LEVEL 4 DATA ANALYST

There is nothing standard about the new apprenticeship Standards!

In 2017 modern apprenticeships underwent a major overhaul. Apprenticeships now represent the very best in vocational Further Education programmes and benefit the widest range of employees and employers for new career starts, upskilling for progression or changes in career direction.

Programme Overview:

Our apprenticeship is designed to prepare apprentices by giving them a deep understanding of what data is, how to work with it and how to use it to gain the greatest insights to empower businesses.

We teach apprentices how to describe, handle, process and manipulate structured and unstructured data. They will learn Python SQL along with modelling techniques using tools such as Numpy, Pandas and Jupyter.

They will be taught data integration, database design and ETL processes along with accuracy and quality considerations.

We delve into statistical analysis and modelling for example z-scores, t-tests and regression.

We provide the understanding and application of the mathematics and formulas behind the analysis, and how to deliver well presented insight that a business can really use.

Along with technologies essential to data analysis, we also teach apprentices how to create local, virtual or cloud based sandboxes and other environments that enable them to visualise and operationalise data.

We also embed teamwork, process, project management and a good grounding in legal and ethical considerations to ensure apprentices are well rounded.

Who is it for?

For individuals working in a position which requires them to extract, compile, analyse and moderate volumes of data with a reasonable degree of complexity.

Key responsibilities which can include:

- Data Analysis
- Data Management
- Data Modelling
- Data Engineering
- Data Manipulation
- Data Presenting

Entry Requirements:

Entry requirements exist for all funded Further Education programmes. These ensure the value, gain and success of the programme. The ATP will conduct the processes with employers and prospective apprentices to determine correct funding eligibility.

Job role eligibility (known as Competency Role Map):

The job role must contain opportunity for an apprentice to practice the content set out in the apprenticeship Standard to achieve vocational competency. Apprentices must have the opportunity to practice the knowledge taught in training sessions in order to convert new knowledge in to sustainable skills applied in the workplace.

Each apprenticeship requires a portfolio of evidence this will showcase the apprentice's work and will be reviewed by the apprenticeship assessment organisation to determine how well new knowledge has been successfully utilised vocationally. If a job role is close to the eligibility criteria we will consult with employers to see if adjustments can be made to ensure criteria is met.

Initial Assessment of existing knowledge and skills:

A prospective apprentice must stand to gain significant knowledge and skills from an apprenticeship. If the apprenticeship is too advanced for them or if they already know much of the knowledge and skills the apprenticeship would provide then they may not be eligible for the funding.

The ATP will review existing qualifications, knowledge and skills to determine if the prospective apprentice will benefit from the proposed apprenticeship such that it meets the funding criteria. In most instances this is very straightforward, however in some instances funding can be specially authorised for reduction in order to fund the parts of an apprenticeship that would be relevant. The ATP will provide the assessment for these possibilities.

The Level 4 Data Analyst is highly technical, so whilst employers can select their own entry criteria, they should include; at least 5 GCSEs including English and Mathematics and hold a minimum of 120 UCAS points, or equivalent as a minimum to help ensure success.

In many cases this type of apprenticeship can demand a higher capability of English and maths than is taught at GCSE or A-Level. For example, advanced report writing, budgeting, complex structured explanations and/or advanced formulae and statistics. The ATP will provide both functional and advanced English and maths diagnostics and teaching to ensure each apprentice is fully supported in these areas.

Programme Duration:

This apprenticeship is delivered over 24 months for full-time employees. For part-time employees the terms is adjusted depending on contracted hours.

Standard Delivery Model:

Apprenticeship training is delivered through a blend of weekly live web-based classrooms and regular face-to-face mentoring sessions that are held on a one-to-one basis in the workplace.

These live classrooms are held through Microsoft Teams. This software provides the full suite of educational tools including everything you would find in a conventional classroom and more e.g. live open interactions, private breakout rooms, note and question queues and interactive illustration boards. We can also use movie green screen technology for lesson illustrations.

A full timetable for the training, mentoring, exams and assessments is provided at the outset. Progress is reviewed at 12-week intervals in a meeting between the mentor, apprentice and employer (typically the apprentice's line manager).

Employers and apprentices have full visibility of progress in real-time by accessing the e-portfolio system, alternatively regular updates can be provided by other means if preferred.

End Point Assessment (EPA):

Aside from qualifications that can be obtained by doing an apprenticeship, the most important and valuable goal is what has been achieved during the programme.

Successful apprentices will obtain a Pass, Merit or Distinction in their apprenticeship. The way a Pass, Merit or Distinction is determined is at a stage called End Point Assessment which takes place once all the leaning has been completed. Like all examinations, a mock will take place before the final assessment.

Once all components of the apprenticeship have been achieved including the mock, a final review is conducted to ensure everything has been covered, this is called gateway. Then the apprentice will undergo their End Point Assessment.

EPA for this programme consists of:

1. Portfolio of Evidence demonstrating work on 6-8 projects covering all the standard criteria

2. Employer Reference built over the course of the apprenticeship during the 12 week reviews, covering all the standard criteria

3. Synoptic Project, a business project completed in the final stages of the apprenticeship (this can sometimes include a virtual lab where appropriate), taking between 10-40 hours over a maximum of 2 weeks

4. A structured interview with the assessors exploring the project, portfolio of evidence and employer reference

Programme Structure:

Apprentices are taught a broad principles, techniques and technologies. The education incorporates knowledge, skills and behaviours as well as self-management self and objective led approach.

