

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:

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: Sri Rathindra Nath Bandyopadhyaya

Position in the organisation: Chairman, Board of Studies and Skilling

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List of documents submitted in support of the Qualifications File

1. Curriculum and Course Content
2. MoM with Industries/ Employers to establish need of the qualification
3. Assessment strategy

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SUMMARY

Qualification Title	Amin Survey
Qualification Code	STC-CON/NSQF-2017/801
Nature and purpose of the qualification	Short term Certificate Course To become self-employed i.e. entrepreneurs or wage employed under private survey organisation, real estate and infrastructure construction.
Body/bodies which will award the qualification	West Bengal State Council of Technical & Vocational Education and Skill Development
Body which will accredit providers to offer courses leading to the qualification	Committee on Accreditation under the West Bengal State Council of Technical & Vocational Education and Skill Development
Body/bodies which will carry out assessment of learners	Board of Examination under the West Bengal State Council of Technical & Vocational Education and Skill Development
Occupation(s) to which the qualification gives access	Assistant / Junior Land Surveyor
Licensing requirements	Yes , Amin Surveyor, local body – Panchyat/ Municipality/ Corporation
Level of the qualification in the NSQF	Level 3
Anticipated volume of training/learning required to complete the qualification	650 hours
Entry requirements and/or recommendations	Preferably Class VIII pass
Progression from the qualification	Surveyor
Planned arrangements for the Recognition of Prior learning (RPL)	RPL will consist of four stages 1. Counselling- To inform, advise and guide the candidates regarding RPL 2. Pre-Assessment- To assess the current competencies of the candidates and identifying the gap between the full qualification and current competencies. 3. Orientation & Bridge Training- To train the candidates for bridging the gap. 4. Final assessment & Certification- To assess the candidate for full qualification and certify.
International comparability where known	N/A
Date of planned review of the qualification.	Every 3 years

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Formal structure of the qualification			
After completion of course and after 2 years of field experience the passed out trainee can work as a Junior Surveyor and after that with appropriate experience, the person can work as a Surveyor.			
Title of component and identification code.	Mandatory/ Optional	Estimated size (learning hours)	Level
<u>I. Theory</u> Theory component of the course is to develop relevant basic technical information & knowledge about various methods of Surveying, Surveying instruments and its operations.	Mandatory	100	3
<u>II. Practical</u> Practical component of the course is to impart relevant basic technical skills to perform levelling and surveying by different methods using various instruments and also reading building drawings.	Mandatory	450	3
<u>III. Employability Skills</u> Employability Skills component of the course is to impart Soft skills which include Communication Skills, Behaviour, IT literacy, Entrepreneurship Skills, Safety, Hygiene etc.	Mandatory	100	3
Total (I+II+III)		650	

Curriculum Document is attached in Annexure-1.

Assessment Strategy Component wise distribution of marks is given in the Annexure No. 2

MoM attached in Annexure-3

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SECTION 1 **ASSESSMENT**

Body/Bodies which will carry out assessment:

Board of Examination 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.

How will RPL assessment be managed and who will carry it out?

RPL will consist of four stages

1. Counselling- To inform, advise and guide the candidates regarding RPL
2. Pre-Assessment- To assess the current competencies of the candidates and identifying the gap between the full qualification and current competencies.
3. Orientation & Bridge Training- To train the candidates for bridging the gap.
4. Final assessment & Certification- To assess the candidate for full qualification and certify.

RPL assessment will be managed by PBSSD (PaschimBanga Society for Skill Development) under Department of Technical Education, Training & Skill Development, Govt. of West Bengal.

Describe the overall assessment strategy and specific arrangements 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.

Assessment will be carried out by Board of Examination 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 includes Diploma Courses, Vocational Courses in VIII+ level and X+2 level & other Short term Courses. 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.

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ASSESSMENT EVIDENCE

Complete a grid for each component as listed in “Formal structure of the qualification” in the Summary.

NOTE: this grid can be replaced by any part of the qualification documentation which shows the same information – ie Learning Outcomes to be assessed, assessment criteria and the means of assessment.

Title of Component:

Outcomes to be assessed	Assessment criteria for the outcome
<p>1. The trainee will be able to recognize and handle type of chain based upon its lengths able to describe various units of length , area and volume, he should have knowledge of Scale</p> <p>2. Recognize and use of different types of tapes on basis of material, marked units, total length</p> <p>3. Recognize & differentiate between different types of offsets and handle them accordingly</p> <p>4. Recognize and handle other tools used in surveying like arrows, pegs, Ranging Rod etc.</p>	<p>The assessors will assess whether the trainee is able to</p> <ul style="list-style-type: none"> • draw a polygon given lengths and calculate the area of the same • make Field Book entry • draw a Map from the Field Book entry • unfold a chain and identify different components of Chain (viz.Link, Tally), • mark and measure offset and verify the same
<p>1. Recognize, identify and use of accessories of Compass and Theodolite survey</p> <p>2. Recognize and use of different types of angle measuring instruments like Compass theodolite</p> <p>3. able to measure different angle and with the help of Compass and Digital Theodolite.</p> <p>4. Prepare a Traverse by these instruments</p> <p>5. Recognize and handle other tools used in surveying like Ranging Rod , arrows, pegs, etc.</p> <p>1. Recognize and handle different</p>	<p>The assessors will assess whether the trainee is able to</p> <ul style="list-style-type: none"> • Draw a line from a given Bearing of the line • Prepare a Traverse from the given bearings of lines • To locate the North direction of a plot • measure a bearing a line and • prepare a Traverse from the measured bearing of lines • measure a horizontal angle and vertical angle with the help of Theodolite

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<p>types of levels such as dumpy level, auto level etc,</p> <ol style="list-style-type: none"> i) able to enter of Level a Level Book ii) Recognize and handle other tools used in surveying like levelling staff, arrows, pegs, etc. 	<p>The assessors will assess whether the trainee is able to</p> <ul style="list-style-type: none"> • define terms viz. RL, BM, FS, IS, BS • enter a Level Book from a given set of level data • take Staff reading at a station point • find RL of that point • draw a cross section and Long section of a Road Project
<ol style="list-style-type: none"> 1. Recognize & identify other miscellaneous instruments used in various surveys like GPS, accessories of plane table 2. Different methods used in Plane Table Surveying 3. Knowledge about cadastral survey 	<p>The assessors will assess whether the trainee is able to Describe the Various types of accessories of Plane Table Survey and their functions</p> <ul style="list-style-type: none"> • set up a Plane Table over a Station • prepare a traverse • prepare a Cadastral map
<ol style="list-style-type: none"> 1. store and stack the surveying tools and instruments, as per standard practices, manufactures guidelines 2. handle, stack and store different surveying materials such as lime, strings, hurdles, paints etc. according to standard practices or instruction 	<p>The assessors will assess whether the trainee is able to</p> <ul style="list-style-type: none"> • Fold a chain, • Boxing of Compass, Levels and Theodolite
<p>Means of assessment 1</p> <p>There will be two types of Assessments viz. Formative and Summative. The Formative Assessment will be carried out continuously during the conduct of course and Summative Assessment will be carried out at the end of the course. Details are mentioned under means of Assessment-2. Written test, Practical examination/ Skill test & Viva voce</p>	
<p>Means of assessment 2</p> <ol style="list-style-type: none"> I. Means of Formative Assessment (Total marks allotted- 300) <ol style="list-style-type: none"> i) Assignments for each module of Theory component ii) Assignments for each module of Employability Skills component iii) Continuous evaluation of each module of Practical component II. Means of Summative Assessment (Total marks allotted- 700) <ol style="list-style-type: none"> i) Written test for Theory component ii) Written test for Employability Skills component iii) Practical Test & Vivavoce for Practical Component. <p>Component wise distribution of marks is given in the Annexure 2</p>	

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Pass/Fail

Pass/Fail

Passing criteria is based on marks obtained in Formative and Summative Assessment taken together as mentioned in Annexure No-1

- i) Minimum Marks to pass Theory component- 60%
- ii) Minimum Marks to pass Employability Skills component- 60%
- iii) Minimum Marks to pass practical component- 70%
- iv) Minimum attendance required to appear in the final examination- 75%

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SECTION 2

EVIDENCE OF LEVEL

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OPTION A

Title/Name of qualification/component: Amin Surveyor		Level: 3	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
Process	Trainee will be able to prepare 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 identify the Job and carry out the solution.	Level 3
Professional knowledge	A trainee Amin surveyor needs to know the definition & objective of surveying, principle & method used in chain surveying, compass surveying, levelling, plane table surveying, theodolite & GPS . A trainee will also have some introductory idea of scale, plan ,elevation & section of a small building, calculation of area, volume, quantity of material calculations.	A trainee Amin surveyor has to handle different machine, accessories required according to job . In this way he/ she will work with high efficiency, focus on the precession of the map .	Level 3
Professional skill	The user/individual will know and understand how to: 1. 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 2. Recognize, identify and use of instruments like Compass, Theodolite and accessories of Compass and Theodolite survey 3. Prepare a Traverse by these instruments 4. Recognize and handle different types of levels such as dumpy level, auto level etc, able to enter a Level Book Recognize and handle other tools used in surveying like levelling staff, arrows, pegs, etc. 5. Recognize & identify other miscellaneous instruments used in various surveys like GPS, accessories of plane table	The job holder at this level may identify the Job with the help of machines, tools and accessories and solve the same by applying the knowledge of principle	Level 3

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Title/Name of qualification/component: Amin Surveyor		Level: 3	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
	<p>6. Different methods used in Plane Table Surveying store and stack the surveying tools and instruments, as per standard practices, manufactures guidelines</p> <ul style="list-style-type: none"> • handle, stack and store different surveying materials such as lime, strings, hurdles, paints etc. according to standard practices or instruction 		
Core skill	<p>The job holder will be able to</p> <ul style="list-style-type: none"> • 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 • speak in at least one language, preferably in one of the local languages of the site • listen and interpret instructions / communication by co-workers • listen and follow instructions given by supervisor • orally and effectively communicate with team members • engage in basic financial and banking transactions • 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.</p>	Level 3
Responsibility	<p>The job holder will work along with his co-worker & helper under his close supervision and he will be responsible for</p> <ul style="list-style-type: none"> . check-up procedure to ensure that project objectives are finished within specific time frame are developed. . Identify the problem & select the method to be used and apply the same and prepare the final map with great accuracy. • Understanding safety compliance while engaging co-worker in 	<p>Job holder is required to carry 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.</p>	Level 3

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Title/Name of qualification/component: Amin Surveyor		Level: 3	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
	field <ul style="list-style-type: none">• Preventing health hazards and loss of human life		

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OPTION B

Title/Name of qualification/component: Enter the title here		Level: Add level number	
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
Process			
Professional knowledge			
Professional skill			
Core skill			
Responsibility			

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SECTION 3

EVIDENCE OF NEED

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.

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

There is an estimation of around 10,000 skilled Amin surveyors required in the state of West Bengal. This estimate is based on the number of gram panchayat and urban local bodies in the state.

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 Centres spread all over West Bengal for class- VIII+ 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.

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.

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

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

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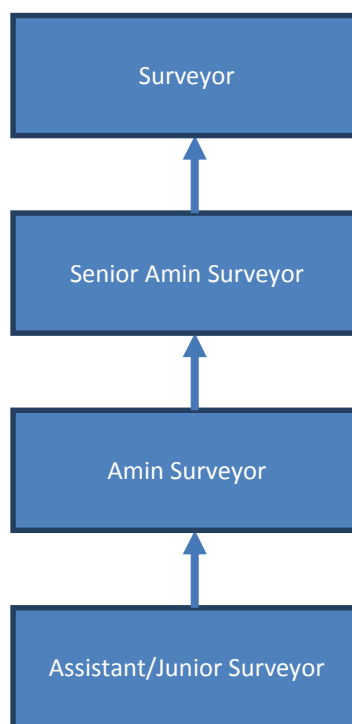
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SECTION 4

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?

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 21 years of age or older and should necessarily be 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.



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

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.