

Qualification Specification

The Advanced Analytics Solutions Level 4 Data Analyst Qualification

Qualification number: 610/6093/8

Qualification Summary

Qualification Title	Advanced Analytics Solutions Level 4 Data Analyst Qualification
Ofqual qualification number (QN)	610/6093/8
Guided Learning Hours (GLH)	200
Total Qualification Time (TQT)	560
Minimum Age	18
Qualification Purpose Summary	<p>This qualification is designed for learners who wish to use data to make business decisions. Apprentice Data Analysts may work in various departments within a single employer, (for example finance, sales, HR, manufacturing, or marketing), and in any employment sector, public or private, including retail, distribution, defence, banking, logistics, media, local government etc.</p> <p>The qualification will develop the learner's skills at using data to answer questions and solve business or organisational problems. Learners will develop skills in requirements-gathering, inspecting, cleansing, transforming and modelling data with the goal of discovering useful information, informing conclusions and supporting decision-making.</p> <p>Data analysis plays a crucial role in making decisions more evidence-based and helping organisations operate more effectively.</p>
Grading	Fail/Pass/Merit/Distinction
Assessment Methods	Work Based Project with questions, Professional Discussion underpinned by portfolio of evidence.
Work/Industry placement experience	Learners must produce a work based project during the gateway period. A portfolio of evidence during the on-programme period of the apprenticeship containing evidence related to the KSBs that will be assessed by the professional discussion will also be required.

Change Control

This section summarises the changes made to this qualification specification.

Version	Publication Date	Summary of Changes
1.0	July 2025	First publication

SECTION ONE - INTRODUCTION

Introduction

If you are using this qualification specification for the purposes of planning training delivery, please ensure that you use the most up to date version.

In the event of a conflict between this document and the assessment plan published by Skills England then the latter takes precedence.

Aims and Objectives

Data analysis plays a crucial role in making decisions more evidence-based and helping organisations operate more effectively.

This qualification prepares learners to use data to make business decisions and use data to answer questions and solve business or organisational problems.

Learners will develop skills in requirements-gathering, inspecting, cleansing, transforming and modelling data with the goal of discovering useful information, informing conclusions and supporting decision-making.

The qualification focusses on the knowledge, skills and behaviours required to successfully carry out analysis of data in a range of workplace settings.

The objectives of this qualification are to develop skills in:

- Identifying data sources to meet the organisation's requirement, using evidence-based decision making to establish a rationale for inclusion and exclusion of various data sets and models
- Liaising with the client and colleagues from other areas of the organisation to establish reporting needs and deliver insightful and accurate information
- Collecting, compiling and, if needed, cleansing data, such as sales figures, Digital Twins etc. solving any problems that arise, to or from a range of internal and external systems
- Producing performance dashboards and reports in the Visualisation and Model Building Phase
- Supporting the organisation by maintaining and developing reports for analysis to aid with decisions, and adhering to organisational policy/legislation
- Producing a range of standard and non-standard statistical and data analysis reports in the Model Building phase
- Identifying, analysing, and interpreting trends or patterns in data sets
- Drawing conclusions and recommending an appropriate response, offering guidance or interpretation to aid understanding of the data
- Summarising and presenting the results of data analysis to a range of stakeholders, making recommendations

- Providing regular reports and analysis to different management or leadership teams, ensuring data is used and represented ethically in line with relevant legislation (e.g. GDPR which incorporates Privacy by Design).
- Ensuring data is appropriately stored and archived, in line with relevant legislation e.g. GDPR
- Practicing continuous self-learning to keep up to date with technological developments to enhance relevant skills and take responsibility for own professional development

Support Handbook

This qualification specification must be used alongside the Guidance Handbook for Employers, Learners, and Training Providers, which is available on request as well as the formal Assessment Plan available from Skills England. The handbook contains additional supporting information to help with planning and delivery and general information on assessment to help learners, employers and training providers plan.