Technical Competencies:

- Identify, collect, compile and migrate data to/from a range of internal and external systems and sources

- Manipulate and link different data sets

- Interpret and apply the organisation's data and information security standards, policies and procedures to data management activities

- Perform database queries across multiple tables to extract data for analysis

- Perform statistical analyses and ad-hoc queries

- Use a range of analytical techniques such as data mining, time series forecasting and modelling to identify and predict trends and patterns In data

- Assist production of performance dashboards and reports

- Assist with data quality checking and cleansing

- Apply tools and techniques for data analysis, data visualisation and presentation

- Assist with producing a range of bespoke and standard data analysis reports

- Summarise and present results along with recommendations to a range of stakeholders

- Works with the organisation's data architecture

Technical Knowledge and Understanding:

- The range of data protection and legal issues

- The data life cycle

- The different types of data, including open and public data, administrative data and research data

- The differences between structured and unstructured data

- The fundamentals of data structures, database system design, implementation and maintenance

- The importance of the domain context for data analytics

- The quality issues that can arise with data and how to avoid and/or resolve these

- The importance of defining customer requirements for data analysis

- The processes and tools used for data integration

The steps involved in carrying out routine data analysis

- Logical and creative thinking

- Analytical and problem solving

- Working independently and taking responsibility

- Analysis tasks

- How to use and apply industry standard tools and methods for data analysis

Underpinning Skills, Attitudes and Behaviours:

- Calculated initiative

- Work with a range of internal and external contacts and stakeholders

- Communicate effectively with both technical and non-technical contacts

- Maintain productive, professional and secure working environment

The designated trainers and mentors will support the employer and apprentice throughout the programme dedicated points of contact for questions and queries.
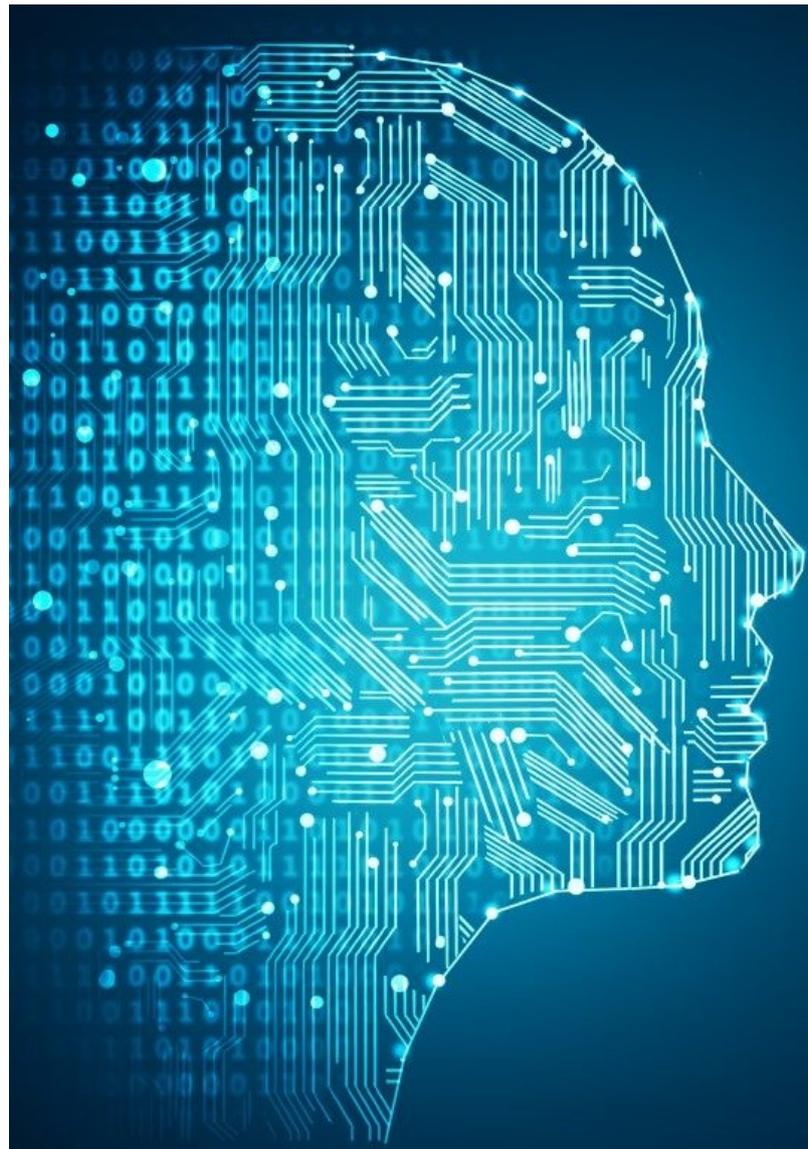
Qualifications and Certifications:

- BCS Data Analysis Concepts

- BCS Data Analysis Tools

Additional Teaching:

To help apprentices perform in industry we have developed and included the following additional teaching programmes alongside the alongside the mandatory qualifications:

- Introduction to Python

- Introduction to Statistics

Professional Membership:

On completion, apprentices may choose to register with the BCS under the register of IT technicians to support their professional career development and progression.

Next steps:

To configure an ideal apprenticeship we will meet with you virtually to discuss your requirements, present the options and collaborate to determine the best apprenticeships to meet your needs. We will provide ongoing support including:

- Recruitment of apprentices

- Quality assured Information Advice and Guidance

- Updates and information on legislation and funding

- Support and guidance for apprentice and employer throughout the apprenticeship

- Access to a comprehensive suite of resources and support material via OneFile

- Industry specialist qualified trainers and mentors