**Map to Apprenticeship Standard 2021 for Level 4 Data Analyst**

**[see:** <https://www.instituteforapprenticeships.org/apprenticeship-standards/data-analyst/>]

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| **Knowledge** | **Problem Solving through ProgrammingCOM411** | **Introduction to Databases COM417** | **COM423 Systems Analysis & Design Work Based Project** | **Principles & Methods****COM427** | **Data analysis, tools and applicationsCOM418** | **Computing Project COM426** |
| K1: | current relevant legislation and its application to the safe use of data | x |   | x | x | x | X |
| K2 | organisational data and information security standards, policies and procedures relevant to data management activities |   |   | x | x |   |   |
| K3 | principles of the data life cycle and the steps involved in carrying out routine data analysis tasks |   |   | x | x | x |   |
| K4 | principles of data, including open and public data, administrative data, and research data |   |   |   | x |   |   |
| K5 | the differences between structured and unstructured data |   |   |   | x |   |   |
| K6: | the fundamentals of data structures, database system design, implementation and maintenance | x | x |   |   |   |   |
| K7 | principles of user experience and domain context for data analytics |   |   | x |   | x |   |
| K8 | quality risks inherent in data and how to mitigate or resolve these |   |   |   | x |   |   |
| K9: | principal approaches to defining customer requirements for data analysis§ |   |   |   |   | x |   |
| K10: | approaches to combining data from different sources |   | x  |  x |   |   |   |
| K11: | approaches to organisational tools and methods for data analysis |   | x | x |   | x |   |
| K12: | organisational data architecture |   |   |   | x |   |   |
| K13: | principles of statistics for analysing datasets |   |   |   | x | x |   |
| K14 | the principles of descriptive, predictive and prescriptive analytics |   |   |   |   | x |   |
| K15: | the ethical aspects associated with the use and collation of data | x |   |   | x | x | X |

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| **Skills** | **Problem Solving through ProgrammingCOM411** | **Introduction to Databases COM417** | **COM423 Systems Analysis & Design Work Based Project** | **Principles & Methods****COM427** | **Data analysis, tools and applicationsCOM418** | **Computing Project COM426** |
| S1 | Use data systems securely to meet requirements and in line with organisational procedures and legislation including principles of Privacy by Design |   |   | X |   |   | X |
| S2 | implement the stages of the data analysis lifecycle | x |   |   |   | x | X |
| S3 | apply principles of data classification within data analysis activity |   |   |   |   | x |   |
| S4 | analyse data sets taking account of different data structures and database designs |   | x |   |   |   |   |
| S5 | assess the impact on user experience and domain context on data analysis activity |   |   |   |   | x |   |
| S6 | identify and escalate quality risks in data analysis with suggested mitigation or resolutions as appropriate |   |   |   | x |   | X |
| S7 | undertake customer requirements analysis and implement findings in data analytics planning and outputs |   |   | X | x |   |   |
| S8 | identify data sources and the risks and challenges to combination within data analysis activity | x |   |   |   |   |   |
| S9 | apply organizational architecture requirements to data analysis activities |   |   | x | x |   |   |
| S10 | apply statistical methodologies to data analysis tasks |   |   | x | x | x |   |
| S11 | apply predictive analytics in the collation and use of data |   |   |   |   | x | X |
| S12 | collaborate and communicate with a range of internal and external stakeholders using appropriate styles and behaviours to suit the audience |   |   |   |   | x |   |
| S13 | use a range of analytical techniques such as data mining, time series forecasting and modelling techniques to identify and predict trends and patterns in data |   |   |   |   | x |   |
| S14 | collate and interpret qualitative and quantitative data and convert into infographics, reports, tables, dashboards and graphs |   |   |   |   | x | X |
| S15 | select and apply the most appropriate data tools to achieve the optimum outcome |   |   | X |   |   | X |

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| **Behaviours** | **Problem Solving through ProgrammingCOM411** | **Introduction to Databases COM417** | **COM423 Systems Analysis & Design Work Based Project** | **Principles & Methods****COM427** | **Data analysis, tools and applicationsCOM418** | **Computing Project COM426** |
| B1 | maintain a productive, professional and secure working environment | x |  | X |  | x | X |
| B2 | show initiative, being resourceful when faced with a problem and taking responsibility for solving problems within their own remit | x | x | X | x | x | X |
| B3 | work independently and collaboratively | x | x | X | x | x | X |
| B4 | logical and analytical | x | x | X | x | x | X |
| B5 | identify issues quickly, investigating and solving complex problems and applying appropriate solutions. Ensures the true root cause of any problem is found and a solution is identified which prevents recurrence. | x | x | X |  |  | X |
| B6 | resilient - viewing obstacles as challenges and learning from failure. | x |  | X | x | x | X |
| B7 | adaptable to changing contexts within the scope of a project, direction of the organisation or Data Analyst role. |  |  |  |  | x | X |