

QUALIFICATION FILE

Data Analysis Associate

- ☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship
☐ Upskilling ☐ Dual/Flexi Qualification ☐ For ToT ☐ For ToA
☐ General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☒ Future Skills ☐ OEM

NCrF/NSQF Level: 4

Submitted By:

National Institute of Electronics and Information Technology (NIELIT)

NIELIT Bhawan,
Plot No. 3, PSP Pocket, Sector-8,
Dwarka, New Delhi-110077,
Phone:- 91-11-2530 8300
e-mail:- contact@nielit.gov.in

Table of Contents

Section 1: Basic Details	3
Section 3: Training Related	8
Section 4: Assessment Related	9
Section 5: Evidence of the need for the Qualification	9
Section 6: Annexure & Supporting Documents Check List	10
Annexure-I: Evidence of Level	11
Annexure-II: Tools and Equipment (Lab Set-Up)	12
Classroom Aids	13
Annexure-III: Industry Validations Summary	13
Annexure IV: Training & Employment Details	14
Annexure-VI: Detailed Assessment Criteria	15
Annexure-VII: Assessment Strategy	17
Annexure-IX: Acronym and Glossary	19

Section 1: Basic Details

1.	Qualification Name	Data Analysis Associate																						
2.	Sector/s	IT-ITeS																						
3.	Type of Qualification: <input checked="" type="checkbox"/> New <input type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM	NQR Code & version of existing/previous qualification: NA	Qualification Name of existing/previous version: NA																					
4.	a. OEM Name b. Qualification Name (Wherever applicable)	-																						
5.	National Qualification Register (NQR) Code &Version (Will be issued after NSQC approval)	QG-04-IT-00348-2023-V1-NIELIT	6. NCrF/NSQF Level: 4																					
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other (Wherever applicable specify multiple entry/exits also & provide details in annexure)	Certificate																						
8.	Brief Description of the Qualification	The Data Analyst Associate Qualification is meant to inculcate the basic skills of data handling, processing and visualization. The trained learner will be able to view data in summary and aggregated form, he/she would able to formulate equation for prediction. inculcate the basic skills of Hadoop Framework and programming experience of core Java. Training in different tools of Hadoop like MapReduce, Hive will increase the exposure to the analytics field.																						
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>12th grade pass</td> <td>NA</td> </tr> <tr> <td>2.</td> <td>Completed 2nd year of 3-year diploma (after 10th) and pursuing regular diploma</td> <td>No Experience required</td> </tr> <tr> <td>3.</td> <td>10th grade pass plus 2-year NTC</td> <td>No Experience required</td> </tr> <tr> <td>4.</td> <td>10th grade pass plus 1-year NTC plus 1 year NAC</td> <td>No Experience required</td> </tr> <tr> <td>5.</td> <td>10th grade pass and pursuing continuous schooling</td> <td>No Experience required</td> </tr> <tr> <td>6.</td> <td>Data Analyst Assistant NOS from 1- 6</td> <td>3 year relevant</td> </tr> </tbody> </table>		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1.	12th grade pass	NA	2.	Completed 2nd year of 3-year diploma (after 10th) and pursuing regular diploma	No Experience required	3.	10th grade pass plus 2-year NTC	No Experience required	4.	10th grade pass plus 1-year NTC plus 1 year NAC	No Experience required	5.	10th grade pass and pursuing continuous schooling	No Experience required	6.	Data Analyst Assistant NOS from 1- 6	3 year relevant
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																						
1.	12th grade pass	NA																						
2.	Completed 2nd year of 3-year diploma (after 10th) and pursuing regular diploma	No Experience required																						
3.	10th grade pass plus 2-year NTC	No Experience required																						
4.	10th grade pass plus 1-year NTC plus 1 year NAC	No Experience required																						
5.	10th grade pass and pursuing continuous schooling	No Experience required																						
6.	Data Analyst Assistant NOS from 1- 6	3 year relevant																						

