<b>NCO - 2015</b>	7318.0300, 7318.5900
<b>NOS Covered</b>	AMH/N9447, AMH/N9450, AMH/N9454, AMH/N9455, AMH/N9456, AMH/N9457, AMH/N9458, AMH/N9459, AMH/N9460, AMH/N9461
<b>NSQF Level</b>	Level-3.5
<b>Duration of Craftsmen Training</b>	One Year (1200 Hours+150 hours OJT/Group Project)
<b>Entry Qualification</b>	Passed 10 <sup>th</sup> class examination
<b>Minimum Age</b>	14 years as on first day of academic session.
<b>Eligibility for PwD</b>	LD, CP, LC, DW, AA, LV, DEAF, HH, AUTISM, ID, SLD
<b>Unit Strength (No. of Student)</b>	20
<b>Space Norms</b>	110 Sq. M
<b>Power Norms</b>	5 KW
<b>Instructors Qualification for:</b>	
<b>1. CARPET WEAVING ARTISAN - HANDLOOM Trade</b>	<p>B.Voc/ Degree in Textile Designing/ Handloom/ textile Technology from recognized university with One-year experience in related field.</p> <p style="text-align: center;">Or</p> <p>Three years Diploma in Textile Designing/ Handloom/ textile Technology from a recognized board of education with two-year experience in the relevant field.</p> <p style="text-align: center;">Or</p> <p>NTC /NAC in Carpet Weaving Artisan - Handloom with three-year experience in the relevant field.</p> <p style="text-align: center;">Or</p> <p>Registered artisan of Handloom department of Central/State govt. with 05 years' experience.</p> <p><b><u>Essential Qualification:</u></b> Relevant Regular/ RPL variant of National Craft Instructor Certificate (NCIC) under DGT.</p> <p><b>NOTE: - Out of two Instructors required for the unit of 2 (1+1), one must have Degree/Diploma and other must have NTC/NAC qualifications or Registered Artisan. However, both of them must possess NCIC in any of its variants.</b></p>
<b>2. Employability Skill</b>	MBA/ BBA / Any Graduate/ Diploma in any discipline with Two years' experience with short term ToT Course in Employability.



**Carpet Weaving Artisan - Handloom**

	(Must have studied English/ Communication Skills and Basic Computer at 12th / Diploma level and above) <b>OR</b> Existing Social Studies Instructors in ITIs with short term ToT Course in Employability.
<b>3. Minimum Age for Instructor</b>	21 years
<b>List of Tools and Equipment</b>	As per Annexure – I

## 5. LEARNING OUTCOME

---

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

### 5.1 LEARNING OUTCOMES

1. Identify various hand tools & machinery in the trade & their safe use. (NOS: AMH/N9447)
2. Identify, test & use of various fibers used in carpet weaving. (NOS: AMH/N9454)
3. Operate winding and reeling machines. (NOS: AMH/N9455)
4. Conduct various operations on the warping drum to warp fabric. (NOS: AMH/N9456)
5. Perform an operation on a traditional carpet loom to weave carpet. (NOS: AMH/N9460)
6. Checking the use of modern carpet loom for weaving carpet. (NOS: AMH/N9457)
7. Prepare carpets using various yarns and colors. (NOS: AMH/N9458)
8. Perform shearing of woven carpets for finishing and value addition. (NOS: AMH/N9457)
9. Carry out coloring and designing for various patterns. (NOS: AMH/N9458)
10. Plan and execute the use of computer aid during the design process. (NOS: AMH/N9460)
11. Perform application of CAD software for designing and color shade. (NOS: AMH/N9450)
12. Perform editing of Taleem on the computer system. (NOS: AMH/N9460)
13. Demonstrate different patterns of design on software. (NOS: AMH/N9450)
14. Plan and Execute calligraphy pattern. (NOS: AMH/N9458)
15. Perform carpet washing to remove stains and other impurities. (NOS: AMH/N9459)
16. Perform dyeing on related materials to achieve better color combinations. (NOS: AMH/N9459)
17. Perform to Calculate cost of production and quality assessment of carpet weaving products. (NOS: AMH/N9461)
18. Identify various G.I tagged products for authenticity of their make. (NOS: AMH/N9460)

## 6. ASSESSMENT CRITERIA

LEARNING OUTCOMES	ASSESSMENT CRITERIA
1. Identify various hand tools & machinery in the Trade & their safe use. (NOS: AMH/N9447)	Identification of various hand tools & precautions in their use.
	Analyzing different safety symbols.
	Hazards in trade & knowledge of the same.
	Safety in firefighting & use of firefighting equipment.
2. Identify, test & use of various fibers used in carpet weaving. (NOS: AMH/N9454)	Identification of natural fibers.
	Identify different fibers viz, Silk, Wool Cotton.
	Identify Methods of testing different fibers.
	Physical checking of fibers with specification /count etc.
	Testing of wool /silk / cotton fibers by visual method and by burn method.
	Chemical testing of wool / silk / cotton by solubility test.
3. Operate winding and reeling machines. (NOS: AMH/N9455)	Checking function of various parts of reeling machine.
	Operating reeling machine for reeling process.
	Winding of cotton yarn balls.
	Winding of woolen yarn
	Rectifying defects in winding process
4. Conduct various operations on the warping drum to warp fabric. (NOS: AMH/N9456)	Process of warping.
	Different warping patterns.
	Familiarization of warping drum & its functions.
	Inserting the locking threads.
	Dropping of threads according to density & size of carpet
	Locking of warp with hooks.
5. Perform an operation on a traditional carpet loom to weave carpet. (NOS: AMH/N9460)	Checking various components & functions of traditional carpet loom.
	Installation of warp upon loom
	Drafting & denting of warp.
	Selvedging process of job.
	Set the talimscript and transfer the design carpet.
	Fix the required amount of warp.
	Select suitable design for the carpet.



**Carpet Weaving Artisan - Handloom**

	Start weaving and complete the design step by step by applying suitable talim Script at the required portions.
6. Checking the use of modern carpet loom for weaving carpet. (NOS: AMH/N9457)	<p>Checking various components &amp; functions of modern carpet loom.</p> <p>Installation of warp upon loom.</p> <p>Drafting &amp; denting of warp upon modern carpet loom.</p> <p>Selvedging process of the job.</p>
7. Prepare carpets using various yarns and colors. (NOS: AMH/N9458)	<p>Taleem script preparation &amp; reading process used in weaving.</p> <p>Demonstrate Formation of Knots. practice for formation of different types of knots.</p> <p>Insertion of thick &amp; thin thread.</p> <p>Beating Procedure for strength enhancement.</p> <p>Fault finding process/Defect tracing process.</p> <p>Fix the amount Warp and weft required.</p> <p>Select suitable calculation of knots for the design.</p> <p>Do the upper and lower beams of the loom.</p> <p>Start and complete the design step by step.</p>
8. Perform shearing of woven carpets for finishing and value addition. (NOS: AMH/N9457)	<p>Perform Shearing of weaved carpet.</p> <p>Remove and trim the extra thread.</p> <p>Follow safety precaution.</p>
9. Carry out coloring and designing for various patterns. (NOS: AMH/N9458)	<p>Sketch the suitable design.</p> <p>Follow the designing principal.</p> <p>Select suitable pattern for the design.</p> <p>Select the colors and color combination.</p> <p>Apply color using color filling tools.</p> <p>Decide the features and placement of the design.</p>
10. Plan and execute the use of computer aid during the design process. (NOS: AMH/N9460)	<p>Basic practice on computer applications.</p> <p>Uses of computer operating system.</p> <p>Create different types of files &amp; folders.</p> <p>Knowledge of Corel DRAW, Photoshop application, In page, Ned Graphics</p>
11. Perform application of	Application of CAD software in various jobs. Including Naqash



**Carpet Weaving Artisan - Handloom**

CAD software for designing and color shade. (NOS: AMH/N9450)	software.
	Use of printers and scanner
	Different tools application in CAD software
	Making designs and coloring software
	Construction of design by using CAD
12. Perform editing of Taleem on the computer system. (NOS: AMH/N9460)	Usage of numeric & color code.
	Demonstrate practices of keyboard.
	Steps required to create a file in talim editor.
	Apply color using color filling tools.
	Decide the features and placement of the design.
13. Demonstrate different patterns of design on software. (NOS: AMH/N9450)	Demonstrate Working on different designs for aesthetic value addition of job.
	Understanding creative process of old master designs.
14. Plan and Execute calligraphy pattern. (NOS: AMH/N9458)	Preparation of different patterns in calligraphy format.
	Different patterns of carpet Cut pile, multi-level.
	Different types of Design.
	Parts of Design, Section of Design.
15. Perform carpet washing to remove stains and other impurities. (NOS: AMH/N9459)	Washing of finished carpet.
	Processes for stain removing.
	Procedure for washing.
	Need for washing of carpets.
16. Perform dyeing on related materials to achieve better color combinations. (NOS: AMH/N9459)	Testing quality of dyed yarn.
	Dyeing of related material in the dyeing lab.
	Safety involved in use of different dyes.
	Classification of dyes, methods of application of dyes & auxiliaries used for dyeing.
17. Perform to Calculate cost of production and quality assessment of carpet weaving products. (NOS: AMH/N9461)	Market intervention.
	Installation of sale stall at the institute for marketing of finished product.
	Market research
	Basic concept of market, Supply, demand & potential for the activity.



**Carpet Weaving Artisan - Handloom**

18. Identify various G.I tagged products for authenticity of their make. (NOS: AMH/N9460)	G.I tagging procedure.
	Significance & necessity of G.I Tagging.
	Procedure of G.I registration.



## 7. TRADE SYLLABUS

SYLLABUS FOR CARPET WEAVING ARTISAN - HANDLOOM TRADE			
DURATION: ONE YEAR			
Duration	Reference Learning Outcome	Professional Skills (Trade Practical)	Professional Knowledge (Trade Theory)
Professional Skill 45Hrs.; Professional Knowledge 15Hrs.	Identify various hand tools & machinery in the Trade & their safe use.	<ol style="list-style-type: none"> <li>1. Identify &amp; use of various hand tools required in the trade</li> <li>2. Identify safety symbols and hazard identification.</li> <li>3. Practice safe methods of fire fighting in case of electrical fire.</li> <li>4. Use of fire extinguishers.</li> </ol>	<ul style="list-style-type: none"> <li>• Safe working practice</li> <li>• Scope of the Carpet Weaving Artisan - Handloom Trade, knowledge of different hand tools used in the trade.</li> <li>• Safety rules and safety signs.</li> <li>• Types and working of fire extinguishers</li> </ul>
Professional Skill 60Hrs.; Professional Knowledge 15Hrs.	Identify, test & use of various fibers used in carpet weaving.	<p><b>Testing of various fibers</b></p> <ol style="list-style-type: none"> <li>5. Identify natural fibers (silk /wool and cotton.</li> <li>6. Identify different varieties of Silk / wool / cotton available in market after processing.</li> <li>7. Test wool /silk / cotton fibers by visual method and by burn method.</li> <li>8. Carry out chemical testing of wool / silk / cotton by solubility test.</li> <li>9. Perform physical checking of Specification / count etc. of silk / wool / cotton used for different qualities of carpets.</li> </ol>	<p><b>Fibers used in the trade</b></p> <ul style="list-style-type: none"> <li>• Classification of textile fibers. Origin of textile fibers. Nature of textile fibers (Cotton, wool, &amp; silk).</li> <li>• Composition of silk fiber.</li> <li>• General structure of silk, Physical properties of Silk yarn.</li> <li>• Chemical properties of silk yarn.</li> <li>• Types of silk yarn: Muga, eri, tussar, mulberry. Reeled Silk, spun silk and wild silk. Life cycle of silk worm.</li> </ul> <p><b>Wool</b></p> <ul style="list-style-type: none"> <li>• Wool, its nature and origin, composition of wool fiber.</li> <li>• Classification of wool according to fleece, lamb's wool, cotty wool, hogget wool, wether wool, merino wool, fine</li> </ul>



			<p>wool.</p> <ul style="list-style-type: none"> <li>Physical properties of wool, chemical properties of wool. General Structure of wool.</li> <li>Moisture regain and moisture content of wool and their effects on properties of wool.</li> <li>Worsted yarn and woollen yarn</li> </ul> <p><b>Cotton</b></p> <ul style="list-style-type: none"> <li>Cotton, its nature and origin, composition of cotton fiber. Ginning and picking of cotton. Cultivation of cotton fiber General structure of cotton</li> <li>Physical properties of cotton yarn. Chemical properties of cotton yarn. Different Types of cotton yarn available in market.</li> </ul>
<p>Professional Skill 60 Hrs.;</p> <p>Professional Knowledge 15 Hrs.</p>	<p>Operate winding and reeling machines.</p>	<p><b>Reeling Machine operation</b></p> <ol style="list-style-type: none"> <li>Check functions of various parts of reeling machine.</li> <li>Operate reeling machine for reeling process.</li> <li>Demonstrate process of loading of yarn on reeling machine.</li> <li>Perform winding of yarn hanks for plying process.</li> <li>Practice on reeling of silk yarns.</li> </ol> <p><b>Winding Machine Operation</b></p> <ol style="list-style-type: none"> <li>Perform winding of different Yarns for ball making process.</li> <li>Perform winding of cotton yarn balls.</li> <li>Perform winding of woollen yarn</li> </ol>	<p><b>Concept of Reeling winding &amp; yarn quality parameters</b></p> <ul style="list-style-type: none"> <li>Knowledge of Reeling machine &amp; its working mechanism.</li> <li>Concept of Quality parameters of silk/wool/cotton yarn during reeling &amp; winding process</li> <li>Count, yarn numbering system, Indirect, direct and universal yarn numbering system. Strength and uniformity of yarn.</li> </ul>



**Carpet Weaving Artisan - Handloom**

		<p>18. Practice on Plying of silk yarns</p> <p>19. Rectify defects in winding process</p>	
<p>Professional Skill 30 Hrs.;</p> <p>Professional Knowledge 15 Hrs.</p>	<p>Conduct various operations on the warping drum to warp fabric.</p>	<p><b>Warping Drum operation</b></p> <p>20. Demonstrate process of warp (making cotton balls, dropping of threads according to density &amp; size of carpet).</p> <p>21. Demonstrate process of mount warp on the loom, locking of warp with hooks, inserting (Poshpun, Jaller and Thur).</p> <p>22. Perform Peg Warping process.</p> <p>23. Perform Sectional warping process.</p> <p>24. Practice rectifying warping faults.</p>	<p>Familiarization of Warping drum &amp; its functions.</p> <p>Knowledge of Warping process &amp; its different methods of locking etc.</p>
<p>Professional Skill 60Hrs.;</p> <p>Professional Knowledge 15Hrs.</p>	<p>Perform an operation on a traditional carpet loom to weave carpet.</p>	<p>25. Check various components &amp; functions of Carpet Hand Loom (Traditional)</p> <p>26. Perform installation of Warp upon Loom.</p> <p>27. Carry out drafting &amp; denting of warp.</p> <p>28. Demonstrate Selvedgeing process of Job.</p> <p>29. Rectify faults during installation upon loom.</p>	<p><b>Concept of Traditional Carpet Loom</b></p> <p>History of Traditional Carpet loom.</p> <p>Features &amp; components of Traditional Carpet Loom.</p> <p>Process of working upon Traditional Carpet Loom.</p> <p>Necessity of selvedging process &amp; its operation.</p>
<p>Professional Skill 60Hrs.;</p> <p>Professional Knowledge 15Hrs.</p>	<p>Checking the use of modern carpet loom for weaving carpet.</p>	<p><b>Carpet Loom Modern</b></p> <p>30. Check various components &amp; functions of Modern carpet Loom</p> <p>31. Perform Installation of warp upon Loom.</p> <p>32. Carry out Drafting &amp; Denting of Wrap upon Modern Carpet Loom.</p> <p>33. Demonstrate Selvedgeing process of Job.</p>	<p><b>Concept of Modern Carpet Loom</b></p> <p>Necessity for introduction of Modern carpet Loom</p> <p>Modern carpet-loom, its features and components.</p> <p>Process of working upon modern carpet Loom.</p>



**Carpet Weaving Artisan - Handloom**

		34. Rectify faults during installation upon loom.	
Professional Skill 120Hrs.;  Professional Knowledge 30Hrs.	Prepare carpets using various yarns and colors.	<p><b>Weaving procedure</b></p> <p>35. Practice on Taleem script preparation &amp; reading process used in weaving.</p> <p>36. Demonstrate Formation of Knots.</p> <p>37. Practice on preparation of different types of knots used in carpet manufacturing job.</p> <p>38. Demonstrate Weaving of knots.</p> <p>39. Perform insertion of thick &amp; thin thread.</p> <p>40. Demonstrate Beating procedure for strength enhancement.</p> <p>41. Demonstrate Fault finding process/ Defect tracing process.</p>	<p><b>Familiarization with Weaving of carpet</b></p> <p>Concept of Taleemscript. Color concepts in Taleem. Definition of wefting (Knot formation). Technical calculations with regard to warp beam, Calculation of knots per sq inch, sq foot, sq meter. Knowledge with regarding to thick &amp; thin thread &amp; its requirement. Familiarization of beating procedure for improving the strength of carpet. Knowledge of defects /faults in weaving of carpet</p> <p>Technical calculations with regard to carpet weaving: Raw Material consumption, pile height and its calculations Do's &amp; don'ts of Carpet Weaving</p>
Professional Skill 30Hrs.;  Professional Knowledge 15Hrs.	Perform shearing of woven carpets for finishing and value addition.	<p>42. Demonstrate Shearing procedure.</p> <p>43. Perform Shearing of the weaved carpet.</p> <p>44. Perform Trimming of weaved carpets for its perfection.</p> <p>45. Find defects during shearing process.</p> <p>46. Rectify defects during shearing process.</p>	<p><b>Shearing Process in carpets</b></p> <p>Need for shearing of weaved carpets. Procedure of Trimming / Shearing of weaved carpets for its perfection &amp; value addition.</p>
Professional Skill 30Hrs.;  Professional Knowledge 15Hrs.	Carry out coloring and designing for various patterns.	<p><b>Color &amp; designing</b></p> <p>47. Practice Drawing exercises of different motif son sketch book</p> <p>a) Flowers</p> <p>b) Leaves</p>	<p><b>Introduction to Aesthetics colour &amp; Design creation.</b></p> <p>Classification of color (Primary, Secondary, Tertiary, intermediate). Warm and cool colors,</p>



		<p>c) Birds d) Animals e) Human figures</p> <p>48. Practice of Geometrical calligraphy shapes design.</p> <p>49. Demonstrate creation of different shades</p> <p>50. Practice on formation of colors shade card.</p> <p>51. Demonstrate Warm and cool colors, Types of colors (Tint, shade, contrast colors color tunes).</p> <p>52. Demonstrate Opposite colors (color wheel, color harmony), kinds of colors (color effects.</p> <p>53. Practice designing of Space Color, Value (Tone), Texture)</p> <p>54. Implement design principles (Balance, Movement, Repetition, Emphasis, Unity.</p>	<p>Types of colors (Tint, shade, contrast colors, color tunes). Demonstrate Opposite colors (color wheel, color harmony), kinds of colors (color effects. Definition of Design. Space Color Value (Tone), Texture) Design Principles (Balance, Movement, Repetition, Emphasis, Unity) Mino arts Concept of 3D &amp; 2D Creativity, Aesthetic sensitivity &amp; understanding Aesthetic factors Cultural &amp; traditional factors Economical factors Managerial factors Design making activity chart</p>
<p>Professional Skill 30Hrs.;</p> <p>Professional Knowledge 15Hrs.</p>	<p>Plan and execute the use of computer aid during the design process.</p>	<p>55. Practice ON /OFF Computer, Use of Operating System, Creation of file and Folder, Save a file on a particular drive and folder, Backup of file.</p> <p>56. Analyze Applicable options during working on a file.</p> <p>57. Practice on Corel DRAW.</p> <p>58. Practice on Photoshop.</p> <p>59. Practice on In-page.</p> <p>60. Practice on NedGraphics.</p>	<p><b>Introduction to Computer</b></p> <ul style="list-style-type: none"> <li>• Familiarization of basics of computers.</li> <li>• Use of Operating System</li> <li>• Creation of file and Folder</li> <li>• Save a file on a particular drive and folder</li> <li>• Backup of file</li> <li>• Applicable options during working on a file</li> <li>• Practice on CorelDRAW</li> <li>• Practice on Photoshop</li> <li>• In-page</li> <li>• Ned graphics</li> </ul>
<p>Professional Skill 30Hrs.;</p>	<p>Perform application of</p>	<p><b>Application of CAD Software in various jobs.</b></p>	<p><b>Introduction of various software functions</b></p>



**Carpet Weaving Artisan - Handloom**

Professional Knowledge 15Hrs.	CAD software for designing and color shade.	61. Demonstrate Naquash, 05 modules of Naquash Software. 62. Practice on developing Shade Card on Software. 63. Demonstrate concept of design creation on software. 64. Create different patterns of design on software.	<ul style="list-style-type: none"> <li>• Naquash Software</li> <li>• 05 modules of Naquash Software</li> </ul>
Professional Skill 60Hrs.  Professional Knowledge 15Hrs.	Perform editing of Taleem on the computer system.	<b>Taleem Editing procedure</b> 65. Demonstrate Usage of Numeric and Color Code. 66. Practices of Keyboard. 67. Find out the designing area from old design papers. 68. Demonstrate steps required to create a file in talim editor, Script Feeding Method. 69. Demonstrate Functions of toolbar, 70. Perform Correction of digitized Design.	Introduction to Taleem Editing Process Familiarization of Numeric and Color Code <ul style="list-style-type: none"> <li>• Introduction to Key board</li> <li>• Find out the designing area from old design papers</li> <li>• Steps required to create a file in talim editor</li> <li>• Script Feeding</li> <li>• Method</li> <li>• Function of tool bar</li> <li>• Correction of digitized</li> <li>• Design</li> </ul>
Professional Skill 60Hrs.;  Professional Knowledge 15Hrs.	Demonstrate different patterns of design on software.	71. Practice on different designs for aesthetic value addition of job. 72. Illustrate Example of Design from Nature 73. Demonstrate Minor Arts Understanding Creative process of old master designer. 74. Interpret creativity, taste and what is considered to be attractive / beautiful at a particular time. 75. Interpret concept of Cultural & ethnic design.	<b>Introduction to designing</b> <ul style="list-style-type: none"> <li>• Definition and meaning of Design</li> <li>• Illustrate Example of Design from Nature</li> <li>• Demonstrate Minor Arts Understanding Creative process of old master designer</li> <li>• To understand Creativity, taste and what is considered to be attractive / beautiful at a particular time.</li> <li>• Demonstrate Concept of Cultural &amp; ethnic design.</li> </ul>
Professional Skill 25Hrs.;	Plan and Execute calligraphy pattern.	76. Identify various calligraphy tools. 77. Perform manual practice	<b>Introduction of Calligraphy</b> <ul style="list-style-type: none"> <li>• Placement of Calligraphy</li> <li>• Different patterns of carpet</li> </ul>



**Carpet Weaving Artisan - Handloom**

<p>Professional Knowledge 5Hrs.</p>		<p>of Alphabets for creation of designs. 78. Practice of insertion of different colors for calligraphic designs. 79. Prepare different patterns in calligraphy format 80. Practice on Geometrical calligraphy 81. Practice on Indian Persian European calligraphy 82. Practice on Outlay of Design, Different types of Design, Parts of Design, Section of Design.</p>	<ul style="list-style-type: none"> <li>• Cut pile multilevel,</li> <li>• Geometrical Indian Persian European Outlay of Design</li> <li>• Different types of Design</li> <li>• Parts of Design</li> <li>• Section of Design</li> </ul>
<p>Professional Skill 25Hrs.;  Professional Knowledge 05Hrs.</p>	<p>Perform carpet washing to remove stains and other impurities.</p>	<p>83. Practice Carpet washing. 84. Practice on preparation for carpet washing process. 85. Identify the quality detergents for maintaining the quality. 86. Carry out washing of finished carpet using different detergents &amp; processes for stain removing. 87. Carry out washing of carpets after weaving. 88. Apply precautionary measures during stain removal.</p>	<p><b>Carpet washing procedures</b>  Need for washing of carpets. Procedure for washing. Detergent quality &amp; effects. Removal of stains</p>
<p>Professional Skill 65Hrs.;  Professional Knowledge 10Hrs.</p>	<p>Perform dyeing on related materials to achieve better color combinations.</p>	<p>89. Demonstrate dyeing procedures. 90. Identify and select different dyeing materials. 91. Practice on different pre dyeing Treatments. 92. Apply methods for maintaining different dye Ratios. 93. Apply methods for application of different dye solutions.</p>	<p><b>Dyeing Process</b>  Safety involved in use of different dyes. Classification of dyes, methods of application of dyes &amp; auxiliaries used for dyeing. Different pigments Methods of maintaining and measuring ratios of dyes and pigments.</p>



**Carpet Weaving Artisan - Handloom**

		94. Perform quality testing of dyed yarn, Dyeing of related material in the dyeing lab.	
Professional Skill 25Hrs.;  Professional Knowledge 05Hrs.	Perform to Calculate cost of production and quality assessment of carpet weaving products.	95. Carry out assessment of Cost. 96. Identify cost of finish product and their selling price, overhead cost and distribution. 97. Identify testing equipment and test product (Carpet weaving). 98. Carry out testing and quality assurance of carpet weaving products. 99. Visit and participation in various exhibitions.	<b>Familiarization with marketing practice and cost of production</b> Basic concept of marketing practice, Supply, demand & potential for the activity. Knowledge of costs product and their selling prices. Overhead costs and their distribution.
Professional Skill 25Hrs.;  Professional Knowledge 05Hrs.	Identify various G.I tagged products for authenticity of their make.	100. Demonstrate Procedure for submission of application G.I registration. 101. Demonstrate Procedure for allotment of G.I number. 102. Demonstrate Procedure for registration of craftsmen for allotment of G.I registration 103. Demonstrate Procedure for registration of finished job for G.I registration. 104. Demonstrate Procedure for identification of various parameters as per G.I tagging.	<b>G.I Tagging</b>  Concept of G.I Tagging along with historical background. Significance & necessity of G.I Tagging

**Note:** The duration of Professional skills (Trade practical) and Professional knowledge (Trade theory) are indicative only. The Training Institute has the flexibility to adopt suitable training duration for effective training.





## **SYLLABUS FOR CORE SKILLS**

### **1. Employability Skills (Common for all CTS trades) (120 Hrs)**

Learning outcomes, assessment criteria, syllabus and Tool List of Core Skills subjects which is common for a group of trades, provided separately in [www.bharatskills.gov.in/](http://www.bharatskills.gov.in/) [www.dgt.gov.in](http://www.dgt.gov.in)

<b>LIST OF TOOLS &amp; EQUIPMENT</b>			
<b>CARPET WEAVING ARTISAN - HANDLOOM (for Batch of 20 Candidates)</b>			
<b>S No.</b>	<b>Name of the Tools and Equipment</b>	<b>Specification</b>	<b>Quantity</b>
<b>A. TRAINEES TOOL KIT</b>			
1.	Measuring Tape	150 cm	21 Nos.
2.	Carpet scissor		21 Nos.
3.	Swifts		10 No.
4.	Swift Holder		10 No.
5.	Comb Beaters		21 Nos.
6.	Curved Knives comb beaters		21 Nos.
7.	Scale plastic	12"	21 Nos.
8.	Compass (Geometry Box)		21 Nos.
9.	Big Size Sketchbook		21 Nos.
10.	Water color		21 Nos.
11.	Eraser, Pencil, Sharpener		21 Nos.
12.	Poser Color Kit		21 Nos.
13.	Pencil color (set of 12)		21 Nos.
14.	Graph Sheets A1	Size A1	10 rims
<b>B. Equipment for Dying and testing Lab</b>			
15.	Digital Microscope	Identification of Textile Fibers	1 No.
16.	Direct count Balance	To measure the count of yarn, roving and silver	1 No.
17.	Warp reel	Measuring Yarns and making it into hanks of standard size	1 No.
18.	Crock Meter	To determine the amount of color transferred from textile materials	1 No.
19.	Tensile Strength Tester	To determine the strength of fiber, lea and fabric	1 No.
20.	Humidity Chamber	For maintaining standard atmospheric temperature and humidity	1 No.
21.	Traditional Carpet Loom	With all accessories	2 Nos.
22.	Modern Carpet Loom	With all accessories	3 Nos.
23.	Warping rod with stand and hammer		2 Nos.
24.	Yarn appearance broad winder	To determine the appearance and smoothness of the yarn	1 No.
25.	Twist Tester	To determine the twist per meter or per inch of all types of yarns	1 No.
26.	Color Cabinet	A Color matching cabinet measures the	1 No.

**Carpet Weaving Artisan - Handloom**

		color variance between two samples	
27.	Arm Spray hank dying machine (2kg)	For sample dying of different types of raw material	1 No.
28.	Desktop Computer with UPS	CPU: 32/64Bit/i3/i5/i7 or I attest processor, Speed: 3 GHz or Higher. RAM: - 8 GBDDR-III or Higher, 512 Gb SSD, Wi-Fi Enabled. Network Card: Integrated Gigabit Ethernet, with USB Mouse, USB Keyboard and Monitor (Min.17Inc h Licensed Operating System and Antivirus compatible with trade related software.	05 Nos.
29.	CAD (with naqash software) with printer, code writer		1 No.
30.	Lan connectivity		As required
31.	Multi-functional A3 size color printer Latest with trolley		1 No.
32.	Carpet Display Frames		10 Nos.
33.	Computer table and chair		As required
34.	Display Board		2 Nos.
35.	Sharping Stone		5 Nos.
<b>C. General shop outfit, furniture and Materials</b>			
36.	Fire Extinguisher		01 No.
37.	Instructor Chairs		02 Nos.
38.	Instructor table		02 Nos.
39.	Computer Table		05 nos.
40.	Computer Chairs		20 nos.
41.	Stool		05 Nos.
42.	Steel Almirah		02 nos.
43.	White board		01 No
44.	White board marker		01 Box
45.	Duster		05 Nos
46.	Cotton cloth (duster)		05 Nos.
47.	Metal Rack		04 Nos.
48.	Lockers with 16 drawers' standard size	100cmX 150cm X 45cm	02 Nos.
49.	Smart interactive board		01 No.
50.	Split AC (with Stabilizer)		As required
51.	Notebooks for trainee's theory and practical		52 Nos. each
52.	Pencils, erasers, sharpeners		52 Nos. each
53.	Notice board		01 No.
54.	Wall clock		01 No.

**Note: -**

1. Internet facility is desired to be provided in the class room.

## ANNEXURE - II

The DGT sincerely acknowledges contributions of the Industries, State Directorates, Trade Experts, Domain Experts, trainers of ITIs, NSTIs, faculties from universities 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.

<b>List of Expert members participated for finalizing the course curriculum of Carpet Weaving Artisan - Handloom trade held on 01<sup>st</sup>&amp; 02<sup>nd</sup> February, 2024 at Srinagar (Jammu &amp; Kashmir).</b>			
S No.	Name & Designation Sh/Mr./Ms.	Organization	Mentor Council Designation
1.	Shri Sudershan Kumar – JKAS, Director	Skill Development - J&K	Chairman
2.	Shri Sanjay Kumar – ISDS, Director	CD, DGT - MSDE	Co-Chairman
3.	Shri G.C.Rama Murthy –  ISDS, Joint Director	CD, DGT - MSDE	Member
4.	Shri Khan Farooq Ahmed, Joint Director ( Nodal Officer)	Skill Development, Kashmir	Member
5.	Shri G M Bhat, Joint Director	Skill Development, Jammu	Member
6.	Shri MohdShafi Bhat, Principal	Women Polytechnic Srinagar	Member
7.	Shri V.K. Saksena– ISDS, Deputy Director	NSTI Jammu (Srinagar Extension)	Member
8.	Shri Mohd Ashraf Wani, Principal (Senior Scale)	Govt ITI Srinagar	Member
9.	Shri Ali Mohammad Khan, HOD	K.G. Polytechnic, Srinagar	Member
10.	Shri S. Bandyopadhyay– ISDS, Assistant Director	CD, DGT - MSDE	Member
11.	Shri Sajad Hussain Naqueeb, Assistant Director (Trgs)	DSD Office Srinagar	Member
12.	Shri Ravi Gupta, Assistant Director	DSD Office Srinagar	Member
13.	Shri Surinder Kumar, Assistant Director	Handicraft & Handloom Department, Kashmir	Member
14.	Shri Javid Ahmed Ganai,	Govt ITI Baramulla	Member

### **Carpet Weaving Artisan - Handloom**

	Principal		
15.	Shri Imran Wajahat, Principal	Govt ITI Anantnag	Member
16.	Shri Imtiyaz Ahmad Mir, Superintendent	Govt ITI Pattan	Member
17.	Shri P.K. Bairagi, Training Officer	CSTARI - Kolkata	Member
18.	Shri B.K. Nigam, Training Officer	CSTARI - Kolkata	Member
19.	Shri Nazir Ahmad, Technical Asstt	JD Office Jammu	Member
20.	Shri Subhash Chander Sharma, Handicraft Training Officer (Industry Expert)	Handicraft & Handloom Department, Jammu	Member
21.	Shri Mir Ashraf Ahmad, Asstt Handicraft Training Officer(Industry Expert)	Handicraft & Handloom Department, Kashmir	Member
22.	Shri Imtiyaz Ahmad, Industry Expert	Handicraft & Handloom Department, Kashmir	Member
23.	Shri Rajeev Pandita, President (Industry Expert)	Rural Artisan Welfare Society, Jammu (NGO)	Member
24.	Shri Manzoor Ahmad Bhat, Proprietor(Industry Expert)	Carpet House Rainawari Srinagar	Member
25.	Smt Nelofar Jan, Proprietor (Industry Expert)	New Bhat Handicrafts, Srinagar	Member
26.	Shri Arshad Hussain Bhat, Proprietor(Industry Expert)	Central Cottage Industries, Srinagar	Member
27.	Shri Riyaz Ahmad, Proprietor (Industry Expert)	New Bhat Handicraft, Srinagar	Member
28.	Shri Nayeem Ahmad Baba, Director (Trade Expert)	NCVET Assesment Agency	Member
29.	Smt Humaira Mehraj, Trade Expert (Carpet Weaving Artisan - Handloom)	Govt Women ITI Bemina	Member
30.	Shri Mohammad Assadullah Bhat, Trade Expert (Carpet Weaving Artisan - Handloom)	Govt ITI Pattan	Member
31.	Shri Sher Ali Parray, Trade Expert (Carpet Weaving Artisan - Handloom)	Govt Women ITI Bemina	Member
32.	Smt Urfi Nazir, Trade Expert (Carpet Weaving Artisan -	Govt ITI Pattan	Member



Industrial Training Institute

***Carpet Weaving Artisan - Handloom***

	Handloom)		
--	-----------	--	--

**ABBREVIATIONS:**

CTS	Craftsmen Training Scheme
ATS	Apprenticeship Training Scheme
CITS	Craft Instructor Training Scheme
DGT	Directorate General of Training
MSDE	Ministry of Skill Development and Entrepreneurship
NTC	National Trade Certificate
NAC	National Apprenticeship Certificate
NCIC	National Craft Instructor Certificate
LD	Locomotor Disability
CP	Cerebral Palsy
MD	Multiple Disabilities
LV	Low Vision
HH	Hard of Hearing
ID	Intellectual Disabilities
LC	Leprosy Cured
SLD	Specific Learning Disabilities
DW	Dwarfism
MI	Mental Illness
AA	Acid Attack
PwD	Person with disabilities

