Welsh Apprenticeship Pathway

Data Analyst

The content of this Pathway has been agreed by ODAG Consultants Ltd. This is the only Apprenticeship Pathway for Data Analyst approved for use in Wales that is eligible for Medr funding.

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WGAF05 V2 – December 2020

Level 3 – Data Technician

LEARNING PROGRAMME CONTENT

The Learning Programme provision shall comprise of three mandatory elements:
- Qualifications,
- Essential Skills
- On/off the job training

The total minimum credit required for the Level 3 Pathway for Data technician is 70 credits.

ENTRY REQUIREMENTS

There are no specific entry requirements for this framework, however:

Employers are looking to widen the pool of potential recruits into data roles, and they are particularly interested in:

- adult learners who are employed in roles that require data handling and analysis and wish to improve their data analysis skills.
- adult learners who wish to become data engineers or data analysts who wish to move into digital roles.
- adult learners who wish to enhance their work-related data skills.
- young people, aged over the age of 16 who wish to gain a qualification in data analytics.

Applicants may have prior experience or qualifications in digital technologies, but this is not mandatory as training providers and employers will deliver programmes of training based on approved up to date qualifications tailored to meet individual needs, recognising prior qualifications and experience.

APPRENTICESHIP PATHWAY LEARNING PROGRAMME(S)

Level 3: Data Technician

Qualifications

Participants must achieve the following combined qualifications below.

Level 3 – Data Technician					
Awarding Body	Qualification No.	Credit Value	Total Qualification Time	Competence / Knowledge / Combined	Qualification Assessment Language(s)
Agored Cymru	C00/5131/2	70	700 hours	Combined	English-Welsh

Essential Skills Wales (ESW)

Essential Skills Wales qualifications assessment languages are English-Welsh

Level 3: Data Analyst	Level	Minimum Credit Value
Communication	1	6
Application of Number	1	6

On/Off the Job Training

Pathway	Minimum On the Job Training Hours	Minimum Off the Job Training Hours
Level 4: Data Analyst	160	270

On/Off the Job Qualification details (Minimum Credit & Hours)

> Combined qualification - 70 credits, 372 hours GLH

On/Off the Job Essential Skills details (Minimum Credit & Hours)

- 6 credits / 60 GLH Level 1 Essential Skills Wales Communication
- 6 credits / 60 GLH Level 1 Essential Skills Wales Application of Number

OTHER ADDITIONAL REQUIREMENTS

> N/A

JOB ROLES

The Data Technician Apprenticeship has been designed with employers in Wales to address the need for data analyst practitioner skills across all sectors. This Apprenticeship programme is designed to provide a robust vocational route to filling the current and future skills need for Data Technician professionals.

The roles covered by this framework could either be within:
- Data centric organisations providing development and/or operational data services to a range of clients; or

- Organisations operating in any sector which make use of IT Systems to process and store data of any type.

The range of organisations for which these roles will be relevant includes obvious ones such as large retailers, engineering and manufacturing, financial services providers and government departments but in reality, almost all users of IT Systems of any sort.

Job title(s)	Job role(s)
Data Technician	Collecting, processing, and organising data from various sources. Using tools such as spreadsheets, databases and cloud storage solutions to handle, format and analyse data. Communicating findings effectively to the team and stakeholders.
Junior Business Intelligence Analyst/Engineer	Gathering, processing, and structuring data from multiple sources, utilising tools to analyse data and generate actionable insights. Creating visualisations, such as dashboards, charts, and graphs, to effectively convey key findings. Collaborating with stakeholders to support data-driven decision-making, and support regular reporting requirement.

PROGRESSION

Progression routes into:

This can be from a variety of routes including directly from school or college with the suggested level of academic qualifications including:

- GCSE, Welsh Baccalaureate Qualification Intermediate
- General or vocational qualifications related to the digital or creative industries

The Level 2 Digital Skills for Business Apprenticeship programme provides apprentices with an entry level grounding in applied digital and data technologies and those who want to specialise more in data technologies can progress into the level 3 data technician apprenticeship.

Or as career development in an appropriate role with suitable qualifications or recognition of prior learning and experience.