		will be exempted, Previous NSQF Qualification of Level 3.	experience												
		b. Age : No bar													
10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	15 Credits	11. Common Cost Norm Category (I/II/III) (wherever applicable): Category-II (Information and Communication Technology)												
12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA													
13.	Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	<input checked="" type="checkbox"/> Offline <input type="checkbox"/> Online <input type="checkbox"/> Blended <table border="1"> <thead> <tr> <th>Training Delivery Modes</th><th>Theory (Hours)</th><th>Practical (Hours)</th><th>OJT Mandator y (Hours)</th><th>ES</th><th>Total (Hours)</th></tr> </thead> <tbody> <tr> <td>Classroom (offline)</td><td>150</td><td>210</td><td>30</td><td>60</td><td>450</td></tr> </tbody> </table> <p>The mode of delivery shall be based on the regional demand and can be offered in any of the above modes mentioned. (Refer Blended Learning Annexure for details)</p>		Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandator y (Hours)	ES	Total (Hours)	Classroom (offline)	150	210	30	60	450
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandator y (Hours)	ES	Total (Hours)										
Classroom (offline)	150	210	30	60	450										
14.	Aligned to NCO/ISCO Code/s (if no code is available mention the same)	NCO-2015/2120.0501 (Associate- Analytics)													
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	Academic: Horizontal: Level 3 Courses in Big Data Analytics/Analytics: None Vertical: Level 4: Data Analyst Associate Level 4.5: Junior data analyst Level 5: Certified Data Analyst Level 6: Post Graduate Program in Data Engineering Professional: Junior Data Analyst-> Database Administrator ->Data analyst-> Data Engineer-> Data Architect->Data Scientist->													
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Qualification File is available in English and Hindi languages.													

17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
18.	Is the Job Role Amenable to Persons with Disability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No a. Locomotor Disability i. Leprosy Cured Person ii. Dwarfism iii. Muscular Dystrophy iv. Acid Attack Victims b. Visual Impairment i. Low Vision	
19.	How Participation of Women will be Encouraged	Participation of Women Candidates will be ensured as per Government norms. Time to time exclusive batches for women would be run for the proposed course. Funding of women batches may be generated from IT for masses scheme /other schemes launched by Govt. of India occasionally.	
20.	Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Colleges <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
22.	Name and Contact Details of Submitting / Awarding Body SPOC (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	Name: Meenu Dhir Email: meenudhir@nielit.gov.in Contact No.: 9779131848 Website: nielit.gov.in	
23. Final Approval Date by NSQC: 29.03.2023		24. Validity Duration: 3 Years	25. Next Review Date : 29.03.2026

Section 2: Module Summary**NOS/s of Qualifications**

1. Perform basic calculation using spreadsheet
2. Manage structured data
3. Analyze data using spreadsheet tool
4. Manage data in Open source tool
5. Visualize data graphically
6. Installation of Hadoop Framework and Java Programming
7. Manage big data using hadoop
8. Implementation of use cases of Data Analytics

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

Th.-Theory **Pr.-Practical** **OJT-On the Job** **Man.-Mandatory** **Training** **Rec.-Recommended** **Proj.-Project**

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQ F Level	Credits as per NCrF	Training Duration (Hours)			Assessment Marks			
						Th.	Pr.	Total	Th.	Pr.	Total	Weightage (%) (if applicable)
1.	NOS 1: Perform basic calculation using spreadsheet	NIE/ITS/N140 41	Core	4	1	10	20	30	23.52	10	33.52	9.57
2.	NOS 2: Manage structured data	NIE/ITS/N140 42	Core	4	2	30	30	60	23.52	10	33.52	9.57
3.	NOS 3: Analyze data using spreadsheet tool	NIE/ITS/N140 43	Core	4	2	30	30	60	35.29	15	50.29	14.36

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQ F Level	Credits as per NCrF	Training Duration (Hours)			Assessment Marks			
						Th.	Pr.	Total	Th.	Pr.	Total	Weightage (%) (if applicable)
4.	NOS 4: Manage data in Open source tool	NIE/ITS/N140 44	Core	4	1	10	20	30	17.64	7.5	25.14	7.18
5.	NOS 5: Visualize data graphically	NIE/ITS/N140 45	Core	4	2	20	40	60	31.57	15	46.57	13.30
6.	NOS 6: Installation of Hadoop Framework and Java Programming	NIE/ITS/N140 47	Core	4	2	30	30	60	36.84	17.5	54.34	15.5
7.	NOS 7: Manage big data using hadoop	NIE/ITS/N140 48	Core	4	1	10	20	30	15.78	7.5	23.28	6.65
8.	NOS 8: Implementation of use cases of Data Analytics	NIE/ITS/N140 46	Core	4	1	10	20	30	15.78	7.5	23.28	6.65
Sub-total						150	210	360	200	90	290	82.85
9	Employability Skills	DGT/VSQ/N01 02	Core		2	60			30			8.57
10	OJT	N/A	Core		1	30			30			8.57
Duration (in Hours)/Total Marks					15	450			350			100

Assessment Components	NOS Included	Duration (in mins) *	Marks
Theory 1: Data Analytics Assistant Paper-1	NOS 1, NOS2, NOS3, NOS 4	90	100
Theory 2: Data Analytics Assistant Paper-2	NOS 5, NOS6, NOS7 NOS-8	90	100
Practical: Data Analytics Assistant	NOS 1-NOS 6	180	90
Internal Assessment	Employability Skills	-	30
Project	OJT	-	30
			Total: 350

*Assessment strategy shall be as per NIELIT Norms prevailing at times.

Assessment - Minimum Qualifying Percentage

Please specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: 50 % (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	BCA/A-Level/Diploma in CS/IT/ allied area with 1 year of Experience in training.
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	MCA/B-Level/B.Tech in CS/IT/EC/EE/ allied areas with an experience of 2 years in training
3.	Tools and Equipment Required for Training	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "Yes", details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	NA

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	MCA/B-Level/B.Tech in CS/IT/EC/EE/ allied areas with an experience of 2 years in training
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	The assessor carries out theory online assessments through the remote proctoring methodology. Theory examination would be conducted online and the paper comprise of MCQ. Conduct of assessment is through trained proctors. Once the test begins, remote proctors have full access to the candidate's video feeds and computer screens. Proctors authenticate the candidate based on registration details, pre-test image captured and I- card in possession of the candidate. Proctors can chat with candidates or give warnings to candidates. Proctors can also take screenshots, terminate a specific user's test session, or re-authenticate candidates based on video feeds. An External Examiner/ Observer (Subject matter expert) are deployed including NIELIT scientific officers who are subject expert for evaluation of Practical examination/ internal assessment / Project/ Presentation/ assignment and Major Project (if applicable). Qualification is generally B.Tech
3.	Assessment Mode (Specify the assessment mode)	Online for Theory Online/Offline/ Blended for Practical
4.	Tools and Equipment Required for Assessment	<input checked="" type="checkbox"/> Same as for training <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (details to be provided in Annexure-if it is different for Assessment)

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): Yes Available in Annexure-B : Evidence of Need
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Yes Available in Annexure-B : Evidence of Need
3.	Government /Industry initiatives/ requirement (Yes/No): Yes Available in Annexure-B : Evidence of Need
4.	Number of Industry validation provided: 5
5.	Estimated nos. of persons to be trained and employed: 500 candidates will be trained in a year.
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: NIELIT is recognized as AB and AA under Government Category. NIELIT is an HRD arm of MeitY, therefore, the Line Ministry Concurrence is not required.

Section 6: Annexure & Supporting Documents Check List

1	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors (<i>Mandatory</i>)	<i>Available at Annexure-I: Evidence of Level</i>
2	Annexure: List of tools and equipment relevant for qualification (<i>Mandatory, except in case of the online course</i>)	<i>Available at Annexure-II: Tools and Equipment</i>
3	Annexure: Industry Validations Summary	<i>Available at Annexure-III: Industry Validations Summary</i>
4	Annexure: Training & Employment Details	<i>Available at Annexure-IV: Training & Employment Details</i>
5	Annexure: Blended Learning (<i>Mandatory, in case selected Mode of delivery is “Blended Learning”</i>)	<i>Available at Annexure-V: Blended Learning</i>
6	Annexure: Detailed Assessment Criteria	<i>Available at Annexure-VI: Detailed Assessment Criteria</i>
7	Annexure: Assessment Strategy	<i>Annexure-VII: Assessment Strategy</i>
8	Supporting Document: Career Progression (<i>Mandatory - Public view</i>)	<i>Available at Annexure-VIII: Career Progression</i>
9	Annexure: Acronym and Glossary	<i>Available at Annexure-IX: Acronym and Glossary</i>
10	Supporting Document: Model Curriculum (<i>Mandatory – Public view</i>)	<i>Available at Annexure-A: Model Curriculum</i>
11	Supporting Document: Assessment SOP (<i>Mandatory</i>)	<i>Available at Annexure-C: Examination SoP</i>

Annexure-I: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Professional Theoretical Knowledge/Process	1. Gaining Knowledge how to Perform basic calculation using spreadsheet 2. Understanding how to Manage structured data 3. The candidate will be able to Analyse data using spreadsheet tool 4. The candidate will be able to Manage data in Open source tool 5. The candidate will be able to Visualize data graphically 6. The candidate will Implement the use cases of Data Analytics 7. Installation of Hadoop, Java concepts, OOPS concepts, Looping techniques, Methods, Method Overloading, Method Over-riding, Arrays, Java Programming 8. The candidate will understand HDFS, Architecture of Hadoop, Configuring Hadoop Cluster & Hadoop Commands. 9. Understanding Big Data Concepts, Need for analyzing Big Data, its roles in Business Intelligence and decision making. 10. Analysis of Data Using Mapreduce implementation with examples	1. Possesses specialized operational knowledge and understanding of the work. 2. Have complete knowledge of the concept of time required for delivery; and Quality for a range of issues	4
Professional and Technical Skills/ Expertise/ Professional Knowledge	1. The candidate will be able to understand the basic concepts of spreadsheet. 2. They will be thorough to understand what is structured data and how to manage it. 3. The visualization tool will give insight to the data graphically. 4. The candidates will be able to understand the concepts of HDFS and Mapreduce. 5. The project will help to get the better understanding of the concepts laid above	1. Possesses specialized professional and technical skills; displays clarity of professional knowledge and technical skills in a broad range of activities/ tasks. 2. Have knowledge of collecting and interpreting the available information, drawing conclusions & communicating the same	4
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	1. Introduction to Employability Skills 2. Career Development & Goal Setting 3. Becoming a Professional in the 21 st Century 4. Constitutional values – Citizenship	1. Can explain Entrepreneurial Mindset and describe the importance of it in the context of opportunity curation for future jobs.	4

	5.Basic English Skills 6.Communication Skills 7.Essential Digital Skills 8.Financial and Legal Literacy 9.Customer Service 10.Entrepreneurship 11.Diversity & Inclusion 12.Getting Ready for Apprenticeship & Jobs	2.Can comfortably use most of the basic software with proficiency. 3.Have the ability to relate to the 5 pillars of Social Emotional Skills and describe the similarities between SES and Emotional Intelligence	
Broad Learning Outcomes/Core Skill	1.Implement Basic of Spreadsheets Solutions. 2.Creating Virtualization using Tableau 3.Realization of Projects in Big Data Domains 4.The candidate will understand the concepts of Hadoop,HDFS , Mapreduce.	1.Students are able to use, create, and configure virtualization solutions. 2.Have knowledge of the Cloud computing Project Cycle and apply Cloud Computing technology to improve solutions.	4
Responsibility		1.Takes complete responsibility for delivery and quality of own	4

Annexure-II: Tools and Equipment (Lab Set-Up)

Batch Size: 30

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	Classroom	1 (30 Sq.m)	30
2	Student Chair	30	30
3	Student Table	30	30
4	Desktop computers with accessories	32 GB RAM with Camera, Headphone and Windows,	30
5	Desk jet printer	1 Nos.	A4

6	Server	Xeron Processor dual core processor with 128 gb ram and 4 TB Hardisk	1
---	--------	--	---

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. LCD Projector
2. Pin-up Board
3. WhiteBoard

Annexure-III: Industry Validations Summary

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID
1.	ThinkNext Technologies	Mr Munish Mittal	Director	ThinkNEXT Technologies Private Limited S.C.F 113, Sector 65, Mohali, Punjab 160062	9815994197	thinknextmunish@gmail.com
2.	Jan Samridhi Dumka	Gobind nath Maji	Secretary	Mahesh munda road, Nuthan dih near sido kanhu model school, Nuthan Dih nala, Jamtara, Jharkhand-815355	8789620133	gobind107@gmail.com
3	United Computer	Subhasis Choudhury	Chief Executive	Chotonilpur (Pirtala), P.O. Sripally, Burdwan-713103	9641820965	united-computer97@rediffmail.com

Annexure IV: Training & Employment Details**Training and Employment Projections:**

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2023	500	1100	100	400	5	14
2024	600	1500	120	500	5	15
2025	700	1800	150	600	5	15

Data to be provided year-wise for next 3 years

Annexure-V: Blended Learning**Blended Learning Estimated Ratio & Recommended Tools:**

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline: Online Ratio
1	Theory/ Lectures - Imparting theoretical and conceptual knowledge	Online interaction platforms like JitSi Meet, Bharat VC, Google Meet, MS Teams, etc.	60:40
2	Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	Online interaction platforms like JitSi Meet, Bharat VC, Google Meet, MS Teams, etc.	60:40
3	Showing Practical Demonstrations to the learners	Online interaction platforms like JitSi Meet, Bharat VC, Google Meet, MS Teams, etc.	60:40
4	Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	NA	100:0
5	Tutorials/ Assignments/ Drill/ Practice	Online interaction platforms like JitSi Meet, Bharat VC, Google Meet, MS Teams, etc.	50:50
6	Proctored Monitoring/ Assessment/ Evaluation/ Examinations	NIELIT Remote Proctored Software	Online: 100% Theory

			Offline: 100% Practical
7	On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	Simulated Platform	<p>Either 100% online on virtual environment</p> <p>Or 100% offline in the Industry.</p>

Annexure-VI: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks
NOS 1: Perform basic calculation using spreadsheet	Features of Spreadsheet Creating and saving worksheet and workbook Layouts, text formats, alignment Basic functions and formulas, sorting Graphs	23.52	10
NOS 2: Manage structured data	Introduction to database , advantages of DBMS, Concept of keys: candidate key, primary key, alternate key, Foreign key, Fundamental integrity rules: entity integrity, referential integrity. Entity-relationship model .ER-diagram, SQL, Knowledge Discovery in Databases, Data Mining, Data warehouse. Migrating data from source to data warehouse, cleaning, aggregation operations. Knowledge Discovery in Databases, Data Mining, Data warehouse. Migrating data from source to data warehouse, cleaning, aggregation operations.	23.52	10
NOS 3: Analyse data using spreadsheet tool	Data, table & formatting Conditional formatting Advanced charting Pivot Table Data Validation Filtering What if analysis, Role of Maths and Statistical techniques in Data Science, Probability and Statistics, Regression analysis, Descriptive	35.29	15

	statistics, Linear Regression		
NOS 4: Manage data in Open source tool	Introduction to Virtual Machine, creating and configuring Virtual Machine, Linux History, Benefits of Linux, Different Flavors of Linux, Introducing Ubuntu, Installing Ubuntu: Starting Up, Logging in, Exploring the Desktop, Ubuntu Basics, Browsing the File System, Understanding File System Concept, Managing Files, Real and Virtual Files, Mounting, File Searches, File Size, File Space Viewing Text Files, Using a Command Line Text Editor, Creating Files, Searching through Files, Comparing Text Files, Copying, Moving, Managing Files.	17.64	7.5
NOS 5 : Visualize data graphically	Introduction Tableau , Connecting to Excel, CSV Text Files, Connecting to Databases, Analyzing, Formatting, Sorting and charts	31.57	15
NOS 6: Installation of Hadoop Framework and Java Programming	Installation of Hadoop, Java concepts, OOPS concepts, Looping techniques, Methods, Method Overloading, Method Over-riding, Arrays, Java Programming, HDFS, Architecture of Hadoop, Configuring Hadoop Cluster & Hadoop Commands.	36.84	17.5
NOS 7: Manage big data using hadoop	Big Data Concepts, Need for analyzing Big Data, its roles in Business Intelligence and decision making. Analysis of Data Using Mapreduce and Hive. Implementation with examples	15.78	7.5
NOS 8: Implementation of use cases of Data Analytics	Demonstration of Project	15.78	7.5
Employability Skills		30	
OJT		30	
Total		350	

Annexure-VII: Assessment Strategy

Assessment of the qualification evaluates candidates to ascertain that they can integrate knowledge, skills and values for carrying out relevant tasks as per the defined learning outcomes and assessment criteria.

The underlying principle of assessment is fairness and transparency. The evidence of the outcomes and assessment criteria. competence acquired by the candidate can be obtained by conducting Theory (Online), Practical assessment, Internal assessment, Project/Presentation/ Assignment, Major Project. The emphasis is on the practical demonstration of skills & knowledge gained by the candidate through the training. Each OUTCOME is assessed & marked separately. A candidate is required to pass all OUTCOMES individually based on the passing criteria.

About Examination Pattern:

1. The question papers for the theory and practical exams are set by the Examination wing (assessor) of NIELIT HQS.
2. The assessor assigns roll number.
3. The assessor carries out theory online assessments through remote proctoring methodology. Theory examination would be conducted online and the paper comprise of MCQ. Conduct of assessment are through trained proctors. Once the test begins, remote proctors have full access to candidate's video feeds and computer screens. Proctors authenticate the candidate based on registration details, pre-test image captured and I-card in possession of the candidate. Proctors can chat with candidates or give warnings to candidates. Proctors can also take screenshots, terminate a specific user's test session, or re-authenticate candidates based on video feeds.
4. An External Examiner/ Observer may be deployed including NIELIT officials for evaluation of Practical examination/ internal assessment / Project/ Presentation/. Major Project (if applicable) would be evaluated preferably by external/ subject expert including NIELIT officials.
5. Pass percentage would be 50% marks in each component.
6. Candidates may apply for re-examination within the validity of registration (only in the assessment component in which the candidate failed).
7. For re-examination prescribed examination fee is required to be paid by the candidate only for the assessment component in which the candidate wants to reappear.
8. There would be no exemption for any paper/module for candidates having similar qualifications or skills.
9. The examination will be conducted in English language only.

Quality assurance activities: A pool of questions is created by a subject matter expert and moderated by other SME. Test rules are set beforehand. Random set of questions which are according to syllabus appears which may differ from candidate to candidate. Confidentiality and impartiality are maintained during all the examination and evaluation processes.

Annexure –VIII: Career Progression

Academic:

Horizontal:

Level 3 Courses in Big Data Analytics/Analytics: None

Vertical:

Level 4: Data Analyst Associate Level

4.5: Junior data analyst Level

5: Certified Data Analyst

Level 6: Post Graduate Program in Data Engineering

Professional:

Junior Data Analyst-> Database Administrator ->Data analyst-> Data Engineer-> Data Architect->Data Scientist->

Annexure-IX: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf