

Revised by NSDA 25th May, 2015

QUALIFICATION FILE – CONTACT DETAILS OF SUBMITTING BODY

Name and address of submitting body:

Apparel, Made ups & Home furnishing Sector Skill Council

Apparel House 4th Floor

Sector 44, Institutional Area

Gurgaon

Name and contact details of individual dealing with the submission

Name: Ms Nidhi Trehan / Mr. Atul Madan

Position in the organisation - Joint Director Projects / Deputy Director Projects & Training

Address if different from above

Tel number(s) 9999684164 / 9971932299

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List of documents submitted in support of the Qualifications File

1. Qualification Pack
2. Occupational Map
3. Assessment Criteria
4. Industry Endorsements – already submitted

5. QUALIFICATION FILE SUMMARY

Qualification Title	Advance Pattern Maker (CAD/CAM) AMH/Q1101		
Body/bodies which will assess candidates	Apparels, Made ups & Home Furnishings Sector Skill Council		
Body/bodies which will award the certificate for the qualification.	Apparels, Made ups & Home Furnishings Sector Skill Council		
Body which will accredit providers to offer the qualification.	Apparels, Made ups & Home Furnishings Sector Skill Council		
Occupation(s) to which the qualification gives access	ADVANCE PATTERN MAKING (CAD/CAM)		
Proposed level of the qualification in the NSQF.	5		
Anticipated volume of training/learning required to complete the qualification.	360 hours		
Entry requirements / recommendations.	Graduate with training in CAD/CAM, preferably Minimum entry age as per the law – 18 years		
Progression from the qualification.	Can reach the next level as a Cutting Master (vertical mobility).		
Planned arrangements for RPL.	5 days (1-3 day – Capsule Training, 4 th – written test, 5 th day – practical)		
International Comparability	It is yet to be established		
Formal structure of the qualification			
Title of unit or other component (include any identification code used)	Mandatory/ Optional	Estimated size (learning hours)	Level
AMH/N1101 (Pattern Development through CAD/CAM)	Mandatory	240 Hrs	5
AMH/N1102 (Maintain the work area, tools and machines)	Mandatory	70Hrs	5
AMH/N1103 (Maintain health, safety and security at work place)	Mandatory	50 Hrs	5

Please attach any document giving further detail about the structure of the qualification – eg a Curriculum or Qualification Pack.

Give details of the document here:

SECTION 1

ASSESSMENT

Name of assessment body:

If there will be more than one assessment body for this qualification, give details.

Apptex Manpower Development Services Ltd
Trendsetters Skill Assessment Pvt Ltd
METTL
Skill Mantra
Methods Apparel Consultancy India Pvt Ltd
PVR Skill Central Pvt Ltd
The Assessors Guild
Think Skills
Prima Competencies Pvt Ltd
Base Research
IQAG
Fashion Futures

Will the assessment body be responsible for RPL assessment?

Give details of how RPL assessment for the qualification will be carried out and quality assured.

The workers will be assessed by empaneled Assessing Bodies and skill gaps will be analyzed, Those who are not passing, for them based on skill gaps a short term training will be conducted for 1-5 days depending on the requirement, to bridge the gap. The workers will then be reassessed and after passing the assessment will be certified by AMHSSC.

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. Introduction

1.1 This methodology is for "Assessing bodies & Assessors" to provide them a clear understanding of assessment policy for AMSSC certification of trainees.

1.2 For assessments to be fair, the assessment bodies are to ensure that the assessment process is valid, reliable, flexible and fair. Assessments are to be planned in conjunction with the training timelines and periodicity, as defined for specific trainings based on National Occupational Standards (NOS).

Assessors must ensure that assessment decisions involve collection and evaluation of sufficient evidence to enable a judgement to be made on the student's competence. An assessment should not place unnecessary demands on students which may prevent them from demonstrating competence.

2. Key Components of the Assessment Process

(a) Competence: Individuals are considered competent when they are able to consistently apply their knowledge and skills to the standard of performance required in the workplace. Both workplace and off the job training and assessment shall aim to ensure that individuals participating in the training have the competence to undertake their work role to the standard expected in a range of employment situations.

(b) Competency based Assessment: Is the process of collecting evidence and making judgements on whether competence has been achieved. This confirms that an individual can perform to the standard expected in the workplace as expressed in the National Occupational Standards.