This qualification specification contains all the qualification-specific information you will need that is not contained in the Guidance Handbook.

Guidance for entry and registration

This qualification is designed for learners who wish to analyse data across organisational functions and processes.

Registration is at the discretion of the Training Provider, in accordance with equality legislation, and Individual employers will set their own entry requirements.

There are no specific prior skills or knowledge a learner must have for this qualification; however, learners will find it helpful if they have recent experience of using a range of data management tools such as Excel or similar to analyse data sets along with good numerical and verbal reasoning skills.

Training Providers are responsible for ensuring that learners are capable of achieving the learning outcomes (LO's) and complying with the relevant literacy, numeracy and health and safety requirements.

Learners registered on this qualification should not undertake another qualification at the same level, or with a similar title, as duplication of learning may affect eligibility for funding.

Achieving this qualification

To be awarded this qualification, learners are required to successfully achieve a pass or better in both mandatory assessment methods.

Refer to the qualification content for further information.

To achieve this qualification, learners must successfully demonstrate their achievement of all of the knowledge, skills and behaviour criteria as detailed in this qualification specification.

Progression

Learners who achieve this qualification could progress to many further learning opportunities including the following:

- Level 5 Data Engineer
- Level 4 Improvement Practitioner
- Level 5 Improvement Specialist

Resource requirements

There are no mandatory resource requirements for this qualification, but Training Providers must ensure learners have access to suitable resources to enable them to cover all the appropriate learning objectives.

Learners will need to have access to:

- Standard office IT equipment to gather, analyse and present data
- Software such as Excel or similar capable of the analysis required in this qualification
- Advanced tools such as Tableau, Minitab, JMP, SPSS, SigmaXL, or Data Analysis Toolkit are not required however learners will benefit from an ability to use one or more of these tools.

How this qualification is assessed

Assessment is a process of measuring a learner's knowledge and skill against the standards set in a qualification.

This qualification is externally assessed and quality assured.

The assessment consists of two components:

- An externally assessed work based project with questioning
- An externally assessed portfolio of evidence

Learners must achieve at least a pass in both of these assessments to gain this qualification.

All the evidence generated by the learner will be assessed against the standards expected of a Level 4 Data Analyst for each learning objective.

Unless otherwise stated in this specification, all learners taking this qualification must be assessed in English and all evidence presented for external assessment must be in English.

SECTION TWO – CONTENT AND ASSESSMENT GUIDANCE

This section provides details of the structure and content of this qualification.

The types of evidence listed are for guidance purposes only. Other types of evidence are acceptable if all learning outcomes are covered, and if the evidence generated can be externally assessed and quality assured.

The explanation of terms shows how the terms used in the qualification content are applied to this qualification, this is contained in Section Three.

Assessment Method 01 Work Based Project and Questioning

Assessment Summary		
<p>This mandatory assessment element consists of a 40 minute long project presentation and questioning assessment questions in which they will demonstrate the KSBs assigned to this assessment method. The presentation element lasts for 20 minutes followed by 20 minutes of questioning by the independent assessor during which the independent assessor will ask a minimum of 8 questions to establish the apprentice's understanding of underpinning reasoning.</p> <p>The independent assessor has the discretion to increase the time of both the presentation and questioning by up to 10% to allow the apprentice to complete their last point.</p> <p>Please refer to the Guidance Handbook for Employers, Learners, and Training Providers for further information regarding the ID verification process and details regarding the set-up of assessments.</p> <p>To achieve a pass in this assessment all pass criteria must be met, to achieve a distinction all pass and distinction criteria must be met.</p>		
KSB Ref. Number	Knowledge, Skill or Behaviour criteria	Learning Objectives <i>In order to achieve a pass grade the learner must demonstrate that they can do or know ...</i>
<ul style="list-style-type: none"> K3, K4, K8, K9, K11, K12 S1, S2, S3, S4, S6, S7, S8, S12, S15 B3, B4 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Operates data systems in compliance with all organisational and legislative requirements including principles of Privacy by Design (S1) Outlines and applies the principles of data analysis lifecycle to the steps of data analysis (K3, S2) Describe the principles of data including open, public, administrative and research data and how they relate to the data used within the project (K4) Demonstrates a reasoned application of the principles of data classification. Explains where any flexibilities in application have been applied and their purpose (S3) Identifies quality risks in data analysis and outlines methods to mitigate, escalate and/or resolve them (K8, S6)

