

NSQF QUALIFICATION FILE

CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

West Bengal State Council of Technical & Vocational Education and Skill Development
Tel number(s): 033-2340-3717
E-mail address: caowbsctvesd@gmail.com

Name and address of submitting body:

West Bengal State Council of Technical & Vocational Education and Skill Development,
Karigari Bhavan (5th Floor), Plot-B/7, Action Area-III
New Town, Kolkata-700160

Name and contact details of individual dealing with the submission

Name: Saequa Monazza
Position in the organization: Chief Administrative Officer
Address if different from above: Same as above
Tel number(s): 033-2340-3717
E-mail address: caowbsctvesd@gmail.com

List of documents submitted in support of the Qualifications File

1. Model Curriculum of **AMIN SURVEYOR ASSISTANT** (V 2.0)



West Bengal State Council of Technical & Vocational Education
and Skill Development
Karigari Bhavan (5th Floor), Plot-B/7, Action Area-III
New Town, Kolkata-700160

NSQF QUALIFICATION FILE

SUMMARY

1	Qualification Title:	Amin Surveyor Assistant (V 2.0)
2	Qualification Code, if any -	Old Code: STC -CON/NSQF -2017 /801 New Code: STC -CON/NSQF -2022 /0804
3	NCO code and occupation -	N.A.
4	Nature and purpose of the qualification (Please specify whether qualification is short term or long term)	Short term Certificate Course To become self-employed i.e. entrepreneurs or wage employed under private survey organization, real estate and infrastructure construction.
5	Body/bodies which will award the qualification	West Bengal State Council of Technical & Vocational Education and Skill Development.
6	Body which will accredit providers to offer courses leading to the qualification	Recognition Committee under the West Bengal State Council of Technical & Vocational Education and Skill Development.
7	Whether accreditation /affiliation norms are already in place or not , if applicable (if yes, attach a copy)	Board of assessment, examination and certification under the West Bengal State Council of Technical & Vocational Education and Skill Development.
8	Occupation(s) to which the qualification gives access	Amin Surveyor Assistant / Junior Land Surveyor
9	Job description of the occupation	Amin Surveyor Assistant will <ul style="list-style-type: none"> • Assist in conducting surveys on land sites and measure the land/properties. • Examine previous records and evidence to ensure data accuracy. • Assist in using equipment and tools to accurately measure land features (e.g. longitudes, latitudes) • Assist in building maps, sketches, and charts.
10	Licensing requirements	Amin Surveyor, local body – Panchyat/ Municipality/ Corporation
11	Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided)	N.A.
12	Level of the qualification in the NSQF	Level 2.5
13	Anticipated volume of training/learning required to complete the qualification	600 hours (including 150 hours of Apprenticeship training and 60 Hrs Employability Skill)
14	Indicative list of training tools required to deliver this qualification	As per Annexure - II
15	Entry requirements and / or recommendations and minimum age	Class 9 Pass OR Class 8 pass and pursuing continuous regular schooling, OR Class 8 Pass with 1 year experience, OR Class 8 Pass + NTC/NAC in Surveyor Trade OR previous relevant qualification of NSQF Level 2 with 1 yr experience

NSQF QUALIFICATION FILE

16	Progression from the qualification (Please show Professional and academic progression)	<ol style="list-style-type: none"> 1. Can work as Land surveyor 2. Can start own entrepreneur 		
17	Arrangements for the Recognition of Prior learning (RPL)	RPL will consists of four stages: <ul style="list-style-type: none"> ● Counselling – To inform advice and guide the candidates regarding RPL. ● Pre-Assessment – To assess the current competencies of the candidates and identify the gap between the full qualification and current competencies. ● Bridge Training – To train the candidates for bridging the gap. ● Final Assessment & Certification – To assess the candidate for full qualification and certify. 		
18	International comparability Where Known (Research Evidence to be provided)	N.A.		
19	Date of planned review of the qualification.	Every 3 years (From date of NSQC approval)		
20	Formal structure of the qualification			
	Title of component and identification code.	Mandatory / Optional	Estimated size (learning hours)	Level
	1. Apply Safe Working Practices	Mandatory	30 Hrs. (T-10+ P-20)	3
	2. Describe the objective of the trade with concept of drawing.	Mandatory	30 Hrs. (T-10+ P-20)	3
	3. Recognize and handle type of chain based upon its lengths able to describe various units of length, area and volume.	Mandatory	60 Hrs. (T-20+ P-40)	3
	4. Identify the principle of compass surveying and perform site survey	Mandatory	30 Hrs. (T-5+ P-25)	3
	5. Recognize and handle different types of levelling instruments.	Mandatory	30 Hrs. (T-5+ P-25)	3
	6. Assist in performing the site survey using plane table.	Mandatory	30 Hrs. (T 10+ P-20)	3
	7. Assist in performing theodolite survey	Mandatory	60 Hrs. (T-20+ P-40)	3
	8. Understand the concept of building drawing and layout the plan.	Mandatory	60 Hrs. (T-15+ P-45)	3
	9. Assist in planing and preparing setting of GPS techniques in various fields.	Mandatory	60 Hrs. (T-20+ P-40)	3
	10. Work in real job situation with special emphasis on basic safety and hazards in this domain.	Mandatory	150 Hrs. (T-0+ P-150)	3

NSQF QUALIFICATION FILE

II. Employability Skills (60 Hrs).	Mandatory	60 Hrs.	3
TOTAL		600 Hrs	

Title of component and identification code.	Mandatory /Optional	Estimated size (learning hours)	Level
<p><u>I. Theory</u></p> <p>(a) Theory component of the course is to develop relevant basic technical information & knowledge about various methods of Surveying viz. Chain survey, compass survey etc. Levelling, plane table survey, theodolite survey, Surveying instruments and its operations. Reading of building drawing and GPS awareness.</p>	Mandatory	115	3
<p><u>II. Practical</u></p> <p>(b) Practical component of the course is to impart relevant basic technical skills to perform survey by chain survey, plane table survey, theodolite survey and compass survey method. levelling and surveying by using various instruments and also reading building drawings and also GPS awareness.</p> <p>(C) OJT component of Practical training of the course is to develop competency in the real job situation with special emphasis on basic safety and hazards in different agencies, Govt surveyors, land registry offices and rural and urban areas.</p>	Mandatory	275	3
<p><u>III. Employability Skills</u> (60 Hrs)</p> <p>Employability Skills component of the course is to impart Soft skills which include Communication Skills, Digital skill, Financial and Entrepreneurship etc.</p>	Mandatory	60	3
Total (I+II+III)		600	

SECTION I ASSESSMENT

21	<p>Body/Bodies which will carry out assessment:</p> <p>Board of assessment, examination and certification under West Bengal State Council of Technical & Vocational Education & Skill Development constituted under the ACT XXVI of 2013 under Department of Technical Education, Training & Skill Development, Govt. of West Bengal.</p>
22	<p>How will RPL assessment be managed and who will carry it out?</p> <p>RPL arrangement will be for existing uncertified experienced workforce and will consist of four stages</p> <ul style="list-style-type: none"> i) Counseling- To inform, advise and guide the candidates regarding RPL ii) Pre-Assessment- To assess the current competencies of the candidates and identifying the gap between the full qualification and current competencies.

NSQF QUALIFICATION FILE

	<p>iii) Bridge Training- To train the candidates for bridging the gap.</p> <p>iv) Final assessment & Certification- To assess the candidate for full qualification and certify.</p> <p>RPL assessment will be managed by WBSCTVESD.</p>
23	<p>Describe the overall assessment strategy and specific arrangements s which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF.</p> <p>Assessment will be carried out by Board of assessment, examination and certification under West Bengal State Council of Technical & Vocational Education & Skill Development, under Department of Technical Education, Training & Skill Development, Govt. of West Bengal. The Council has all necessary infrastructure and pool of qualified Assessors/ Examiners to carry out such assessments. Presently the Council is conducting all examinations for all courses which include Diploma Courses, NQR enlisted Short Term Courses, NSQF complaint Short Term Courses, Vocational Courses under Higher Secondary (Vocational) level & all other Short term Courses in the state of West Bengal. Council also conducts all State Level Entrance tests like JEXPO for admission to Diploma Courses in Polytechnics, VOCLET for lateral entry to Diploma Courses in Polytechnics and CET (Common Entrance Test) for admission to NCVT courses in ITIs. This Council has been recognized as an assessing body for NSQF aligned courses by NCVET under MSDE, GOI.</p> <p>Council conducts Training of Assessors (TOA) for prospective Assessors for NSQF complaint courses through certified Master Trainers / experts.</p>

ASSESSMENT EVIDENCE

24. Assessment evidences Title of Component:

Outcomes to be assessed	Assessment criteria for the outcome
1. Apply Safe Working Practices	<p>(1.1) Maintain procedures to achieve a safe working environment in line with occupational health and safety regulations and requirements according to site policy.</p> <p>(1.2) Recognize any unsafe situations according to site policy, and assess his report accordingly.</p> <p>(1.3) Identify and take necessary precautions on fire and safety hazards and report according to site policy and procedures.</p> <p>(1.4) Demonstrate Personal Productive Equipment (PPE) like: safety helmet, safety glove, safety shoe, climbing harness, lanyard and tool belt (when climbing), use the same as per related working environment.</p> <p>(1.5) Demonstrate basic first aid & CPR and use them under different circumstances.</p>
2. Describe the objective of the trade with concept of drawing.	<p>(2.1) Identify the objective of surveying</p> <p>(2.2) Select the various units.</p> <p>(2.3) Draw different types of scales.</p> <p>(2.4) Find out R.F. on the scale, calculate the length of the scale on drawing.</p>
3. Recognize and handle type of chain based upon its lengths able to describe various units of length, area and volume.	<p>(3.1) Practice folding and unfolding the chain.</p> <p>(3.2) Measure the distance between given points and their booking.</p> <p>(3.3) Practice in chaining and taking offset.</p> <p>(3.4) Select of base line and station points.</p>

NSQF QUALIFICATION FILE

	(3.5) Conduct chain survey on small plots, built up plots. (3.6) Chain Survey of an extensive area, locating detail, plotting & finishing the same in ink or colour paint.
4. Identify the principle of compass surveying and perform site survey	(4.1) Measure bearing of a line and conduct traverse survey using prismatic other accessories. (4.2) Entry in field book and compute correct bearings. (4.3) Calculate the area of traverse.
5. Recognize and handle different types of levelling instruments.	(5.1) Describe various levelling instruments with its components (5.2) Identify the method used. (5.3) Examine the levelling difficulties. (5.4) Apply levelling instruments for site levelling, red cross section etc. (5.5) Calculate the volume of earthwork.
6. Assist in performing the site survey using plane table.	(6.1) Identify the instruments used in plane table survey. (6.2) Describe the method used in this survey. (6.3) Recognize of centering, levelling and orientation operation.
7. Assist in performing theodolite survey	(7.1) Identify the different parts of theodolite. (7.2) Describe principle of operations (7.3) Adjust the theodolite for traverse survey (7.4) Identify the errors.
8. Understand the concept of building drawing and layout the plan.	(8.1) Identify and select- plan, elevation and section of small buildings. (8.2) Elaborate Simple idea of RCC Structural detail like column, beam, slab, and footing. Give details material calculation (8.3) Layout of a building plan.
9. Assist in planing and preparing setting of hand held GPS techniques in various fields.	(9.1) Assist in setting up hand held GPS system and identify its components (9.2) Assist in operating hand held GPS system and Collecting field data using hand held GPS (9.3) Assist in processing hand held GPS data for further uses,
10. Work in real job situation with special emphasis on basic safety and hazards in this domain.	(10.1) Assessor will check report prepared for this component of training of the course and assess whether competency has been developed to work in the real job situation with special emphasis on basic safety and hazards in this domain. (The trainee is expected to undertake work in actual workplace under any supervisor / contractor for 150 Hours.)
11. Employability Skills	As per NCVET guided course module for 60 Hrs

Means of assessment

- Theory component 200 marks
- Practical Test & Viva voce for Practical Component 800 marks

Pass/Fail

Passing criteria is based on marks obtained in Formative and Summative Assessment taken together

1. Minimum Marks to pass Theory component- 60%
2. Minimum Marks to pass practical component- 70%

Minimum attendance required to appear in the final examination- 75%

NSQF QUALIFICATION FILE

SECTION 2 EVIDENCE OF LEVEL

Title/Name of qualification/component: Amin Surveyor Assistant		Level: 2.5	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
Process	Trainee will be able to assist in preparing a map from the field data and engage in a Surveyor job while maintaining occupational health & safety parameters	The job holder at this level may assist to identify the Job and carry out the solution.	2.5
Professional knowledge	Amin surveyor Assistant needs to know the definition & objective of surveying, principle & method used in chain surveying, compass surveying, levelling, plane table surveying, theodolite & GPS. He / She will also have some introductory idea of scale, plan, elevation & section of a small building.	An Amin surveyor Assistant has to handle different machine, accessories required according to job. In this way he/ she will work with high efficiency, focus on the precision of the map.	2.5
Professional skill	<p>The trainee will be able to recognize and handle types of chain and tapes , tools used in surveying like arrows, pegs, Ranging Rod, Field Book etc. and have knowledge of Scale</p> <p>Recognize, identify instruments like Compass, Theodolite and accessories of compass and Theodolite survey</p> <p>Assist in preparing a Traverse by these instruments</p> <p>Recognize and handle different types of levels such as dumpy level, auto level etc, able to enter a Level Book</p> <p>Recognize and handle other tools used in surveying like levelling staff, arrows, pegs, etc.</p> <p>Recognize & identify other miscellaneous instruments</p>	The job holder at this level may identify the Job with the help of machines, tools and accessories and assist in solving the same by applying the knowledge of principle	2.5

NSQF QUALIFICATION FILE

	used in various surveys like GPS, accessories of plane table. The trainee will be able to recognize and handle types of chain and tapes , tools used in surveying like arrows, pegs, Ranging Rod, Field Book etc. and have knowledge of Scale		
Core skill	<p>The job holder will be able to read at least two languages, preferably in the local language of the site and basic English read and interpret safety sign boards, signage, tags etc. provided at workplace.</p> <p>Speak in at least one language, preferably in one of the local languages of the site, listen and interpret instructions / communication by co- workers. Will listen and follow instructions given by supervisor orally and effectively communicate with team members engage in basic financial and banking transactions</p> <p>Understand principles of time management and entrepreneurship</p>	The job holder will be able to communicate clearly, both in writing and orally, with co-workers, supervisors and customers. He will be able to use basic arithmetic calculations for his work and use basic banking services both on professional and personal level.	2.5
Responsibility	The job holder will assist in work of a Senior under close supervision to ensure that project objectives are finished within specific time frame are developed.	Job holder is required to assist in carrying out functions using various method of chain, compass, plane table, levelling, theodolite surveying and make necessary field book and level book entry & prepare the map.	2.5

SECTION 3

EVIDENCE OF NEED

26. What evidence is there that the qualification is needed?

West Bengal has the highest density of population in the country. This brings down the per capita availability of land. As a result this necessitates dividing of land in small plots among the local population. This need is further aggravated due to fast paced urbanisation within the state. Therefore this urges the demand of skilled Amin surveyors. Hence this qualification is of extreme relevance with the perspective of the state.

Industry Relevance - West Bengal State Council of Technical & Vocational Education and Skill Development has proposed this course after receiving multiple feedback from industries regarding need of the qualification. Hence, Council has proposed this course.

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

There is an estimation of around 12,000 skilled Amin surveyor Assistant required in the state of West Bengal. This estimate is based on the number of gram panchayat and urban local bodies in the state.

28. What steps were taken to ensure that the qualification does not duplicate already existing or planned qualifications in the NSQF?

This qualification is being conducted under the West Bengal State Council of Technical & Vocational Education & Skill Development under Department of Technical Education, Training and Skill Development since the academic year 2005 in Vocational Training Centers spread all over West Bengal for class- X+ pass dropout youths. In the state of West Bengal the Council is affiliating and awarding body for this qualification. Thus there is no other existing or planned qualification (Short term courses) in the state aligned with NSQF.

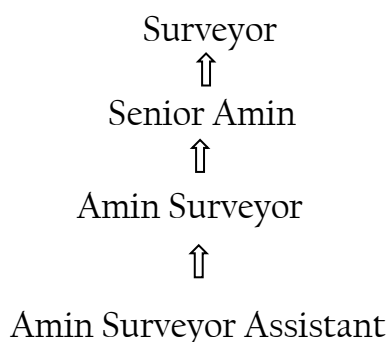
29. What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated?

The council has three well defined sub-committees namely Board of Studies and Skilling, Board of Examination and Recognition Committee. These committees monitor and review the progress of all qualifications under its purview on a regular basis.

This qualification will be reviewed and revised at an interval of three years on the basis of the outcome of the trainees, placement and self-employment data and feedback from concerned industries/employers.

SECTION 4
EVIDENCE OF PROGRESSION

The trainee on completion of the course does not immediately qualify to work as an independent authority. The trainee has to gain at least 2 years of field experience, should be of 18 years of age or older and should necessarily an Indian citizen, when he will become eligible to apply for license from local bodies viz. Panchayat, Municipality, corporation, Government of West Bengal. Thereafter, he becomes eligible to work as an Asst. Surveyor. From there, he can become either an employee of an organization or become self-employed Amin Surveyor. In case of employment under an employer, he can progress to various level-wise designations, based on either experience or on obtaining subsequent qualifications. This is as shown below.



30. 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 trainee on completion of the course does not immediately qualify to work as an independent authority. The trainee has to gain at least 2 years of field experience, should be of 18 years of age or older and should necessarily an Indian citizen, when he will become eligible to apply for license from local bodies viz. Panchayat, Municipality, corporation, Government of West Bengal. Thereafter, he becomes eligible to work as an Asst. Surveyor. From there, he can become either an employee of an organization or become self-employed Amin Surveyor. In case of employment under an employer, he can progress to various level-wise designations, based on either experience or on obtaining subsequent qualifications. This is as shown below.