Progression from:

The Level 4 Data Analyst Apprenticeship programme offers successful apprentices the opportunity to make further progress in their studies and undertake a level 4 Diploma or enter the start of a Foundation Degree or HND in Computing or Data related course. They could also continue with their data specialisation and commence the degree apprenticeship (level 6) in Data Science or a related digital technology programme. They can also progress within their job role and pursue their learning by undertaking additional technical professional qualifications in data analytics.

Apprentices who complete this Level 3 apprenticeship programme can also progress within their career to develop greater specialisation and progress to data practitioner positions, utilising their expanding technical expertise within the organisation.

Level 4 – Data Analyst

LEARNING PROGRAMME CONTENT

The Learning Programme provision shall comprise of three mandatory elements:

- Qualifications,
- Essential Skills
- On/off the job training

The total minimum credit required for the Level 4 Pathway for Data analyst is 124 credits.

ENTRY REQUIREMENTS

There are no specific entry requirements for this framework, however:

Employers are looking to widen the pool of potential recruits into data roles, and they are particularly interested in:

- adult learners who are employed in roles that require data handling and analysis and wish to improve their data analysis skills.

- adult learners who wish to become data engineers or data analysts who wish to move into digital roles.

- adult learners who wish to enhance their work-related data skills.

- young people, aged over the age of 16 who wish to gain a qualification in data analytics.

Applicants may have prior experience or qualifications in digital technologies, but this is not mandatory as training providers and employers will deliver programmes of training based on approved up to date qualifications tailored to meet individual needs, recognising prior qualifications and experience.

APPRENTICESHIP PATHWAY LEARNING PROGRAMME(S)

Level 4: Data Analyst

Qualifications

Participants must achieve the following combined qualifications below.

Level 4 – Data Analyst					
Awarding Body	Qualification No.	Credit Value	Total Qualification Time	Competence / Knowledge / Combined	Qualification Assessment Language(s)
Agored Cymru	C00/0772/1	124	1240 hours	Combined	English-Welsh

Essential Skills Wales (ESW)

Essential Skills Wales qualifications assessment languages are English-Welsh

Level 4: Data Analyst	Level	Minimum Credit Value
Communication	2	6
Application of Number	2	6

On/Off the Job Training

Pathway	Minimum On the Job Training Hours	Minimum Off the Job Training Hours
Level 4: Data Analyst	285	480

On/Off the Job Qualification details (Minimum Credit & Hours)

Combined qualification - 124 credits, 565 hours GLH

On/Off the Job Essential Skills details (Minimum Credit & Hours)

- 6 credits / 60 GLH Level 2 Essential Skills Wales Communication
- 6 credits / 60 GLH Level 2 Essential Skills Wales Application of Number

OTHER ADDITIONAL REQUIREMENTS

N/A

JOB ROLES

The Data Analyst Apprenticeship has been designed with employers in Wales to address the need for data analyst practitioner skills across all sectors. This Apprenticeship programme is designed to provide a robust vocational route to fulfil the current and future skills need for Data Analytics professionals.

The roles covered by this framework could either be within:
- Data centric organisations providing development and/or operational data services to a range of clients; or

- Organisations operating in any sector which make use of IT Systems to process and store data of any type.

The range of organisations for which these roles will be relevant includes obvious ones such as large retailers, engineering and manufacturing, financial services providers and government departments but in reality, almost all users of IT Systems of any sort.

Job title(s)	Job role(s)
Data Analyst	Transforming, validating or modeling data with the purpose of understanding or making conclusions from the data for decision making purposes
Data Engineer	Preparing data for analytical or operational uses. Designing and building data pipelines to bring together information from different source systems. Integrating, consolidating, cleansing and structuring data into easily accessible and usable formats.
Data Manager	Management of large, highly dynamic data sets, often referred to as 'Big Data'. The data will be derived from a range of sources and can relate to contexts including business and scientific or social research.

PROGRESSION

Progression routes into:

This can be from a variety of routes including directly from school or college with the suggested level of academic qualifications including:

- GCSE, Welsh Baccalaureate Qualification Intermediate
- GCE AS and A Level, Welsh Baccalaureate Qualification Advanced
- General or vocational qualifications related to the digital or creative industries

Or as career development in an appropriate role with suitable qualifications or recognition of prior learning and experience.

Progression from:

The Level 4 Apprenticeship programme offers successful apprentices the opportunity to further progress in their studies and undertake a Foundation Degree or HND in Computing or continue with their data specialisation and undertake the degree apprenticeship (level 6) in Data Science or a related digital technology programme. They can also progress within their job role and pursue their learning by undertaking additional technical professional qualifications in data analytics.

Apprentices who complete this Level 4 apprenticeship programme can progress within their career to take on team leader or more senior data practitioner positions, utilising their expanding technical expertise within the organisation.

EQUALITY & DIVERSITY

It is important that apprenticeship Pathways are inclusive and can demonstrate an active approach to identifying and removing barriers to entry and progression. Pathways should advance equality of opportunity between people who share

protected characteristics and those people who do not as identified in the Equality Act 2010.

The protected characteristics identified in the Equality Act are age, disability, gender re-assignment, race, religion or belief, sex, sexual orientation, pregnancy and maternity. Marriage and civil partnership is also included although only in respect of the requirement to eliminate discrimination in employment.

Training providers and employers MUST also comply with the other duty under the Equality Act 2010 to ensure that applicants are not discriminated against in terms of entry to the industry based upon those nine protected characteristics.

EMPLOYMENT RESPONSIBILITIES AND RIGHTS (ERR)

Employment Responsibilities and Rights (ERR) is no longer compulsory. But it is recommended that all apprentices (especially the 16 years -18-year group) receive a company induction programme.

RESPONSIBILITIES

It is the responsibility of the Training Provider and Employer to ensure that the requirements of this pathway are delivered in accordance with the Welsh Government/Medr Apprenticeships Guidance.

Further information may be obtained from:
Medr

Annex 1

Level 3: Data Technician

- [Agored Cymru Level 3 Diploma in Data Analytics](#)

The mandatory units of the combined qualification contain a total of 43 credits of which 18 credits relate to competence and 25 credits relate to knowledge.

Mandatory and optional units

Unit Title	Level	Credits
Mandatory units: Minimum credits required: 43		
[Database Software](#)	Two	4
[Digital Information Management](#)	Three	6
[Spreadsheet Software](#)	Three	6
[Data Analysis](#)	Three	11
[Data Visualisation](#)	Three	4
[Ethical Use of Information](#)	Three	3
[Analyse and Present Data and Information](#)	Three	4
[Statistical Analysis](#)	Three	2
[Risk Management for Data Analysis](#)	Three	3

Unit Title	Level	Credits
Optional units: Minimum credits required: 27		
[Social Analytics](#)	Three	2
[Model Structured Data](#)	Three	6
[Macro Programming for IT Applications](#)	Three	8
[Database Applications](#)	Three	8
[Data Modelling](#)	Three	6
[Sustainable Development and Global Citizenship](#)	Three	5
[Digital Security for Business](#)	Three	4
[Coding](#)	Three	10
[Data-Driven Applications](#)	Three	8
[Principles of Artificial Intelligence use in the Workplace](#)	Three	4
[Database Software](#)	Three	6
[Principles of Working in the Public Sector](#)	Two	5

Annex 2

Level 4: Data Analyst

- [Agored Cymru Level 4 Diploma in Data Analytics](#)

The mandatory units of the combined qualification contain a total of 72 credits of which 30 credits relate to competence and 42 credits relate to knowledge.

Mandatory and optional units

Unit Title	Level	Credits
Mandatory units: Minimum credits required: 72		
Develop Own Effectiveness and Professionalism	Four	12
Principles of Data Management Infrastructure	Four	18
Data Analysis Tools	Four	18
Data Analysis: Data Science	Four	24

Unit Title	Level	Credits
Optional units: Minimum credits required: 52		
Statistical Analysis of Data Sets	Four	15
Investigating and Defining Customer Requirements for ICT Systems	Four	15
Principles of Information Governance and Assurance	Three	15
Testing IT & Telecoms Systems	Four	15
Testing the Security of Information Systems	Four	15
Advanced Data Representation and Manipulation for IT	Three	7
Data Management Infrastructure	Four	18
Programming for Data Analysis	Four	15