(c) Collection of Evidence: Evidence collected may be direct, such as observation of workplace performance/hands on exercises or indirect, such as formal testing. The evidence gathered is to be valid,

sufficient, current and authentic.

(d) Judging Competence: An individual is considered competent after he/she has completed an assessment that verifies that all aspects of the Occupational Standards can be applied in an industry context. Assessment may involve a variety of assessment methods. Evidence is to be used by an assessor to make a judgement about whether a student is competent.

(e) Methodology of Assessment: Can vary from assessor to assessor. However, the process is to broadly comprise of Knowledge & Skill assessments, with the later involving practical's/on work assessment.

(f) Standards against which the students are to be assessed: National Occupational Standards pertaining to the concerned job role.

3. Planning Assessments

3.1 For assessments to be effective, the assessing body is to ensure following –

(a) Clear understanding Knowledge & Skills as defined in National Occupational Standards

(b) Selecting right assessment method. This is a key activity and would involve the following –

(i) Identify unit(s) of competency to cluster for assessment.

(ii) Develop competency profile.

(iii) Identify evidence requirements.

(iv) Review and select assessment methods.

(v) Select assessment tools and record evidence matrix.

(vi) Develop assessment plan.

3.2 The assessing body will have defined methods and mechanism to evaluate the competence of candidate's skill and knowledge.

(a) The assessing body shall have "question banks" for random selection of questions to evaluate knowledge levels for specific job roles. Process for regular maintenance and update the question bank should be defined.

(b) The assessing body shall have an appropriate mechanism to ensure that the assessors prepare results within stipulated time and send these to the assessing body.

(c) The assessing bodies shall have a mechanism to consolidate results and enter the result in web based software and communicate to concerned agencies.

3.3 Assessment: Assessments are to be a mix of knowledge and skills. For each job role, this mix is predefined in consultation with all stakeholders.

AMSSC decision will be final and binding in this regard.

3.4 Assesse details: The assessment agency is to obtain details of candidates to be assessed from training provider.

3.5 Assessment Plan : With all the above inputs, the assessing body is to have an assessment plan, covering the following :-

(a) what will be assessed, i.e., Performance criteria, Knowledge and Skills as defined in NOS

(b) how assessment will occur, i.e. the methods that will be used

(c) when the assessment will occur

(d) where the assessment will take place, i.e. the context of the assessment;

(e) the criteria for decision making, i.e. those aspects that will guide judgements; and

4. Empanelling of Assessors for AMSSC

4.1 Empanelling of assessors is the most crucial activity and is central to the success of the assessing process. The assessing body should have well-defined process for enrolling/empanelling assessors. The assessing body should have on-role/empanelled assessors with expertise in/similar to Apparel and Made ups domain or should be able to empanel such assessors within 60 days from affiliation. Due diligence is to be ensured by assessing bodies while empanelling the assessors.

4.2 The Assessor will be appointed on approval by the panel where the assessor will be judged on basis of his basic educational qualification, overall experience in the field, practical competency, market knowledge & his ability to handle the students/VTP(s).

4.3 Generic aspects for the assessors are to be ensured as follows –

(a) Familiarity with assessment schemes.

- (b) Thorough knowledge of the relevant assessment/ examination methods and examination documents.
- (c) fluent in communication in the language of examination, and
- (d) free from any interest so that they can make impartial and non-discriminatory judgment / assessment.

4.4 On successful evaluation, assessors will be affiliated with AMSSC for specific job roles/NVQF level. Each assessor will be awarded a unique identity number.

5. Conduct of Assessments

- 5.1 The assessments are to be conducted by pre-approved (by AMSSC) assessors for specific job roles.
- 5.2 Assessments are to be based on the criteria defined by AMSSC.
- 5.3 The theoretical assessments, if manual, are to follow different question paper for each candidate
- 5.4 Skill assessments are to be based on practical, hands-on work by candidates. For soft skills, role plays, structured activities, on-field assessments etc. are to be considered.
- 5.5 For candidates who are not literate, assessment should be done based on observation of practical skills.
- 5.5 Evidence gathering and recording of evidence is to be ensured.
- 5.6 The entire assessment process is to be video-graphed.

6. Assessment Records & Results

- 6.1 Record of all candidates having enrolled and gone through the training process is to be separately maintained by the assessing body.
- 6.2 Documentation, which needs to be maintained for each specific assessment include the following –
 - (a) Reference to relevant QP/NOS
 - (b) Competency profile for the job role
 - (c) Assessment tools, equipment, checklist
 - (d) Assessment plan & details of Assessor
 - (e) Record of evidence presented and assessed
 - (f) Records and reporting of assessment decision
 - (g) Appeals information
 - (h) Assessments filled by Assessor for trainees

The Process

1. Skill Assessment Examination Pattern

Theory and Practical assessment: The assessment will have 2 separate sections.

Section A – Theory

25 Objective type questions of 1 Marks each. Total 25 Marks. [Time duration – 45 min]

The objective type theory questions shall be drawn in prescribed format from the available question bank by AMSSC, Govt. of India or in case of unavailability of the same the expert assessors will make the question paper. For this work a team of educationalist (Teachers / Diploma / Degree holders / Professors / Ph.D) of the same field are contacted and they prepare the question bank.

Section B – Practical Exam and
Viva Voce

5 practical questions, the candidate has to perform any 3, each practical is of 20 marks. Total 60 marks.
[Time duration – 2 hrs for all given 3 practical tasks]

The marks will be distributed as per following –

Theory	Viva Voce	Practical Marks (60)			Total Marks
		Written & Practical	Quality & Safety	Attitude	
25	15	50	5	5	100

The candidate has to write the methodology adopted with tools used in a separate answer sheet.

The practical questions shall be drawn from the prescribed question bank by AMSSC, Govt. of India or in case of unavailability of the same the expert assessors will make the questions for the same.

2. Minimum passing marks for candidates

As per MES guidelines the minimum passing marks in each

Theory – 40%

Practical – 60%

In order to get certified the candidate has to secure minimum passing marks in theory and practical paper separately. Passing marks minimum 50% average.

3. The essential Documentation and procedures

a. Pre Exam

- Contacting VTPs for scheduling of the exam dates for generation of ABN nos.
- Allocation of Assessor for the particular ABN(s)
- Setting of theory and practical paper based on NOS curriculum & drawn from question banks provided by AMSSC, Govt. of India and in absence of the same will be set by the expert assessor's panel.
- Preparation of customised exam related documents, generation of attendance sheets & results sheets with other allied documents. Sealing of paper set envelopes (theory & practical) of various trades along with other necessary documents by the confidential section of the assessing agency.

b. During Examination

- Opening of the sealed question paper envelope/s in the presence of Principal/Centre Head with their signature and seal.
- Accountability statement/Guidelines for the invigilators/examiners/assessors (Annex – 1).
- Attendance of the candidates with verification (Annex – 1)
- Declaration by the candidate. (Annex – 1)
- After examination all the papers, documents (including practical madeups) will be sealed back in an envelope & will be taken back by the assessing body for valuation and post exam work.

c. Post Exam

- Valuation of theory papers/practical papers by the assessors: The theory paper and practical will be evaluated by the allocated authorised assessors on the same day and the marks will be entered in the

prescribed format. (Annex – 1)

- Preparation of results in prescribed format. (Annex – 1)
- Verification of results by Assessing body

4. Results

The result will be prepared by assessing agency within 3 days in prescribed format (as per guidelines) and the same will be send to AMSSC in soft copy.

Documentation required in the process of assessment

Accountability statement

Candidate Attendance Sheet

Declaration form to be filled by candidates

Exam Result Sheets

Practical Exam Sheets

Feedback Sheets (optional) for students & VTP

Assessor Empanelment Format

Observation Checklists

Tests (Written papers/records)

Evidence Record Sheets

Result Submission format

Please attach any documents giving further information about assessment and/or RPL.

Give details of the document(s) here:

ASSESSMENT EVIDENCE

Complete the following grid for each grouping of NOS, assessment unit or other component as per the assessment criteria. Insert the required number of rows.

CRITERIA FOR ASSESSMENT OF TRAINEES

Advance Pattern Maker (CAD/CAM)

AMH/Q1101

AMHSSC

Guidelines for Assessment

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria
5. To pass the Qualification Pack, every trainee should score a minimum of 50% in every NOS.
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

Assessable Outcome	Assessment criteria	Marks Allocation				
		Total Mark	Out Of	Theory	Skills Practical	Viva
1. AMH/N1101 (Pattern development through CAD/CAM)	PC1 .Downloading and organizing information obtained by designer/buyer	150	10	2	6	2
	PC2 Analysing specific information and translating according to company procedure		15	9	4	2
	PC3. Coordinate with merchandiser to ensure clarity of information and resolve any possible misinterpretations		12	4	6	2
	PC4. Draft the pattern on the CAD software as per specification given		15	3	10	2
	PC5. Digitize the manual pattern on the CAD software, if applicable, as per specification		15	2	12	1

	given					
	PC6. Adjust the pattern specifications as per the standard and allowances required		6	2	2	2
	PC7. Perform size wise grading of patterns as provided in the BOM(Bill of Material)		10	2	7	1
	PC8. Incorporate shrinkage in pattern grading company instructions		9	1	7	1
	PC9. Determine the cut ratio plan		9	2	5	2
	PC10. Perform the most efficient marker(lay planning) according to the configuration intended		15	2	10	3
	PC11. Set Parameters on CAM as per required output		7	1	4	2
	PC12. Ensure the design output is cut and hand over to the next department		7	2	4	1
	PC13. Ensure the work is saved as a back-up before shutting down the CAD machine		5	1	3	1
	PC14. Take printout of mini marker to be handed over to the merchandiser, for reference		10	1	7	2
	PC15. Shut down, after use, the CAD/CAM system carefully and in accordance with company instructions		5	1	1	3
		Total	150	35	88	27
2 AMH/N1102 (Maintain work area, tools and machines)	PC1.Prepare and organize work	70	5	1	3	1

	PC2. Use correct handling procedures.		9	2	5	2
	PC3. Work in comfortable position with correct posture		5	1	3	1
	PC4. Deal with work interruptions		9	3	5	1
	PC5. Maintain tools and equipment		7	2	4	1
	PC6. Carry out running maintenance within agreed schedules		5	1	3	1
	PC7. Carry out maintenance and/or cleaning within one's responsibility		4	1	2	1
	PC8. Report unsafe equipment and other dangerous occurrences		7	2	3	2
	PC9. Use cleaning equipment and methods appropriate for the work to be carried out		4	1	2	1
	PC10. Carry out cleaning according to schedules and limits of responsibility		3	1	1	1
	PC11. Request for upgrading of system or softwares when required for effective working		4	1	2	1

	PC12. Always a backup file to be maintained when working on various design softwares		4	1	2	1
	PC13. All soft copies of design work to be maintained in files as well for future reference		4	1	2	1
		Total	70	18	37	15
3 . AMH/N1103 (Maintain health, safety and security at workplace)	PC1. Comply with health and safety related instructions applicable to the workplace	100	5	1	3	1
	PC2. Use and maintain personal protective equipment as per protocol		10	1	8	1
	PC3. Carry out own activities in line with approved guidelines and procedures		5	2	2	1
	PC4. Maintain a healthy lifestyle and guard against dependency on intoxicants		5	3	1	1
	PC5. Follow environment management system related procedures		5	2	2	1
	PC6. Identify and correct (if possible) malfunctions in machinery and equipment		5	1	2	2
	PC7. Report any service malfunctions that cannot be rectified		5	1	2	1

	PC8. Store materials and equipment in line with manufacturer's and organizational requirements		5	1	3	1
	PC9. Safely handle and move waste and debris		5	1	3	1
	PC10. Minimize health and safety risks to self and others due to own actions		5	2	2	1
	PC11. Seek clarifications, from supervisors or other authorized personnel in case of perceived risks		5	2	2	1
	PC12. Monitor the workplace and work processes for potential risks and threats		7	1	4	2
	PC13. Carry out periodic walk-through to keep work area free from hazards and obstructions, if assigned		6	1	3	2
	PC14. Report hazards and potential risks/ threats to supervisors or other authorized personnel		5	1	3	1
	PC15. Participate in mock drills/ evacuation procedures organized at the workplace		5	2	3	1
	PC16. Undertake first aid, fire-fighting and emergency response training, if asked to do so		5	1	2	2

	PC17. Take action based on instructions in the event of fire, emergencies or accidents		7	2	4	1
	PC18. Follow organisation procedures for shutdown and evacuation when required		5	3	1	1
	Total		100	28	50	22
	Grand Total		320	81	175	64

SECTION 2

EVIDENCE OF NEED

What evidence is there that the qualification is needed?

While collecting data from the companies for the occupational map, we also took feedback from industry, which was collected with respect to roles for which qualification packs development, was to be prioritized. This was largely based on volume of people required, quantitative and qualitative shortfall which the Industry feels they face. Governing council of AMHSSC gave final approval and endorsement for the same. The number of industries which validated the job role are 30. (Small – 10 , Medium – 10 and Large – 10)

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

Skills Gap analysis Reports for industry demand and secondary research data, though these do not lend to accurate demand projection.

- Feedback from industry for demand though again sample size may not lend to accurate figures
- Training duration, and current and potential training capacity envisaged
- An LMIS development initiative is being put in place to be more precise regarding the demand and supply

The employment in clothing and textile industry will be 21.54 million by 2022 and there is an incremental human resource requirement of 6.31 % from the year 2013 till year 2022. Manufacturing of wearing apparels will require 4.58 million people by the year 2022.

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

- NSDC list of Approved and Under-Development QPs was checked prior to commissioning the work
- NSDC QRC team also confirmed the same

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?

- Agencies have been appointed by the SSC to interact with training providers to gather feedback in implementation.
- Monitoring of results of assessments
- Employer feedback will be sought post-placement
- A formal review is scheduled in two year time

Please attach any documents giving further information about any of the topics above.

Give details of the document(s) here:

SECTION 3

SUMMARY EVIDENCE OF LEVEL

Justify the NSQF level allocated to the QP by building upon the five descriptors of NSQF. Explain the reasons for allocating the level to the QP.

Generic NOS is/are linked to the overall authority attached to the job role.

Advance Pattern Maker (CAD/CAM)					
AMH/Q1101					
Process required	Professional Knowledge	Professional Skills	Core Skills	Responsibility	Level
The skill of Advance Pattern Maker CAD/CAM requires him develop the patterns using CAD/CAM . He is required to know measurement techniques, fabrics, basic patterns and the garments. According to the techpack and the garment construction method to be followed.	Advance Pattern Maker CAD/CAM should be aware of the basic pattern techniques , garment construction , fabrics ,computer knowledge, size charts and policies of the company. He should know how to operate the CAD/CAM, draft pattern on it, cut ration plan, grading using , lay planning And basic	Advance Pattern Maker CAD/CAM plans and organizes work to achieve targets and deadlines. He plans processes and encourage interchange of ideas/designs. He should be able to identify the faults in equipment and process and the ways to rectify them. He assess /evaluate design processes and communicate effectively within the	Advance Pattern Maker CAD/CAM reads and follows manuals/procedures/an d compliance policies . He constantly updates himself with modifications in quality parameters through written print and mail communication (digital). He can read and interprets Spec Sheets, Bill of Material, incorporate the shrinkage and listens effectively and orally communicate	The advance pattern maker uses the CAD system to recreate the pattern design techniques by transferring ideas to the computer, digitizing and modifying patterns and also the use of CAM to get the patterns and lays cut out in the actual sizes. He is responsible for his work and learning and some responsibility and learning of people under him.	Level 5

	troubleshooting of the computer system.	workplace. He analyzes the marker lay and specification sheet and passes on relevant information to others. He provides opinions on work in a detailed and constructive way. He needs to take appropriate decisions related to responsibilities and practice a customer service oriented approach. He solves operational role related issues. He should raise alarm and Identify & report any malfunctions in machineries, services, chemical leaks .	information accurately to his superiors and juniors. He seeks advise from his seniors regarding quality requirement .He responds to the emergencies, accidents or fire at the workplace and evacuate the premises and help others in need while doing so. He values physical fitness, personal hygiene and good habits.		
Level 5	Level 5	Level 5	Level 5	Level 5	Level 5

OTHER EVIDENCE OF LEVEL [This need only be filled in where evidence other than primary outcomes was used to allocate a level] **(Optional)**

Summary of other evidence (if used):

SECTION 4

EVIDENCE OF RECOGNITION OR 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?

The extent to which a labour is trained and educated effects its mobility. To ensure horizontal and vertical mobility the Qualifications pack have been tailored in a manner that it states all the required skills for a particular job role and ensures increase in developmental level when skills are practiced over time. With experience Advance Pattern Maker CAD/CAM can become a cutting master

(Progression as per vertical mobility)

Please attach any documents giving further information about any of the topics above.
Give details of the document(s) here: