

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

NSDA Reference

To be added by NSDA

CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

Name and address of submitting body:

Directorate of Textiles, Odisha

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List of documents submitted in support of the Qualifications File

1. Annexure – 1 – News Paper advertisement for admission to the qualification (Justification of the title of Qualification).
2. Annexure - 2 – Syllabus of the qualification (Justification of structure of the Qualification)
3. Annexure – 3 - Appointment of question setter by the Chief Examiner. (Justification for Assessment).
4. Annexure – 4 - Order of Directorate of Textiles for conducting Semester Examination (Justification for Assessment).
5. Annexure – 5 - Copy of final result sheet showing weightage of 20% on assessment tests & 80% on final semester examinations.
6. Annexure – 6 - Certificate with mark sheets issued to the successful candidates.
7. Annexure – 7 - Third handloom census 2009-10 of Ministry of Textiles, Govt. of India.
8. Annexure – 8 - Odisha Economic Survey 2014-15 by Planning & Co-ordination Department, Govt. of Odisha.
9. Annexure – 9 - Monthly news letter published by the Handloom Export Promotion Council (HEPC) in March'2015.
10. Annexure – 10 - Vision of 12th Plan in Handloom Sector.
11. Annexure – 11 - Total pass out from Institute.
12. Annexure – 12 - Total sanction strength of Technical Assistant, Junior Weaving Supervisor, Inspector of Industries and Technical Superintendant in the Establishment of Directorate of Textiles, Govt. of Odisha.
13. Annexure – 13 - Letter to Staff Selection Commission, Govt. of Odisha for filling up of 13 nos. of posts of Technical Assistant.
14. Annexure – 14 - Appointment order for filling up of 13 nos. of posts of Technical Assistant (Justification of progression from the Qualification).
15. Annexure – 15 - Recommendation of the Technical Committee during 2015-16 for necessary changes in the existing syllabus and structure.

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

SUMMARY

Qualification Title	Handloom Weaving & Design
Qualification Code	"N/A".
Nature and purpose of the qualification	Certificate Course on Handloom Weaving & Design. It is a certified course designed by the Directorate of Textiles, Govt. of Odisha. The purpose of the qualification is designed for the fresher to enable for acquiring knowledge in the area of Weaving, Designing, Dyeing, Ikat Technology and Garment Stitching.
Body/bodies which will award the qualification	Directorate of Textiles, Odisha, Bhubaneswar
Body which will accredit providers to offer courses leading to the qualification	Handlooms, Textiles and Handicrafts Department, Govt. of Odisha.
Body/bodies which will carry out assessment of learners	Directorate of Textiles, Odisha, Bhubaneswar
Occupation(s) to which the qualification gives access	The qualification provides access to jobs like Product Planning, Fabric Designing, Costing of Fabrics, Quality Control, Technological Up-Gradation in Pre-loom, On-loom & Post-loom, Marketing of Fabrics etc. in Govt. organisation or other private Handloom, Apparel and allied industries. Other specific job opportunities are as follows. <ol style="list-style-type: none"> 1. Directorate of Textiles, Odisha (Technical Assistant) 2. Primary Weavers Cooperative societies (Junior Executive in QA/QC, Hand Dyer, Warping & winding operator, CAD Designer, Dobby and Jacquard handloom Weaver) 3. Government Jails (Technical Assistant) 4. Apparel Industry- (Sewing Machine Operator) 5. Handloom Entrepreneur
Licensing requirements	"N/A".
Level of the qualification in the NSQF	Level- 5
Anticipated volume of training/learning required to complete the qualification	2314 Hours.
Entry requirements and/or recommendations	10 th pass Minimum Age 17 years.
Progression from the qualification	Inspector of Industries / Technical Superintendant.
Planned arrangements for the Recognition of Prior learning (RPL)	RPL Policy will be described as and when available.
International comparability where known	It is observed that the present qualification is designed for handloom industry of Odisha comprising of various elements in the field of economics & management, weaving, design & structure, dyeing & finishing, computer aided design, Ikat technology, apparel manufacturing, costing of fabrics applied in handloom industry in the state of Odisha. Though individual elements are available at various points, all the elements in single qualification is available nowhere.
Date of planned review of the qualification.	Every year on Monday in 3 rd week of January. Hence, the next review will be held in January, 2017
Annexure – 1 – Justification of the Title of Qualification.	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

Formal structure of the qualification: Certificate course in Handloom Weaving & Design				
Title of NOS/unit or other component	Mandatory / Optional	Estimated size (learning hours)		Level
		Theory	Practical	
Semester-I				
The trainee is able to get idea on Handloom Economics & Management (Part-I)	M	20	0	3
Development of Computer Aided Textile Design	M	50	100	3
Knowledge on fundamentals of Fabric Structure (Part-I)	M	100	0	4
Knowledge on fundamentals of Weaving Mechanism	M	50	200	4
Application of general textile chemical processes used for handloom fabrics. (Part-I)	M	75	150	3
Assessment Tests on each of the topics mentioned above.	M	10	9	
Final Semester Examinations on each of the topics mentioned above.	M	15	9	
Sub Total		320	468	
Semester-II				
The trainee is able to get idea on Handloom Economics & Management (Part-II)	M	30	0	3
Knowledge on Fabric Structure (Part-II)	M	50	200	3
The trainee is able to get idea on Textiles Chemistry (Part-II)	M	50	175	3
The trainee is thorough on Textile Calculation & can fix the fabric parameters	M	200	0	4
Assessment Tests on each of the topics mentioned above.	M	8	6	
Study Tour to different handloom clusters inside the state.	M	0	60	3
Final Semester Examinations on each of the topics mentioned above.	M	12	6	
Sub Total		350	447	
Semester-III				
Knowledge on Fabric Structure (Part-III)	M	100	100	4
Knowledge on development of fabrics by IKAT Technology.	M	50	180	4
Basic knowledge on Preparation of Made up	M	50	150	3
The trainee is able to prepare a feasible Project in handloom sector	M	0	60	4
Assessment Tests on each of the topics mentioned above.	M	6	12	
Final Semester Examinations on each of the topics mentioned above.	M	9	12	
Sub Total		215	514	
Grand Total		885 (38%)	1429 (62%)	
		2314		

Annexure- 2 – Justification of the structure of the Qualification.

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

SECTION 1 **ASSESSMENT**

Body/Bodies which will carry out assessment:

Directorate of Textiles, Odisha

Will the assessment body be responsible for RPL assessment?

RPL Policy will be described as and when available.

Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, consistent and fair and show that these are in line with the requirements of the NSQF:

1. The **Advisory Committee** under the chairmanship of the Director of Textiles and Handloom, Orissa, Bhubaneswar, comprising of other three members i.e. 1. Joint Director of Textiles, 2. Deputy Director of Textiles and 3. Assistant Director of Textiles, Khordha (Member Convenor) will coordinate to study and formulate new concepts for the Institute.
2. The Additional Director of Textiles is the **Chief Examiner** of the Semester Examination as authorised by the Advisory Committee.
3. 3 (three) Semester system has been introduced w.e.f. 2007-08, each Semester being of 6 months duration. Semester wise breakup of the theory and practical classes, study tour, project assignment and assessment of marks thereof is prepared. One Mid-Term Internal Assessment is conducted in each Semester.
4. Mid-Term Internal Assessment test is conducted by the concerned faculty member of each subject under the supervision of the "Course Director/ Principal" of the Institute.
5. The Semester examination papers are set up and evaluated by the professionally qualified Departmental Technical Officer or Professional Experts as authorised by the Advisory Committee.
6. The assessment is primarily carried out by collecting evidence of competence gained by the trainees by observing them at work, written examinations, asking questions (viva-voce) and initiating formative discussions to assess understanding and by evaluating records/daily diary & project works and sessional marks are awarded to them. The examinations are conducted on the subjects covered in the qualification. The theory answer sheets and Practical are evaluated by the third party who is professionally qualified as per the choice of the Assessing Body. The candidates who are qualified successfully are awarded with a Certificate issued by the Assistant Director of Textiles and Principal of the Institute.
7. 20 % weightage of the total mark in each subject is given for Mid-Term Internal Assessment and 80 % weightage is given for Semester Examination conducted at the end of each semester. **(Annexure – 2)**
8. The Assessment is done by fair means adopting the following procedure.
 - I. The entire Semester Assessment system is controlled by an independent cell in the Establishment Section of the Directorate of Textiles.
 - II. The Chief Examiner appoints the Question Setters and assessors, who are primarily professionally qualified Departmental Technical Officer or Professional Experts.
 - III. The Question Setters are supplied with a set of previous year questions (Question Bank) along with the syllabus. **(Annexure-3)**
 - IV. The Question Setter submits the Question Paper to the Chief Examiner in a sealed cover.
 - V. The Sealed Question Papers are provided to the Examiner, who is a responsible Officer of the Directorate of Textiles on the date of Examination. **(Annexure -4)**

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

VI.	The Examiner carries the sealed Question Paper to the Exam Centre (Institute), which is opened 15 minutes before the Examination in presence of the Principal and Asst. Director of Textiles, Khordha.
VII.	After the Examination the Answer Sheets are sealed in presence of the Examiner, the Principal and Asst. Director of Textiles, Khordha.
VIII.	The Examiner carries the sealed Answer Sheets & copy of the attendance sheets of the candidates and submits the same to the Chief Examiner on the same day.
IX.	The Chief Examiner forwards the sealed Answer Sheets to the Assessor for evaluation.
X.	After collecting all the evaluation sheets from the Assessors and Mid-Term Internal Assessment marks from the Institute, the Chief Examiner compiles the marks and declares the result. (Annexure - 5)
XI.	A Certificate is issued to the successful candidates along with the Mark Sheets. (Annexure - 6)

ASSESSMENT EVIDENCE

Title of NOS/Unit/Component: Certificate course in Handloom Weaving & Design

Criteria for assessment for each segment of qualification have been created by the assessing body. Assigned marks are given in proportion to competency and also lay down proportion of marks for theory, practical and viva-voce for each segment. The assessment for theory part is based on knowledge bank of question covering the entire syllabus created by professionals as per the choice of the Assessing Body. Individual assessments are done for practical and viva-voce for every student at each examination as per assessment criteria given below. To pass the qualification, every trainee should score a minimum mark of 40% in each segment.

Outcomes to be assessed	Assessment criteria for the outcome				
	Total Marks				Qualifying Marks
	Theory		Practical and Viva-voce		
Subjects	Assessment test marks 20% of total marks	Final semester examination marks 80% of total marks	Assessment test marks 20% of total marks	Final semester examination marks 80% of total marks	
Semester-I					
The trainee is able to get idea on Handloom Economics & Management (Part-I)	10	40	0	0	40%
Development of Computer Aided Textile Design	10	40	10	40	40%
Knowledge on fundamentals of Fabric Structure (Part-I)	10	40	0	0	40%
Knowledge on fundamentals of Weaving Mechanism	10	40	10	40	40%

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

Application of general textile chemical processes used for handloom fabrics. (Part-I)	10	40	10	40	40%
Sub-Total	50	200	30	120	
Semester-II					
The trainee is able to get idea on Handloom Economics & Management (Part-II)	10	40	0	0	40%
Knowledge on Fabric Structure (Part-II)	10	40	10	40	40%
The trainee is able to get idea on Textiles Chemistry (Part-II)	10	40	10	40	40%
The trainee is thorough on Textile Calculation & can fix the fabric parameters	20	80	0	0	40%
Sub-Total	50	200	20	80	
Semester-III					
Knowledge on Fabric Structure (Part-III)	10	40	10	40	40%
Knowledge on development of fabrics by IKAT Technology.	10	40	10	40	40%
Basic knowledge on Preparation of Made up	10	40	10	40	40%
The trainee is able to prepare a feasible Project in handloom sector	0	0	20	80	40%
Sub-Total	30	120	50	200	
Grand Total	130	520	100	400	
	650		500		
	1150				460
Means of assessment 1: Described at Table 1					
Pass/Fail :					
The candidates having at least 85% of attendance and securing minimum 40% of marks in each subject and total up to minimum 460 marks out of 1150 marks are declared as pass (competent) and below it as failed (Not yet competent). (Annexure – 2)					

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

Table – 1 Title of Component:

Semester/ Mod. No.	Outcomes to be assessed	Assessment criteria for the outcome
S-1/ E&M-01	The learner can express briefly on ongoing Government Schemes, handloom Policy & handloom clusters of state as well as Country.	<ol style="list-style-type: none"> 1. List the name of the developmental schemes implemented by the Government of Odisha in handloom sector. 2. Describe the details of handloom clusters of the state as well as county with reference to its products & loom capacity.
S-2/ E&M-01	The trainee can discuss on modern management including Total Quality Management (TQM) / Economical Ordering Quantity (EOQ) / Project Management concept-Constitution of Self Help Groups (SHGs) and Small & Medium Enterprises (SMEs) / Administration, Finance, Marketing Management related to SHGs, SMEs, Co-operatives etc.	<ol style="list-style-type: none"> 1. Define modern management, TQM, EOQ etc. 2. Describe in detail on constitution of SHGs, SMEs & Co-operatives. 3. Give details on Administration, Finance, Marketing Management related to SHGs, SMEs, Co-operatives etc.
S-01 / CAD-01	The learner can handle the computer & work on, MS Office (Word & Excel).	<ol style="list-style-type: none"> 01. Give details of packages available in normal computers. 02. Open the computer & type a paragraph given & find the sum of the numbers given in a table.
S-01/ CAD-02	The trainee can operate Computer aided Design using weave, paint and drape sections of CATD Software with concept of Colour Cycle, Floral & all over Design, Designs for Dobby, Jacquard, Jalla weave and get a copy through printer for further work.	<ol style="list-style-type: none"> 01. What is CATD software & how it helps in textile designing. 02. Define paint, weave & drape available in the CATD software. 03. Develop design on paint, insert required weaves, make the desired fabric & view drapes at different used points.
S-01/ FS-01	Able to prepare the Design, Draft, Peg plan, Tie-up Plan & Tie up arrangement for plain, twill, satin weave and its derivatives on graph paper.	<ol style="list-style-type: none"> 01. Define fabric structure. 02. Give details of basic weaves with their design, draft, peg-plan, tie-up plan & tie-up arrangements. Develop the same on loom. 03. Give details derivatives of basic weaves. Produce the same on given handloom.
S-02/ FS-01	Able to guide the handloom weavers in Cooperative societies about Colour and weave effect, derivative weaves like Honey Comb, Huck a back, Terry weave, Double cloth, Tubular cloth, Leno weave, Mock leno weave and designing by use of Extra warp, Dobby, Jacquard, Extra weft, Jalla, Solid Boarder effect and to develop knowhow on various products of Odisha like Bomkai, Habaspuri, Khandua, Dhalapathar Parada.	<ol style="list-style-type: none"> 01. Define colour & weave effect for ornamentation of fabrics. 02. Demonstrate different designs like Honey Comb, Huck a back, Terry weave, Double cloth, Tubular cloth, Leno weave, Mock leno weave on graph paper & then produce it on given handloom. 03. Narrate method of designing by use of Extra warp, Dobby, Jacquard, Extra weft, Jalla, Solid Boarder effect. 04. Give brief ideas on various traditional products of Odisha like Bomkai, Habaspuri, Khandua, Dhalapathar Parada with indication of technology involved..
S-02/ FS-02	Able to distinguish between Natural and manmade fibre on the basis of staple length, Turn per inch (TPI), Twist, Moisture content, Strength, Single thread and lea, count etc.	<ol style="list-style-type: none"> 01. Give table on properties of fibres. 02. Identify a fibre by the process of visual method & indicate about the quality of the resultant yarn using visual parameters. 03. Define TPI, Moisture Content, Strength, Lea count etc.

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

<p>S-03/ FS-01</p>	<p>The learner can evaluate the fabric dimension/set and its physical properties using various equipments for analysis of cloth sample for reproduction of the same. He/She also can calculate the quantity of yarn required per square meter of fabric.</p>	<ol style="list-style-type: none"> 01. Define cloth analysis. 02. What are the parameters involved in cloth analysis. 03. How one sample is reproduced by cloth analysis? 04. Calculate the quantity of required yarn for reproduction of a given sample.
<p>S-01/ WM-01</p>	<p>The candidate can distinguish different types of looms, Types of Reed & Heald and their uses.</p>	<ol style="list-style-type: none"> 01. Define weaving mechanism & explain about various types of handlooms used in the country. 02. Describe in detail on types of reed & healds with use.
<p>S-01/ WM-02</p>	<p>He / She can work on pre-loom machine like Winding, Warping, Denting, Drafting of threads and Tie up arrangement.</p>	<ol style="list-style-type: none"> 01. Objective & principle of winding, warping, denting, drafting & tie-up arrangement. 02. Describe a warping machine with focus on individual parts.
<p>S-01/ WM-03</p>	<p>The candidate can demonstrate on types of motions on a handloom like Primary/ Secondary/ Auxiliary motion, Types of Dobby- Tapped, Barrel, and lattice-Mounting of dobbie, Principle and working of Jacquard Machine- 60 hooks, 100 Hooks, 200 hooks, Card cutting, lacing, harness building. Able to work in loom using dobbie and jacquard machines during weaving</p>	<ol style="list-style-type: none"> 01. Define motions like, primary, secondary & auxiliary involved in handloom weaving. 02. Define a dobbie & jacquard. 03. Principle of working of a jacquard. 04. What are card cutting, lacing & harness building for a jacquard weaving
<p>S-01/ TCh-01</p>	<p>Can able to prepare soft water from the hard water . He / She can carry out processes like Scouring, Bleaching, Souring of cotton yarn, able to prepare shade cards using different Dye Stuffs like Direct, Azoic, Vat, Sulphur, Acid, Metal complex, Reactive, Disperse dyes in handloom industry.</p>	<ol style="list-style-type: none"> 01. Define hardness of water. 02. How hard water is converted to soft water. 03. What are the objectives of Scouring, Bleaching, Souring, ? 04. Which dyestuffs are used on Cotton fibre? 05. Which dyes are used for Silk filament 06. Which dyestuffs are used for Polyester fibre? 07. Describe different preparatory processes like scouring, bleaching etc for cotton yarn & degumming for silk yarn. 08. Apply the above processes to grey yarn/silk yarn & develop a given shade with stated dye stuff.
<p>S-02/ TCh-01</p>	<p>He / she can able to select Azo-free eco-friendly synthetic dyes suitable for various fibres Further, he / she can able to evaluate the . Effect of mercerization on cotton yarn using suitable dyestuffs, Degumming of silk and tassar yarn. Different types of natural dyes and its application. Different types of fastness prosperities, common defects in dyeing and improvement of dye fastness. Different types of finishes on cotton and silk. Cotton: Sizing, Calendaring and anti crease. Silk- Scrooping and weightening</p>	<ol style="list-style-type: none"> 01. Define eco-friendly dye stuffs & describe on Fibre suitable for various dye stuffs. 02. What is mercerization on cotton yarn & degumming of silk yarn. 03. Types of natural dyes & its application. 04. Define fastness properties of dyed yarn. 05. What are the common defects in dyeing & how it can be removed. 06. Describe different finishing processes applied on cotton & silk fabrics. 07. What are objectives of sizing, calendaring, anti crease process on cotton. Scrooping & weightening process on silk.

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

S-02/ TCa-01	Able to assess different systems of yarn count, conversion of count, average & resultant count, Reed & Heald count & its calculation.	<ol style="list-style-type: none"> 01. Define yarn, reed & heald count in various systems. 02. Give the formula for conversion of yarn count from one system to another. 03. Calculate the average/resultant count of two or more given yarn.
S-02/ TCa-02	Able to check the quality of raw material and finished products like Diameter of yarn- Fixation of ends/ inch & Picks /inch-cover factor, Various aspects of yarn (Count, twist, strength etc), Warping and Take up motion calculation.	<ol style="list-style-type: none"> 01. Define diameters of yarn. 02. What is maximum setting of fabric & how ends or picks per inch can be fixed for a fabric. 03. Define cover factor & how it is influenced by the thread density. 04. Describe the role of take up motion for uniform weaving. 05. Define dividend of a take up motion.
S-02/ TCa-03	Can estimate the cost of production and fix the sale price of the fabric.	<ol style="list-style-type: none"> 01. Describe prime factors responsible for costing of a fabric. 02. Calculate the sale price of a fabric to be manufactured as per given specification.
S-02/ ST-01	Acquires knowledge on latest developments in Handloom & Fashion Technology through study tour to different institutions / organisations like ITT, Choudwar / Women Poly technology, Dhenkanal / NIFT, Bhubaneswar / Weavers' Service Centre, Bhubaneswar / important handloom clusters of Odisha.	<ol style="list-style-type: none"> 01. How the theory knowledge acquired during training is recapitalized after visit to different technical educational institutes. 02. Preparation of vivid report on study tour.
S-03/ IT-01	Can produce Odisha IKAT fabric	<ol style="list-style-type: none"> 01. Describe different methods of fabric ornamentation. 02. How ornamentation by Ikat technique is different from other method.
S-03/ IT-02	Calculate requirement of yarn for warp, weft and double Ikat, grouping of threads. Tying of group of threads as per design, dyeing of resisted thread, untying of yarn with repetition of processes for multicolour effect and use of tie-dyed yarn for development of the Ikat design.	<ol style="list-style-type: none"> 01. Define single, double and combined Ikat. 02. Narrate the method of calculation for grouping of threads for developing a particular single, double or combined Ikat design. 03. Describe & demonstrate the process of tying, dyeing & untying of yarn to develop the above design.
S-03/ MG-01	Able to perform work like stitching of garments, operate sewing machine- manual and automatic, , cloth cutting and designing on patch work	<ol style="list-style-type: none"> 01. Describe the details of fashion & styles, basic tailoring, cloth cutting, stitching and designing on patch work. 02. Stitch a garment as per given requirement.
S-03/ PA-01	Able to do marketing of handloom products in and outside the state, Prepare feasible Project plan on Export oriented products, Ikat fabric, Natural dyed fabric, Reproduce languishing traditional products and market them.	<ol style="list-style-type: none"> 01. What are the outlines for preparation of a project report? 02. Give a note on Export oriented products, Ikat fabric, Natural dyed fabric, Handloom marketing, Renovation of traditional products or Development of entrepreneurship.

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

SECTION 2

EVIDENCE OF LEVEL

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF level descriptors	NSQF Level
1. Process	The learner can express briefly on ongoing Government Schemes, handloom Policy & handloom clusters.	The learner is well acquainted with the process with clear choice for formulation of developmental proposal & production plan for the handloom weavers basing on the latest study & demand of the market.	4
	The trainee can discuss on modern management concept including TQM, EOQ, Project Management Concept- Constitution of SHGs and SMEs.	The learner is able to adopt the process for constitution of SHGs, SMEs Co-operatives, manage the quality control & inventory control system in a situation of clear choice.	
	The learner can handle the computer & work on, MS Office (Word & Excel).	The learner is able to handle the computer loaded with CATD package independently with his limited knowledge in a routine & predictable manner.	
	The trainee can operate CATD software using paint, weave and drape sections with concept of Colour Cycle, Floral & all over Design, Designs for Dobby, Jacquard, Jalla weave and get a copy through printer for further work.	The learner is familiar with the process for development of simple handloom design with reference to colour cycle concept & application of paint, weave & drape segments independently and able to get a hard copy of it in a predictable manner.	
	A student can prepare the Design, Draft, Peg plan, Tie-up Plan & Tie up arrangement for plain, twill, satin weave and its derivatives on graph paper before going to produce the same on handloom.	The learner knows the process of preparation of Design, Draft, Peg plan, Tie-up Plan & Tie up arrangement for basic weaves & its derivatives on graph paper independently.	
	A learner can explain clearly on Colour and weave effect, derivative weaves like Honey Comb, Huck a back, Terry weave, Double cloth, Tubular cloth, Leno weave, Mock leno weave and designing by use of Extra warp, Dobby, Jacquard, Extra weft, Jalla, Solid Boarder effect and to develop know-how on various traditional products of Odisha.	Learner is fully familiar about the process on development of the colour & weave effects, towelling fabrics, double cloth, tubular cloth, mock leno cloth, solid border effect extra warp & weft design along with traditional fabrics of Odisha independently.	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF level descriptors	NSQF Level
	A candidate can able to distinguish Natural and manmade fibre & staple length, Turn per inch (TPI), Twist , Moisture content, Strength , Single thread and lea, count etc.	The learner has a clear choice of the process of identification of a fibre by visual method & can indicate about the quality of the resultant yarn using the visual parameters in a predictable manner.	
	The trainee can understand & give practical demonstration on evaluation of fabric dimension/set and its physical properties using various equipments for analysis of cloth sample for reproduction of the same. He/She also can calculate the quantity of yarn required per square meter of fabric.	The learner knows the process of finding out the fabric dimension/set and its physical properties with thread density, crimp, shrinkage & quantity of raw material used per square meter of the fabric independently.	
	The candidate can distinguish various types of looms in the country, Types of Reed & Heald and its uses.	The candidate is able to distinguish different types of looms, reeds & healds used in handloom weaving. He knows the process of operating a handloom with all fittings independently.	
	Can demonstrate principles of Winding, Warping, Type of warp, Different parts of warping machine, Denting, Drafting of threads and Tie up arrangement.	The learner is able to demonstrate the processes involved in preparing different packages for warp, weft and beams required for construction of a fabric in a predictable way.	
	Can demonstrate different types of motions on a handloom like Primary/ Secondary/ Auxiliary motion, Types of Dobby- Tapped, Barrel , and lattice- Mounting of dobby, Principle and working of Jacquard Machine- 60 hooks, 100 Hooks, 200 hooks, Card cutting, lacing, harness building.	The trainee is able to know the process of providing different types of motions to a handloom to manufacture a fabric independently. He/ She can also work successfully on the loom attachments like different Dobbies & Jacquards providing primary motion.	
	Able to evaluate water hardness, objectives of various preparatory processes like Scouring, Bleaching, Souring of cotton, use of different Dye Stuffs like Direct, Azoic, Vat, Sulphur, Acid, Metal complex, Reactive, Disperse dyes in handloom industry.	The learner knows the process to describe the details on removal of water hardness & give practical demonstration on removal of impurities from cotton yarn through scouring, bleaching and its dyeing with different dyestuffs in a predictable manner.	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
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	<p>Able to select Azo-free eco- friendly synthetic dyes & Fibre suitable for various dye stuffs. Effect of mercerization on cotton yarn, Degumming of silk and tassar yarn. Different types of natural dyes and its application. Different types of fastness prosperities, common defects in dyeing and improvement of dye fastness. Different types of finishes on cotton and silk.</p> <p>Cotton: Sizing, Calendaring and anti crease. Silk- Scrooping and weightening</p>	<p>The trainee knows the process of selection of eco- friendly dyestuffs from the domain of synthetic dyes and finds its suitability on different fibres. He/she has clear choice of procedure for demonstration of the process of removal of sericin from silk / Tassar and can express the principles of finishing of Cotton & Silk fabric limited to Sizing, Calendaring and anti crease on cotton & Scrooping and weightening on silk. He/she can identify the dyeing defects & suggest for rectification.</p>	
	<p>Can distinguish different systems of yarn count, conversion of count, average & resultant count, Reed & Heald count & its calculation.</p>	<p>The learner is familiar with the systems of Yarn / Heald / Reed Count and related calculations. Process of differentiate indirect, direct & universal systems of count independently.</p>	
	<p>Can be able to fix ends/ inch & Picks /inch for production of a fabric set.</p>	<p>The learner can state the process of calculation of diameter of yarn with different counts & can fix the fabric set i.e. ends/inch or picks/inch independently.</p>	
	<p>Can estimate the cost of production and fix the sale price of the fabric.</p>	<p>The learner knows the process of costing of a fabric sample after complete analysis of it independently in a predictable & routine manner.</p>	
	<p>Acquires knowledge on latest developments in Handloom & Fashion Technology through study tour to different institutions / organisations like ITT, Choudwar / Women Poly Technology, Dhenkanal / NIFT, Bhubaneswar / Weavers' Service Centre, Bhubaneswar / important handloom clusters of Odisha.</p>	<p>This is a group activity. The learner is able to know the process of communication with each other including outsiders. Process of acquiring knowledge on recapitalization of Study / Hypothetical / Imaginative matters on practical/ field /spot visit.</p>	
	<p>The learner can explain on different methods and comparative study on fabric ornamentation and comparison of Ikat Fabrics in various parts of country.</p>	<p>The trainee is able to explain the Ikat process used in the country. She/he can demonstrate the steps involved in the process for development of a design through Ikat technique in a predictable & routine manner.</p>	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
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	Can calculate yarn for warp, weft and double Ikat, grouping of threads. Tying of group of threads as per design, dyeing of resisted thread, untying of yarn with repetition of processes for multicolour effect and use of tie-dyed yarn for development of the Ikat design.	The trainees knows the process of calculation of the required quantity of yarn for an Ikat design & prepare the groups from suitable package followed by tying, dyeing, untying & unwinding manually or applying mechanical means independently.	
	The learner can gain fundamental knowledge on fashion & styles, basic tailoring, cloth cutting, stitching and designing on patch work	The trainee is able to know the process of simple garment stitching with different styles & fashions independently.	
	Skill on Preparation of Project on Export oriented products, Ikat fabric, Natural dyed fabric, Handloom marketing, Renovation of traditional products or Development of entrepreneurship by a group of 3-4 students.	The learner knows the process of formulation of a feasible project report having a clear choice of decision on a particular recent trend oriented job in the handloom industry.	
2. Professional knowledge	The learner can express briefly on ongoing Government Schemes, handloom Policy & handloom clusters of state as well as Country.	The learner is able to get factual knowledge & general concepts on different Government Schemes, Handloom Policy prevailed in the state or country for development of handloom weavers.	5
	The trainee can discuss on modern management including Total Quality Management (TQM) / Economical Ordering Quantity (EOQ) / Project Management Concept- Constitution of Self Help Groups (SHGs) and Small & Medium Enterprises (SMEs) / Administration, Finance, Marketing Management related to above units.	The learner gets factual knowledge & general concepts on constitution of SHGs, SMEs & Co-operatives, Management, Quality Control & Inventory Control System of these units. Here also, the learner is most often guided by a higher officer.	
	The learner can handle the computer & work on, MS Office (Word & Excel).	The trainee is conversant with limited factual knowledge & principles of working of a computer loaded with MS Office (Word & Excel) & are able to handle the same independently.	
	The trainee can operate Computer aided Design using weave, paint and drape sections of CATD Software with concept of Colour Cycle, Floral & all over Design, Designs for Dobby, Jacquard, Jalla weave and get a copy through	The learner is well conversant with factual knowledge & principles of working of a computer loaded with CATD software. The learner is executing the work independently.	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
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	printer for further work.		
	A student can prepare the Design, Draft, Peg plan, Tie-up Plan & Tie up arrangement for plain, twill, satin weave and its derivatives on graph paper before going to produce the same on handloom.	The learner is having factual knowledge, principles & general concepts on preparation of Design, Draft, Peg plan, Tie-up Plan & Tie up arrangement for elementary weaves & its derivatives on graph paper to weave the fabric. The learner is executing the work independently.	
	A learner can explain clearly on Colour and weave effect, derivative weaves like Honey Comb, Huck a back, Terry weave, Double cloth, Tubular cloth, Leno weave, Mock leno weave and designing by use of Extra warp, Dobby, Jacquard, Extra weft, Jalla, Solid Boarder effect.	Learner is having factual knowledge, principles & general concepts for development of colour & weave effects, towelling fabrics, double cloth, tubular cloth, mock leno cloth, solid border effect extra warp & weft design. The learner is executing the work independently.	
	A student can know & explain the Properties of Natural and manmade fibre & concept of staple length, Turn per inch (TPI), Twist, Moisture content, Strength, Single thread and lea, count etc.	The candidate is well conversant with factual knowledge on properties of textile fibres, concept of staple length, Turn per inch (TPI), Twist, Moisture content, Strength, Single thread and lea, count etc. Here also, the learner is most often guided by a higher officer.	
	The trainee can understand & give practical demonstration on evaluation of fabric dimension/set and its physical properties using various equipments for analysis of cloth sample for reproduction of the same. He/She also can calculate the quantity of yarn required per square meter of fabric.	The learner is able to get sufficient knowledge on fabric dimension/set, principles, processes & general concepts of cloth analysis for reproduction of the same. The learner is executing the work independently.	
	The candidate can explain various types of looms in the country, Classification of looms, Types of Reed & Heald and its uses.	The candidate gets knowledge & concept on types and classification of handlooms, reeds & healds etc used for weaving a fabric. He can execute the work independently.	
	Able to demonstrate Winding, Warping, Type of warp, function of different parts of warping machine, Denting, Drafting of threads and Tie up arrangement.	The learner is able to get knowledge on the principles, processes & demonstration of winding, warping, denting, drafting & tie-up arrangement. He /She perform his own job	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF level descriptors	NSQF Level
		and share with other weavers in the field.	
	Can explain different types of motions on a handloom like Primary/ Secondary/ Auxiliary motion, Types of Dobby-Tapped, Barrel, and lattice- Mounting of dobby, Principle and working of Jacquard Machine- 60 hooks, 100 Hooks, 200 hooks, Card cutting, lacing, harness building.	The trainee is able to get factual knowledge on the types of motions like primary, secondary & auxiliary used in a handloom, working principles of dobby & jacquards with different capacity and set the motions independently.	
	Able to evaluate water hardness and demonstrate various preparatory processes like Scouring, Bleaching, Souring of cotton, use of different Dye Stuffs like Direct, Azoic, Vat, Sulphur, Acid, Metal complex, Reactive, Disperse dyes in handloom industry.	The learner is able to get factual knowledge on water hardness & its rectification. Principles, process & demonstration on removal of impurities from yarn, dyeing of yarn with different dyestuffs. He/she can be able to prepare recipes for the processes like Scouring, Bleaching, Scouring & apply the same on cotton yarn. He/She can do the job under the supervision of experts.	
	Able to select Azo-free eco-friendly synthetic dyes & Fibre suitable for various dye stuffs. Demonstrate on effect of mercerization on cotton yarn, Degumming of silk and tassar yarn, different types of natural dyes and its application, different types of fastness prosperities and identify common defects in dyeing and improvement of dye fastness.	The trainee is able to get limited factual knowledge on selection of azo-free eco-friendly dyestuffs from the domain of synthetic dyes and finds its suitability on different fibres. Process of identifying the common dyeing defects & suggest for its rectification.	
	Acquires knowledge on different systems of yarn count, conversion of count, average & resultant count, Reed & Heald count & its calculation.	The learner is able to get knowledge on definition of yarn, heald & reed count and process & principles of related calculations conversion, average or resultant count and work out independently.	
	Able to define diameter of yarn- Fixation of ends/ inch & Picks /inch- cover factor, Various aspects of yarn (Count, twist, strength etc), Warping and Take up motion calculation.	The learner gets concept on yarn diameter, principles & process of calculation of diameter of yarn with different counts & fixation of textural parameters i.e. ends/inch or picks/inch.	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
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	Fundamental knowledge on Costing of fabric.	The learner is able to get knowledge on general concepts & procedures regarding preparation of costing of a given fabric sample or a fabric to be developed. He can fix the price of a product independently.	
	Acquires knowledge on latest developments in Handloom & Fashion Technology through study tour to different institutions / organisations like ITT, Choudwar / Women Poly technology, Dhenkanal / NIFT, Bhubaneswar / Weavers' Service Centre, Bhubaneswar / important handloom clusters of Odisha.	As a group activity, the learner is able to get knowledge on mode of interaction with each other & outsiders. Process of recapitalization of theoretical hypothesis with practical utility in the field of work independently.	
	The learner can explain on different methods and comparative study on fabric ornamentation and comparison of Ikat Fabrics in various parts of country.	The trainee is able to get the basic facts on principles & processes of manufacturing of Ikat fabrics in the country. She/he is able to distinguish the basic difference between yarn resist methods & fabric resist methods of Ikat manufacturing.	
	Can calculate requirement of yarn for warp, weft and double Ikat, grouping of threads, tying of group of threads as per design, dyeing of resisted thread, untying of yarn with repetition of processes for multicolour effect and use of tie-dyed yarn for development of the Ikat design.	The learner is able to get principles & concepts of manufacturing of Ikat fabrics including calculation of the required quantity of yarn for an Ikat design & prepare the groups from suitable package manually or applying mechanical means. The trainee knows the method of practical demonstration of different steps of the techniques like tying, dyeing, untying & unwinding etc. He can develop the Ikat samples independently.	
	The learner can gain fundamental knowledge on fashion & styles, basic tailoring, cloth cutting, stitching and designing on patch work	The trainee is well conversant with basic facts, process & principles of cloth cutting, stitching & designing for garments with different styles & fashions independently.	
	Acquires knowledge on Preparation of Project on Export oriented products, Ikat fabric, Natural dyed fabric, Handloom marketing, Renovation of traditional products	The learner has knowledge on facts, principles & process for formulation of a sustainable project report having a clear choice of decision on a particular recent trend oriented job in	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF level descriptors	NSQF Level
	or Development of entrepreneurship by a group of 3-4 students .	the handloom industry.	
3. Professional skill	The learner can express briefly on ongoing Government Schemes, handloom Policy & handloom clusters of state as well as Country.	The learner is fully equipped with professional skill to recall & describe the guidelines for implementation of different Government Schemes; Handloom Policy prevailed in the state or country for development of handloom weavers.	5
	The trainee can discuss on modern management including Total Quality Management (TQM) / Economical Ordering Quantity (EOQ) / Project Management concept- Constitution of Self Help Groups (SHGs) and Small & Medium Enterprises (SMEs) / Administration, Finance, Marketing Management related to SHGs, SMEs, Co-operatives etc.	The learner is able to get ample professional skill to recall and narrate step by step like, constitution of SHGs, SMEs & Co-operatives, Modern management, Quality Control & Inventory Control System of these units.	
	The learner can handle the computer & work on, MS Office (Word & Excel).	The learner is has knowledge & professional skill to recall & demonstrate the running of a computer loaded with a limited & narrow range of application like MS Office (Word & Excel) by practical work in repetitive manner.	
	The trainee can operate Computer aided Design using weave, paint and drape sections of CATD Software with concept of Colour Cycle, Floral & all over Design, Designs for Dobby, Jacquard, Jalla weave and get a copy through printer for further work.	The trainee is able to get the professional skill to recall & demonstrate the running of a computer loaded with CATD software using appropriate rule of paint, weave & drape functions with quality parameters of the desired fabric.	
	A student can prepare the Design, Draft, Peg plan, Tie-up Plan & Tie up arrangement for plain, twill, satin weave and its derivatives on graph paper before going to produce the same on handloom.	The learner is professionally skilled on preparation of Design, Draft, Peg plan, Tie-up Plan & Tie up arrangement for elementary weaves & its derivatives on graph paper to weave the fabric by practical performance using appropriate principle & quality parameters.	
	A learner can explain clearly on Colour and weave effect,	The learner is professionally skilled on development of colour &	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF level descriptors	NSQF Level
	derivative weaves like Honey Comb, Huck a back, Terry weave, Double cloth, Tubular cloth, Leno weave, Mock leno weave and designing by use of Extra warp, Dobby, Jacquard, Extra weft, Jalla, Solid Boarder effect and to develop knowhow on various products of Odisha like Bomkai, Habaspuri, Khandua, Dhalapathar Parada.	weave effects, towelling fabrics, double cloth, tubular cloth, mock leno cloth, solid border effect extra warp & weft design independently by practical performance using appropriate principle & quality parameters.	
	A student can distinguish the Natural and manmade fibre & concept of staple length, Turn per inch (TPI), Twist, moisture content, Strength, Single thread and lea, count etc.	The learner is equipped with professional skill to recall & demonstrate the properties of textile fibres in a narrow range of application like, staple length, Turn per inch (TPI), Twist, Moisture content, Strength, Single thread and lea, count etc.	
	The trainee can give practical demonstration on evaluation of fabric dimension/set and its physical properties using various equipments for analysis of cloth sample for reproduction of the same. He/She also can calculate the quantity of yarn required per square meter of fabric.	The learner is professionally skilled to find out the parameters of fabric dimensions, like length & width, Set, like ends/inch, picks/inch & count of the yarn through cloth analysis for reproduction of the same by practical performance using appropriate principles & quality concepts.	
	The candidate can distinguish various types of looms in the country, Types of Reed & Heald and its uses.	The candidate is professionally skilled to recall & demonstrate the general concept, in narrow range of application like types and classification of handlooms, reeds & healds etc used for weaving a fabric using appropriate principles & quality concepts.	
	Can demonstrate principles of Winding, Warping, Type of warp, Different parts of warping machine, Denting, Drafting of threads and Tie up arrangement.	The candidate is professionally skilled to recall & demonstrate the pre weaving processes in a narrow of application like, winding, warping, denting, drafting & tie-up arrangement by repetitive practical works using basic fundamental methods & tools.	
	Acquires knowledge on types of motions on a handloom like Primary/ Secondary/ Auxiliary motion, Types of Dobby- Tapped, Barrel, and lattice- Mounting of doobby,	The candidate is also professionally skilled to recall & demonstrate on types motions in a narrow range of application like primary, secondary & auxiliary used in a handloom,	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF level descriptors	NSQF Level
	Principle and working of Jacquard Machine- 60 hooks, 100 Hooks, 200 hooks, Card cutting, lacing, harness building.	working principles of dobby & jacquards with different capacity using appropriate rule & quality norms.	
	Can evaluate water hardness, demonstrate various preparatory processes like Scouring, Bleaching, Souring of cotton, use of different Dye Stuffs like Direct, Azoic, Vat, Sulphur, Acid, Metal complex, Reactive, Disperse dyes in handloom industry.	The learner has knowledge & professional skill to recall & demonstrate type of water hardness & its rectification. Principles, process & demonstration in narrow range of application like scouring, dyeing of yarn with different dyestuffs in repetitive & routine manner.	
	Can select Azo-free eco- friendly synthetic dyes & Fibre suitable for various dye stuffs, effect of mercerization on cotton yarn, Degumming of silk and tassar yarn, different types of natural dyes and its application, different types of fastness prosperities, common defects in dyeing and improvement of dye fastness, different types of finishes on cotton and silk. Cotton: Sizing, Calendaring and anti crease. Silk- Scrooping and weightening	The learner is professionally skilled to recall & demonstrate on selection process of azo-free eco-friendly dyestuffs from the domain of synthetic dyes and finds its suitability on different fibres. Process of identifying the common dyeing defects & suggest for its rectification in repetitive & routine manner.	
	Acquires knowledge on different systems of yarn count, conversion of count, average & resultant count, Reed & Heald count & its calculation.	The learner is professionally skilled to recall & demonstrate the definition of a narrow range of application like, yarn, heald & reed and its count, process & principles of related calculations conversion, average or resultant count in a repetitive & routine manner.	
	Can demonstrate diameter of yarn- Fixation of ends/ inch & Picks /inch- cover factor, Various aspects of yarn (Count, twist, strength etc), Warping and Take up motion calculation.	The learner is professionally skilled to recall & demonstrate on a range of cognitive & practical skills on yarn diameter, principles & process of calculation of diameter of yarn with different counts & fixation of textural parameters i.e. ends/inch or picks/inch using basic method & tools.	
	The learner can explain on different methods and comparative study on fabric ornamentation and comparison of Ikat Fabrics in various parts of country.	The learner is with professional skill to recall & demonstrate on principles & processes of manufacturing of Ikat fabrics in the country in a narrow range of application i.e. by yarn resist	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
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		methods & fabric resist methods of Ikat manufacturing.	
	Acquires knowledge on calculation of yarn for warp, weft and double Ikat, grouping of threads. Tying of group of threads as per design, dyeing of resisted thread, untying of yarn with repetition of processes for multicolour effect and use of tie-dyed yarn for development of the Ikat design.	The learner is professionally skilled to narrate & demonstrate the general principles & concepts on manufacturing of Ikat fabrics with a range of cognitive & practical skills i.e. calculation of the required quantity of yarn for an Ikat design & prepare the groups from suitable package manually or applying mechanical means. Demonstration of different steps of the techniques like tying, dyeing, untying & unwinding etc.	
	The learner can gain fundamental knowledge on fashion & styles, basic tailoring, cloth cutting, stitching and designing on patch work	The trainee is professionally skilled to recall & demonstrate on basic facts, process & principles in routine & repetitive in a narrow range of application like cloth cutting, stitching & designing for garments with different styles & fashions.	
	Acquires skill on Preparation of Project on Export oriented products, Ikat fabric, Natural dyed fabric, Handloom marketing, Renovation of traditional products or Development of entrepreneurship by a group of 3-4 students.	The learner is professionally skilled to recall & demonstrate the basic facts, principles & process for formulation of a sustainable project report having a clear choice of decision on a particular recent trend oriented job in the handloom industry.	
4. Core skill	The learner can express briefly on ongoing Government Schemes, handloom Policy & handloom clusters of state as well as Country.	The learner is having core skill on formulation of developmental proposal & production plan as per present market trend & handloom reservation act with skill of basic mathematical principles.	4
	The trainee can discuss on modern management including Total Quality Management (TQM) / Economical Ordering Quantity (EOQ) / Project Management concept- Constitution of Self Help Groups (SHGs) and Small & Medium Enterprises (SMEs) / Administration, Finance, Marketing Management related to SHGs, SMEs, Co-operatives etc.	The learners is having core skill concept on calculation on requirement of raw materials in EOQ formula & maintain quality as per TQM principles with core knowledge on personal banking to provide adequate finance to sustain the activity.	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