		<ul style="list-style-type: none"> • Outlines and applies the principles for defining customer requirements and implements findings in data analytics planning and outputs (K9, S7) • Demonstrates how data from different sources is combined and prepared for data analysis setting out how they identified the risks and challenges inherent in combining data within the project (S8) • Describes the tools and methods used by their organisation for data analysis and identifies which were used within the project with reasoning for the choices made to achieve the best outcome (K11, S15) • Analyses data sets taking account of different data structures and database designs (S4) • Outlines the choice of organisational data architecture (K12) • Communicates and collaborates with all relevant stakeholders and adapts communication style to meet audience and situational requirements (S12) • Describes how they work independently and collaboratively detailing their impact on the work of others (B3) • Acts independently to establish logical and analytical solutions such as exploring new data sets or resolving issues within the data (B4)
Distinction Criteria In addition to satisfying all the pass criteria the following must also be met to achieve a distinction award		
K3, K4, K8, K9, K11, K12 S1, S2, S3, S4, S6, S7, S8, S12, S15 B3, B4	N/A	<ul style="list-style-type: none"> • Evaluates the outcomes of data analysis and suggests alternative tools/methods which would be of benefit to all stakeholders (K8, K11, B4) • Analyses the requirements of the customer to produce a data analysis plan which provides an optimum solution (S7) • Demonstrates the use of data sets with different data structures and database designs to solve problems or improve the accuracy or efficiency of data analysis (S4)

Assessment Method 02 Professional Discussion underpinned by a Portfolio of Evidence

Assessment Summary		
<p>This mandatory assessment element consists of a learner led professional discussion lasting 60 minutes, to include a minimum of 10 open style questions from the assessor to clarify or follow up evidence. The independent assessor has the discretion to increase the time of the professional discussion by up to 10% to allow the apprentice to complete their last answer. Further time may be granted for apprentices with appropriate needs, in-line with the EPAO's Reasonable Adjustments Policy. The professional discussion will be audio-recorded.</p> <p>The apprentice and the independent assessor will have access to their own copies of the portfolio (either electronic or bring a copy with them) throughout the discussion and both can refer to it as needed. The apprentice can draw on the contents of the portfolio to underpin the discussion, selecting items to inform and enhance their answers.</p> <p>The independent assessor must ask a minimum of 10 open questions.</p> <p>Details of other arrangements may be found in the Guidance Handbook.</p> <p>To pass this assessment element learners must achieve all criteria at pass level. To achieve a pass in this assessment all pass criteria must be met, to achieve a distinction all pass and distinction criteria must be met.</p>		
KSB Ref. Number	Knowledge, Skill or Behaviour criteria	Learning Objectives <i>In order to achieve a pass grade the learner must demonstrate that they can do or know ...</i>
K1, K2, K5, K6, K7, K10, K13, K14, K15 S5, S9, S10, S11, S13, S14 B1, B2, B5, B6, B7	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Explains how current, relevant legislation impacts on the safe use of data and how their role contributes to a productive, safe, and secure working environment (K1, B1) Explains the relevant data policies and procedures for the organisation, and identifies the data standards to be reached (K2) Describes the fundamentals of data structures and database system design and explains how they are implemented and maintained (K6) Explains approaches to combining data from different sources to improve accuracy and / or efficiency and / or maximise benefits to the organisation and / or customer (K10) Describes impact on user experience and domain context on data analysis (S5) Explains the differences between Structured and Unstructured data (K5) Explains the ethical aspects associated with the collation and use of data and justifies why this is important (K15)

		<ul style="list-style-type: none"> • Describes the relevant tools or techniques used for working with the data systems architecture in their organisation (S9) • Explains and applies the principles of statistics for analysing datasets (K13, S10) • Identifies and explains challenges in their work and how they overcame them, providing an outline of lessons learned (B6) • Explains how they have applied analytical techniques for data mining and time series forecasting and other modelling techniques (S13) • Identifies areas of work where they adapted to changing contexts within the scope of a project, direction of the organisation or Data Analyst role (B7) • Explains the principles of descriptive, predictive and prescriptive analytics and demonstrates how they have been applied within their own data analysis practice. (K14, S11) • Demonstrates data analysis activities involving the collation and interpretation of qualitative and quantitative data and displays results using visual representations (S14) • Explains the principles of user experience and domain context for data analytics (K7) • Describes how they have appropriately adapted their activities to meet minor, unexpected changes at work. (B2) • Describes how they have ensured the true root cause of any problem is found and a solution is identified which prevents recurrence (B5)
<p style="text-align: center;">Distinction Criteria</p> <p style="text-align: center;">In addition to satisfying all the pass criteria the following must also be met to achieve a distinction award</p>		
<p>K1, K2, K5, K6, K7, K10, K13, K14, K15</p> <p>S5, S9, S10, S11, S13, S14</p> <p>B1, B2, B5, B6, B7</p>	N/A	<ul style="list-style-type: none"> • Critically evaluates the risks and benefits of predictive analytics (K14, S11) • Compares and contrasts visual data representation approaches and how they aid understanding by stakeholders (S14) • Evaluates the benefits and risks inherent in combining data from different sources (K10)

OVERALL GRADING

Results from each of the two assessment methods are combined to arrive at the overall grade awarded.

Project Presentation with Questioning	Professional Discussion underpinned by portfolio	Overall Grade
Fail	Any grade	Fail
Any grade	Fail	Fail
Pass	Pass	Pass
Pass	Distinction	Merit
Distinction	Pass	Merit
Distinction	Distinction	Distinction

SECTION THREE - EXPLANATION OF TERMS

This table explains how the terms used are applied to this qualification (not all verbs are used in this qualification)

Define	Give the meaning of a word or phrase
Demonstrate	Show an understanding of a subject
Describe	Provide details about the subject or item
Explain	Provide details about the subject with reasons showing how or why
Give examples of ...	Provide relevant examples to support the subject
Identify	List or name the main points
Indicate	Point out or show using words, illustrations or diagrams
Locate	Find or identify
List	Make a list of words, sentences or comments
Outline	Identify or describe the main points
Plan	Think about, organise and present information in a logical way. This could be presented in writing, as diagrams or an illustration.
Show	Give information that includes clear knowledge about the subject
State	Give the main points in brief, clear sentences
Use	Take an item, recourse or piece of information and link it to the question or task.

SECTION FOUR - SUPPORT

Support Materials

The following support materials are available to assist with the delivery of this qualification and may be available on our website, via ACE360 or on request.

- Guidance Handbook for Employers, Learners, and Training Providers
- Learning resources
- Guidance materials by KSB

We do not explicitly endorse any source of learning materials however there is a wealth of material available on the topic in academic textbooks, media and social domains.

Training Providers are cautioned to be circumspect when selecting sources.

Reproduction of this document

Reproduction of this document is permitted by Training Providers under the following conditions:

- You may copy and paste any material from this document however we do not accept any liability for any incomplete or inaccurate copying and subsequent use of this information
- Any photographs, diagrams, logos or illustrations in this publication are either our exclusive intellectual property or are used under license
 1. They are protected under copyright law and cannot be reproduced, copied or manipulated without permission of their owners.