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	The learner can handle the computer & work on, MS Office (Word & Excel).	The learner is having sufficient knowledge for applying his core skill of type master while preparing drafts & application of formulas on excel calculation sheets.	
	The trainee can operate Computer aided Design using weave, paint and drape sections of CATD Software with concept of Colour Cycle, Floral & all over Design, Designs for Dobby, Jacquard, Jalla weave and get a copy through printer for further work.	The learner is also having knowledge to apply his core skills like relation between pixels & ends per inch or picks per inch etc during design drawing through paint, weave insertion & manufacturing of fabric and finally visuals through drape software.	
	A student can prepare the Design, Draft, Peg plan, Tie-up Plan & Tie up arrangement for plain, twill, satin weave and its derivatives on graph paper before going to produce the same on handloom.	The learner is able to develop the fabric samples with various designs, where the core skill like repeat of a weave, denting & drafting principles, tie-up arrangement for shedding etc are utilised. The learner is executing the work independently.	
	A learner can explain clearly on Colour and weave effect, derivative weaves like Honey Comb, Huck a back, Terry weave, Double cloth, Tubular cloth, Leno weave, Mock leno weave and designing by use of Extra warp, Dobby, Jacquard, Extra weft, Jalla, Solid Boarder effect and to develop knowhow on various products of Odisha like Bomkai, Habaspuri, Khandua, Dhalapathar Parada.	Learner is having the core skill on development of the colour & weave effects, towelling fabrics, double cloth, tubular cloth, mock leno cloth, solid border effect extra warp & weft effect. The core skill like the principles for development of fabric design with bird's eye-view, hound's teeth effect, moisture absorbing properties etc are well utilised independantly.	
	A student can explain the Properties of Natural and manmade fibre & concept of staple length, Turn per inch (TPI), Twist, Moisture content, Strength, Single thread and lea, count etc.	The learner is able to apply his core skill on service of fabrics as per their constituent yarns, like moisture absorbency capacity of constituent fibre makes the fabric comfortable & accordingly the raw materials are to be selected.	
	The trainee can give practical demonstration on evaluation of fabric dimension/set and its physical properties using various equipments for analysis of cloth sample for reproduction of the same. He/She also can calculate the quantity of yarn required per square meter of fabric.	The learner is able to apply his core skills to find out the parameters like, thread density, crimp, shrinkage & type and quantity of raw material used, structure, design, dimensions, count of warp & weft etc with application of arithmetic and algebraic principles.	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
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	The candidate can explain various types of looms in the country, Classification of looms, Types of Reed & Heald and its uses.	The candidate is able to apply his skill to explain a loom with appropriate calculation of reed & heald count as per count of yarn used.	
	Can express principles of Winding, Warping, Type of warp, Different parts of warping machine, Denting, Drafting of threads and Tie up arrangement.	The learner is able to pre-select the appropriate yarn for construction of fabric as per end use with requisite properties by applying his core skill on design, draft, peg plan, tie-up plan & tie-up arrangement to make the fabric with his basic arithmetic and algebraic knowledge.	
	Acquires Knowledge on types of motions on a handloom like Primary/ Secondary/ Auxiliary motion, Types of Dobby- Tapped, Barrel , and lattice- Mounting of doobby, Principle and working of Jacquard Machine- 60 hooks,100 Hooks, 200 hooks, Card cutting, lacing, harness building.	The trainee is able to make attachment of different Dobbies & Jacquards on loom. He/ She is able to rearrange the dismantled parts of take up / let off motions, Dobbies & Jacquards. The trainee can adopt core principle of dividend for setting the picks per inch in a fabric by applying his basic arithmetic and algebraic knowledge.	
	Can evaluate water hardness and demonstrate objectives of various preparatory processes like Scouring, Bleaching, Souring of cotton, use of different Dye Stuffs like Direct, Azoic, Vat, Sulphur, Acid, Metal complex, Reactive, Disperse dyes in handloom industry.	The learner is with core skills on preparation of different recipes for pre processing like, removal of water hardness, impurities from yarn, dyeing of yarn different dyestuffs by his basic arithmetic and algebraic application along with understanding of natural environment.	
	Can select Azo-free eco- friendly synthetic dyes & Fibre suitable for various dye stuffs. Effect of mercerization on cotton yarn, Degumming of silk and tassar yarn. Different types of natural dyes and its application. Different types of fastness prosperities, common defects in dyeing and improvement of dye fastness. Different types of finishes on cotton and silk. Cotton: Sizing, Calendaring and anti crease. Silk- Scrooping and weightening	The learner is with core skills on preparation of different recipes for mercerization of cotton yarn, removal of serecin from silk / Tassar yarn, finishing of Cotton & Silk fabric like, Sizing, Calendaring and anti crease on cotton & Scrooping and weightening on silk yarn by his basic arithmetic and algebraic application along with understanding of natural environment.	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
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	Acquires knowledge on different systems of yarn count, conversion of count, average & resultant count, Reed & Heald count & its calculation.	The learner is able to apply his core skill calculation on fixed weight / length system/universal system of yarn count for fabric construction by his basic arithmetic and algebraic principles.	
	Acquires knowledge on Diameter of yarn- Fixation of ends/ inch & Picks /inch- cover factor, Various aspects of yarn (Count, twist, strength etc), Warping and Take up motion calculation.	The learner is able to apply his core skill on calculation of diameter of yarn with different counts & can fix the fabric set i.e. ends/inch or picks/inch. He is also able to calculate the texture of fabric in terms of cover factor by applying required mathematical formula. He/she can apply the principle of Ashunhurst's rule & Pierce' yarn geometry for fabric construction.	
	Acquires knowledge on latest developments in Handloom & Fashion Technology through study tour to different institutions / organisations like ITT, Choudwar / Women Poly technology, Dhenkanal / NIFT, Bhubaneswar / Weavers' Service Centre, Bhubaneswar / important handloom clusters of Odisha.	This is a group activity. The candidate is able to communicate written or oral with required clarity with the people of visiting organizations by understanding political & natural environment. He/she is also able to recapitalised theoretical knowledge acquired during learning sessions in the study tour by his core skill.	
	The learner can explain on different methods and comparative study on fabric ornamentation and comparison of Ikat Fabrics in various parts of country.	The learner is with core skills to narrate the steps involved in development of a Ikat design through yarn resist method or fabric resist method by understanding natural environment.	
	Knowledge on calculation of yarn for warp, weft and double Ikat, grouping of threads. Tying of group of threads as per design, dyeing of resisted thread, untying of yarn with repetition of processes for multicolour effect and use of tie-dyed yarn for development of the Ikat design.	The trainee is with core skills to calculate the required quantity of yarn for an Ikat design & prepare the groups from suitable package manually & applying mechanical means with arithmetic & algebraic principles with understanding of fineness of design with respect to count of yarn & desired motif.	
	The learner can gain knowledge on fashion & styles, basic tailoring, cloth cutting, stitching and designing on patch	The trainee is able to apply his/her core skill on manufacturing of apparels like baby frock, trousers, petty coats etc. following	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
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	work	the steps like pattern making, cloth cutting, sewing & finishing by applying arithmetic & algebraic principles.	
	Skill on Preparation of Project on Export oriented products, Ikat fabric, Natural dyed fabric, Handloom marketing, Renovation of traditional products or Development of entrepreneurship by a group of 3-4 students .	The candidate is able to communicate written or oral with required clarity with the elements of project assignment & a clear choice of decision for a particular job in the handloom industry & is able to prepare a sustainable project report by applying arithmetic & algebraic principles. 7	
5. Responsibility	The learner can express briefly on ongoing Government Schemes, handloom Policy & handloom clusters of state as well as Country.	The learner is able to formulate developmental proposal & responsible for production plan for the handloom weavers basing on the latest study & demand of the market, protecting handloom domain.	5
	The trainee can discuss on modern management including Total Quality Management (TQM) / Economical Ordering Quantity (EOQ) / Project Management concept- Constitution of Self Help Groups (SHGs) and Small & Medium Enterprises (SMEs) / Administration, Finance, Marketing Management related to SHGs, SMEs, Co-operatives etc.	The learner is responsible for constitution of SHGs & SMEs, manage the quality control & inventory control system including the financial matter involved in production & marketing activities.	
	The learner can handle the computer & work on, MS Office (Word & Excel).	The learner is able to handle the computer independently to some extent as per the process taught & work on MS Office (Word & Excel).	
	The trainee can operate Computer aided Design using weave, print and drape sections of CATD Software with concept of Colour Cycle, Floral & all over Design, Designs for Dobby, Jacquard, Jalla weave and get a copy through printer for further work.	The learner is responsible for own work & learning. He/she is able to prepare a handloom design through the process related to print, weave and drape sections of the CATD package independently.	
	A student can prepare the Design, Draft, Peg plan, Tie-up Plan & Tie up arrangement for plain, twill, satin weave and	The learner is responsible for own work & learning. He/she is able to prepare Design, Draft, Peg plan, Tie-up Plan & Tie up	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF level descriptors	NSQF Level
	its derivatives on graph paper before going to produce the same on handloom.	arrangement for elementary weaves & its derivatives on graph paper.	
	A learner can explain clearly on Colour and weave effect, derivative weaves like Honey Comb, Huck a back, Terry weave, Double cloth, Tubular cloth, Leno weave, Mock leno weave and designing by use of Extra warp, Dobby, Jacquard, Extra weft, Jalla, Solid Boarder effect and to develop knowhow on various products of Odisha like Bomkai, Habaspuri, Khandua, Dhalapathar Parada.	Learner is responsible for own work & learning on development of the colour & weave effects, towelling fabrics, double cloth, tubular cloth, mock leno cloth, solid border effect extra warp & weft design along with traditional fabrics of Odisha. The learner is executing the work independently at his own responsibility.	
	A student can know & explain the Properties of Natural and manmade fibre & concept of staple length, Turn per inch (TPI), Twist, Moisture content, Strength, Single thread and lea, count etc.	The learner is responsible for own work & learning for identification a fibre by visual method & can indicate the quality of the resultant yarn using such visual parameters.	
	The trainee can understand & give practical demonstration on evaluation of fabric dimension/set and its physical properties using various equipments for analysis of cloth sample for reproduction of the same. He/She also can calculate the quantity of yarn required per square meter of fabric.	The learner is able to find out fabric dimension/set, physical properties, thread density, crimp, shrinkage & quantity of raw material used/required per square meter of the fabric. The trainee is responsible for own work & learning for reproduction of the sample on a procurement order by analysing the factors like structure, design, dimension, count of warp & weft etc..	
	The candidate can explain various types of looms in the country, Classification of looms, Types of Reed & Heald and its uses.	The candidate can be able to distinguish different types of looms, reeds, heald & can operate a handloom with all fittings. He/she can execute the work here independently.	
	Able to express principles of Winding, Warping, Type of warp, Different parts of warping machine, Denting, Drafting of threads and Tie up arrangement.	The learner can be able to demonstrate the processes involved in preparing different packages for warp, weft and beams required for construction of a fabric, calculate the quantum of raw materials required for preparing the fabric. He /She perform his own job and share with other weavers in the field.	
	Acquires knowledge on types of motions on a handloom	The trainee is responsible for own work & learning on types of	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

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	like Primary/ Secondary/ Auxiliary motion, Types of Dobby- Tapped, Barrel , and lattice- Mounting of doobby, Principle and working of Jacquard Machine- 60 hooks,100 Hooks, 200 hooks, Card cutting, lacing, harness building.	motions used in handlooms and work successfully on the loom attachments like different Dobbies & Jacquards, rearrange the dismantled parts of take up / let off motions, Dobbies & Jacquards & can adopt the principle of dividend for setting the picks per inch in a fabric at his own risk.	
	Able to evaluate water hardness, objectives of various preparatory processes like Scouring, Bleaching, Souring of cotton, use of different Dye Stuffs like Direct, Azoic, Vat, Sulphur, Acid, Metal complex, Reactive, Disperse dyes in handloom industry.	The learner is responsible for own work & learning. He/she is able to deliver practical demonstration on removal of water hardness, impurities from yarn, dyeing of yarn with different dyestuffs, prepare recipes for Scouring, Bleaching, Souring & apply the same on cotton yarn.	
	Can select Azo-free eco- friendly synthetic dyes & Fibre suitable for various dye stuffs. Effect of mercerization on cotton yarn, Degumming of silk and tassar yarn. Different types of natural dyes and its application. Different types of fastness prosperities, common defects in dyeing and improvement of dye fastness. Different types of finishes on cotton and silk. Cotton: Sizing, Calendaring and anti crease. Silk- Scrooping and weightening	The trainee is responsible for own work & learning. He/she is able to select eco- friendly dyestuffs from the domain of synthetic dyes, demonstrate the process of removal of sericin from silk / Tassar, principles of finishing like, Sizing, Calendaring and anti crease on cotton & Scrooping and weightening on silk independently .	
	Acquires knowledge on different systems of yarn count, conversion of count, average & resultant count, Reed & Heald count & its calculation.	The learner is able to define the systems of Yarn / Heald / Reed Count and related calculations, International, fixed weight or fixed length systems of yarn count independently.	
	Able to gain thorough idea on Diameter of yarn- Fixation of ends/ inch & Picks /inch- cover factor, Various aspects of yarn (Count, twist, strength etc), Warping and Take up motion calculation.	The learner is responsible for own work & learning. He/she is able to calculate the diameter of yarn with different counts & can fix the fabric set i.e. ends/inch or picks/inch, calculate the texture of fabric in terms of cove factor applying the principle of Ashunhurst's rule & Pierce' yarn geometry for fabric construction independently.	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

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	Able to acquire thorough knowledge on Costing of fabric.	The learner is responsible for own work & learning for preparation of costing of fabric by using the construction particulars of the cloth like, ends/inch, picks/inch, crimp & shrinkage %. She/he can fix the price of a product independently.	
	Acquires knowledge on latest developments in Handloom & Fashion Technology through study tour to different institutions / organisations like ITT, Choudwar / Women Poly technology, Dhenkanal / NIFT, Bhubaneswar / Weavers' Service Centre, Bhubaneswar / important handloom clusters of Odisha.	The candidate is responsible for own work & learning, able to prepare a study tour report covering the outcomes of the study tour being shared by other co-trainees.	
	The learner can explain on different methods and comparative study on fabric ornamentation and comparison of Ikat Fabrics in various parts of country.	The trainee is responsible for own work & learning. He/she is able to explain the Ikat process used in the country, demonstrate the steps involved in development of a design through Ikat technique, distinguish the basic difference between yarn resist method & fabric resist method independently.	
	Able to calculate yarn for warp, weft and double Ikat, grouping of threads. Tying of group of threads as per design, dyeing of resisted thread, untying of yarn with repetition of processes for multicolour effect and use of tie-dyed yarn for development of the Ikat design.	The trainee is able to calculate the required quantity of yarn for an Ikat design, prepare the groups from suitable package manually or applying mechanical means, demonstrate the techniques of tying, dyeing, untying & unwinding etc. Involved in the Ikat designing independently. He/she is also able to guide weavers.	
	The learner can gain fundamental knowledge on fashion & styles, basic tailoring, cloth cutting, stitching and designing on patch work	The trainee is responsible for own work & learning, able to explain on different styles & fashions, apparel manufacturing like, baby frock, trousers, petty coats followed with the steps like pattern making, cloth cutting, sewing & finishing	
	Can prepare Project on Export oriented products, Ikat	The learner is having a clear choice of decision for a particular	

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

	Title/Name of qualification/component: Certificate Course in Handloom Weaving & Design		Level: 5
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	fabric, Natural dyed fabric, Handloom marketing, Renovation of traditional products or Development of entrepreneurship by a group of 3-4 students .	job in the handloom industry & is able to prepare a sustainable project report with justified break even analysis on his/her own responsibility considering involved factors for creating scope of employment & self employment.	

SECTION 3

EVIDENCE OF NEED

What evidence is there that the qualification is needed?

1. The Handloom Sector is one of the largest unorganized economic activities after agriculture and constitutes an integral part of the rural and semi rural livelihood. Handloom weaving constitutes one of the richest and most vibrant aspects of the Indian cultural heritage. The sector has an advantage of being less capital intensive, minimal use of power, eco-friendly, flexibility of small production, informal school for skill generation and transfer of technology openness to innovations and adaptability to market requirements. It is a natural productive asset and tradition at cottage level, which has sustained and grown by transfer of skill from one generation to other.
2. As per 3rd Handloom Census report of Ministry of Textiles, Govt. of India, carried out in 2009-10, 43.31 lakh people are engaged in weaving and allied activities with 23,77,331 no. of handlooms in the country out of which 36.33 lakh workers in rural areas and 6.98 lakh workers in urban areas. In Odisha, 1,14,106 nos. of handloom weavers & allied workers are engaged with 43,652 no. of handlooms. **(Annexure – 7)**
3. As per the report of Odisha Economic Survey 2014-15, published during February'2015 by the Planning and Coordination Department, Directorate of Economics and Statistics, Government of Odisha, there is an urgent need to impart training on skill development. **(Annexure – 8)**
4. As per the monthly news letter published by the Handloom Export Promotion Council (HEPC) in March'2015, there is a 72.64% growth on export of handloom fabrics from April 2013-January2014 to April 2014-January2015. **(Annexure – 9)**
5. As per the report of Development Commissioner (Handlooms) published on 30th December'2015, the handloom cloth production has increased from 6952 million square meters in 2012-13 to 7203 million square meters in 2014-15 with increase in exports from Rs.2233 Crore in 2013-14 to Rs.2246 Crore in 2014-15. **(Annexure – 9)**
6. The vision of 12th Plan in Handloom Sector says **“To develop a strong, competitive and vibrant Handloom Sector to provide sustainable employment to the handloom weavers particularly belonging to disadvantaged section of the Indian society and to ensure inclusive growth of the sector”**. The approach to the 12th Plan is
 - To sustain and strengthen the traditional knowledge, skills and capabilities of the weavers.
 - To expand productive employment
 - To develop a strong brand promotion channel for market development of the handloom products especially for younger generation and Niche market.
 - To encourage handloom sector for greater value addition to cater niche markets and younger generation including exports. **(Annexure – 10)**

To cater the requirement of the handloom industry of the state, for upliftment of the socio economic condition of the weaver artisans by product diversification as per the need of the recent market and to develop entrepreneurship, the base level technical qualified resource is needed. There was scarcity of technically qualified man power to guide the weavers in the state and to overcome the situation the State Govt. established **Pattern Making Factory training centre (P.M.F.) during 1965 at Khordha** to appoint the successful trainees at base level technical post. Subsequently, it is changed to **Institute of**

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016

Handloom Weaving and Design in the year 2007-08. (Annexure - 2) Accordingly, the course content was restructured with a view to provide a better service to the handloom industry of the state, looking into the changed scenario of fashion, style and choice of the consumer.

What is the estimated uptake of this qualification and what is the basis of this estimate?

Total uptake capacity of a batch is 15 and as per available records, more than 214 nos. of trainees have passed out from the Institute and engaged in various fields of the industry. **(Annexure - 11)** At present 76 nos. of candidates of this qualification are working successfully under the Directorate of Textiles, Odisha in the capacity of Technical Assistant, Junior Weaving Supervisor, Inspector of Industries and Technical Superintendent. **(Annexure - 12)** Many of the candidates have been self employed.

The Odisha Handloom products have created a good demand through e-marketing by reputed organisations like Boyanika, Utkalika and Sambalpuri Bastralaya. The products the handloom industry has still demand of this qualification to cater its need. As per present need in the Directorate of Textiles, Govt. of Odisha requisition for recruitment of 13 nos. of posts of Technical Assistant with this present qualification has been sent to Odisha Staff Selection Committee. **(Annexure - 13)**

Accordingly, after receipt of selection list from Staff Selection Commission, Odisha the Director of Textiles, Odisha appoints the successful candidates as Technical Assistant.

(Annexure - 14)

What steps were taken to ensure that the qualification(s) does (do) not duplicate already existing or planned qualifications in the NSQF?

National Qualification Registrar has been referred and so far we have not found any duplicacy.

What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated?

The empowered Advisory Committee takes care of monitoring and review of the revision & updating the qualification as and when required. It is mandatory that the committee will sit once in a year for the purpose.

Basing on the recommendation of the Advisory Committee, a Technical Committee has been set up during 2015-16 and recommended for necessary changes in the existing syllabus and structure of the Institution to cater the present demand. **(Annexure - 15)**

NSQF QUALIFICATION FILE GUIDANCE











Version 6: Draft of 08 March 2016

SECTION 4

EVIDENCE OF PROGRESSION

What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?

A learner is expected to join as Technical Assistant under the Directorate of Textiles, Govt. of Odisha after successful completion of the qualification. Data sheet. His career progression is expected to progress in the following aspects.

Govt. of Odisha	Export House	Entrepreneurship		Apparel Sector	Designing	Dyeing	Weaving
Inspector of Industries / Technical Superintendent  Junior Weaving Supervisor  Technical Assistant	Senior Executive  Executive  Junior Executive	Small & Medium Entrepreneur  Micro Entrepreneur	Pre Loom Entrepreneur  Warping and Winding Operator	Supervisor  Sewing Machine Operator	Design Entrepreneur  CAD Designer	Master Dyer  Hand Dyer	Master Weaver  Dobby and Jacquard Handloom Weaver

NSQF QUALIFICATION FILE GUIDANCE

Version 6: Draft of 08 March 2016