POWERING POTENTIAL

Apprenticeship Programme Guide

DATA ANALYST SCQF 8

QA.com

DIGITAL AND TECH APPRENTICESHIPS

Building tech careers in the workplace

We offer digital and tech apprenticeships that focus on the most in-demand skills including; cyber, IT, software development, data and digital marketing, along with others in project management.

We help learners to progress and grow within your company, helping you retain talent and build capabilities.

Our award-winning approach to blended learning enables apprentices to develop further and faster, adding immediate value to their roles, whilst our interactive portal with real-time dashboards and trigger alerts enable managers to effectively and efficiently track progress.

Experience: 20,000 apprenticeships placed

An unrivalled talent pool: In Scotland,. 20,000 apply to join our programmes every year
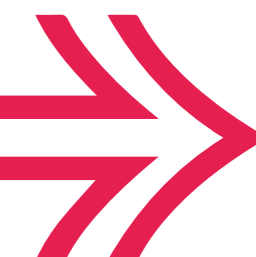
Proven: We have high learner achievement rates*

*Over 800 Learners achieved their Apprenticeship with QA in 2022

CONTENTS

ROLE PROFILE

DATA ANALYST SCQF 8

This programme provides apprentices with the knowledge and performance skills required to become a proficient Data Analyst.

Learners will gain:

- A theoretical and practical understanding of data
- Knowledge of key data concepts, tools and technologies
- An understanding of modelling techniques
- Techniques to analyse data
- The ability to produce visualisations to support effective data-driven decision making

TYPICAL JOB ROLES

Upon completion of this course learners will be equipped to work in roles such as:

- Data Analyst
- Data Insight Analyst
- Data Visualisation Engineer
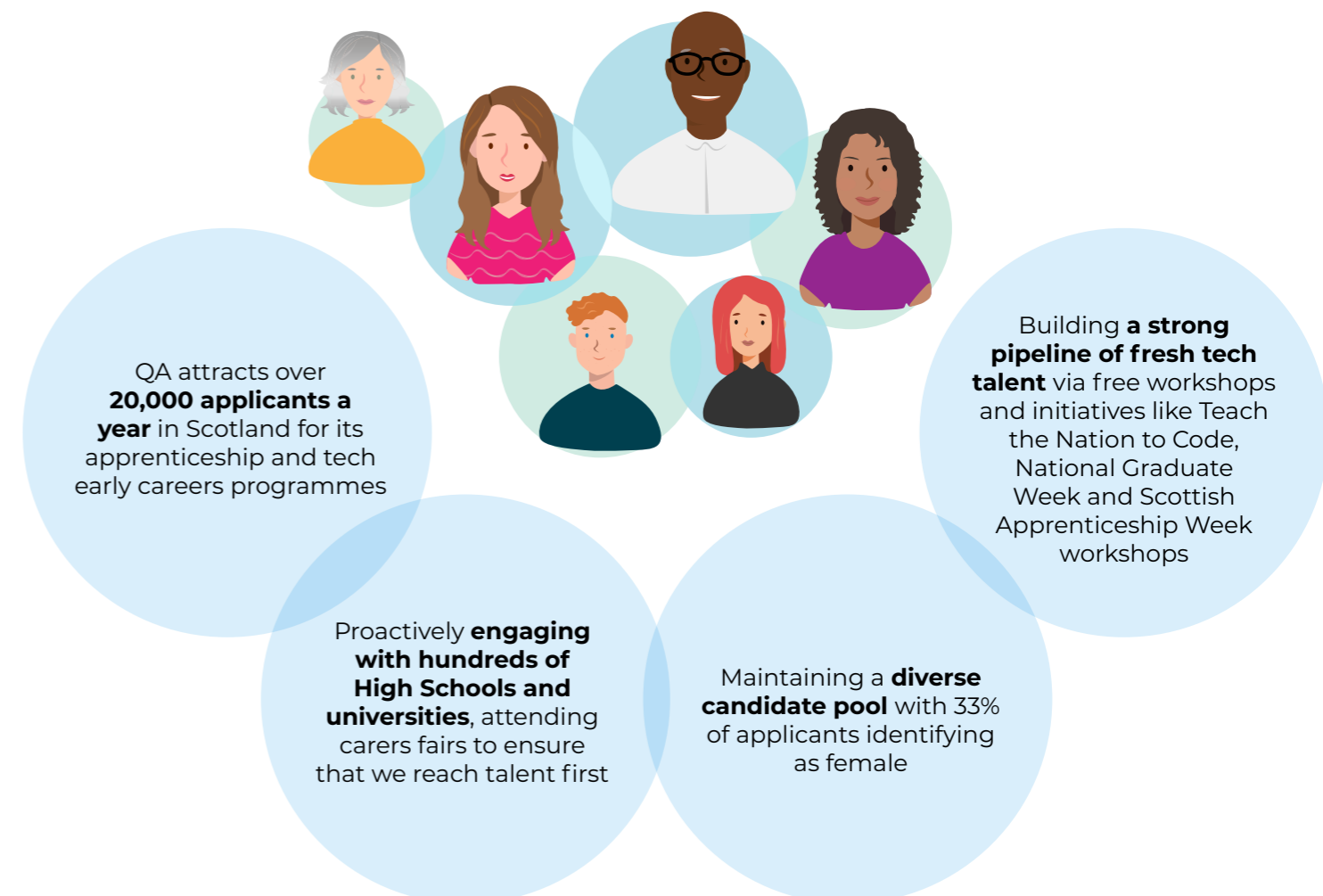- Business Intelligence Analyst

FINDING NEW TALENT

We offer an extensive attraction and recruitment service for employers who are looking to use apprenticeships to bring new talent into their organisation. We use multiple channels and tactics to attract people who are interested in and are passionate about building a career in tech. Our recruitment model includes 1-2-1 interviews to ensure we select apprentices of the highest calibre.

We are committed to increasing diversity and tech and to help achieve this, we work closely with special interest groups and charities including; Code First Girls, Developing The Young Workforce, and LTSB (Leadership Through Sports and Business) who are a social mobility charity. This ensures apprentices from all backgrounds are given the same opportunities, and supports us to close the gender and diversity gap in tech.

QA attracts over **20,000 applicants a year** in Scotland for its apprenticeship and tech early careers programmes

Building **a strong pipeline of fresh tech talent** via free workshops and initiatives like Teach the Nation to Code, National Graduate Week and Scottish Apprenticeship Week workshops

Proactively **engaging with hundreds of High Schools and universities**, attending carers fairs to ensure that we reach talent first

Maintaining a **diverse candidate pool** with 33% of applicants identifying as female

DIVERSITY AND INCLUSION

A BLENDED APPROACH TO LEARNING

We're passionate about diversity in tech

It's our mission to help eradicate the gender gap, and make sure equal opportunities are given to applicants from all backgrounds. We do this through our long-standing partnerships, QA-driven initiatives and use of trending tools and software.

Diversity-first candidate attraction

We've invested in using augmented copy checking tools to ensure language is inclusive, open to all and free from bias.

We use inclusive imagery throughout our campaigns – producing visual content that promotes diversity and inclusion.

Diversity partnerships

We forge partnerships with like-minded organisations who share our vision on STEM gender equality including; DYW, Code First: Girls, Stemettes and Young Professionals.

Promoting inclusivity

We nurture relationships with influencers, schools, colleges and universities via events and interactive sessions to ensure learners from all backgrounds are given the same opportunities.

Initial Assessment

Every candidate goes through an initial assessment where their current knowledge and skills are measured and mapped against the apprenticeship framework.

This process is an assessment of the apprentice's suitability for an apprenticeship programme, and ensures they are placed on the right programme at the right time. This contributes towards a successful completion and a good learner experience.

How we deliver

QA's apprenticeships are designed to immerse the apprentice in their job role while providing time for them to complete the training to become occupationally competent.

QA Apprenticeships also provide more flexibility for the employer, allowing apprentices to learn through a combination of project and lab work, live events, self-research, self-paced learning and peer-to-peer learning.

Employer coaching, shadowing and mentoring remain essential, however, there will be more defined requirements to guarantee this is directly related to the apprenticeship and will be part of the training plan.

LEARNER SUPPORT

Safeguarding at QA

Safeguarding means ensuring the safety and wellbeing of our learners.

At QA, this means ensuring our polices and processes promote and protect learner wellbeing and that while you are on programme, and that while on programme, we teach learners about the types of risk facing modern day British citizens.

This includes cyber risks, mental and physical health information, risks of radicalisation or grooming and much more.

Prevent at QA

Prevent is part of the Government's counter-terrorism strategy.

At QA, this means we teach our staff and learners about the four British values: democracy, rule of law, individual liberty and respect and tolerance.

We also work with Prevent partners to identify people at risk of being or causing terror related harm.

Mental Health at QA

Emotional and mental wellbeing is an important component of successful learning.

Understanding how to protect mental health and promote emotional wellbeing is part of maintaining positive mental welfare.

We will always actively encourage conversations and make sure information is readily available to both learners and staff with regards to mental wellbeing.

Ways to access support if you are worried for yourself or someone else:

· Call us – anytime 07808 050273
· Email: safeguarding@qa.com
· Contact your Skills Coach, tutor or account manager
· Speak to any member of QA staff onsite

DIGITAL BY DESIGN APPRENTICESHIP PROGRAMMES

Digital by Design programmes

QA Digital by Design apprenticeships provide a greater focus on online learning together with using live interaction where it adds the most value for learners.

It means that there is a single learner journey which brings teaching, coaching, learning and assessment into a single, repeatable flow for every module.

In Digital by Design, these three elements will work together:

- The content
- The service and support
- The technology

Discover, practise and apply

All QA apprenticeships use a guided discovery approach to learning, as opposed to traditional methods of delivery such as live events. This shifts the emphasis from content delivery to our learners and their context, resulting in the apprentice feeling empowered to take ownership of their learning experience through the "Discover, Practise, Apply" model.

DISCOVER

Learners will learn the theory, by exploring subjects online and in the live events.
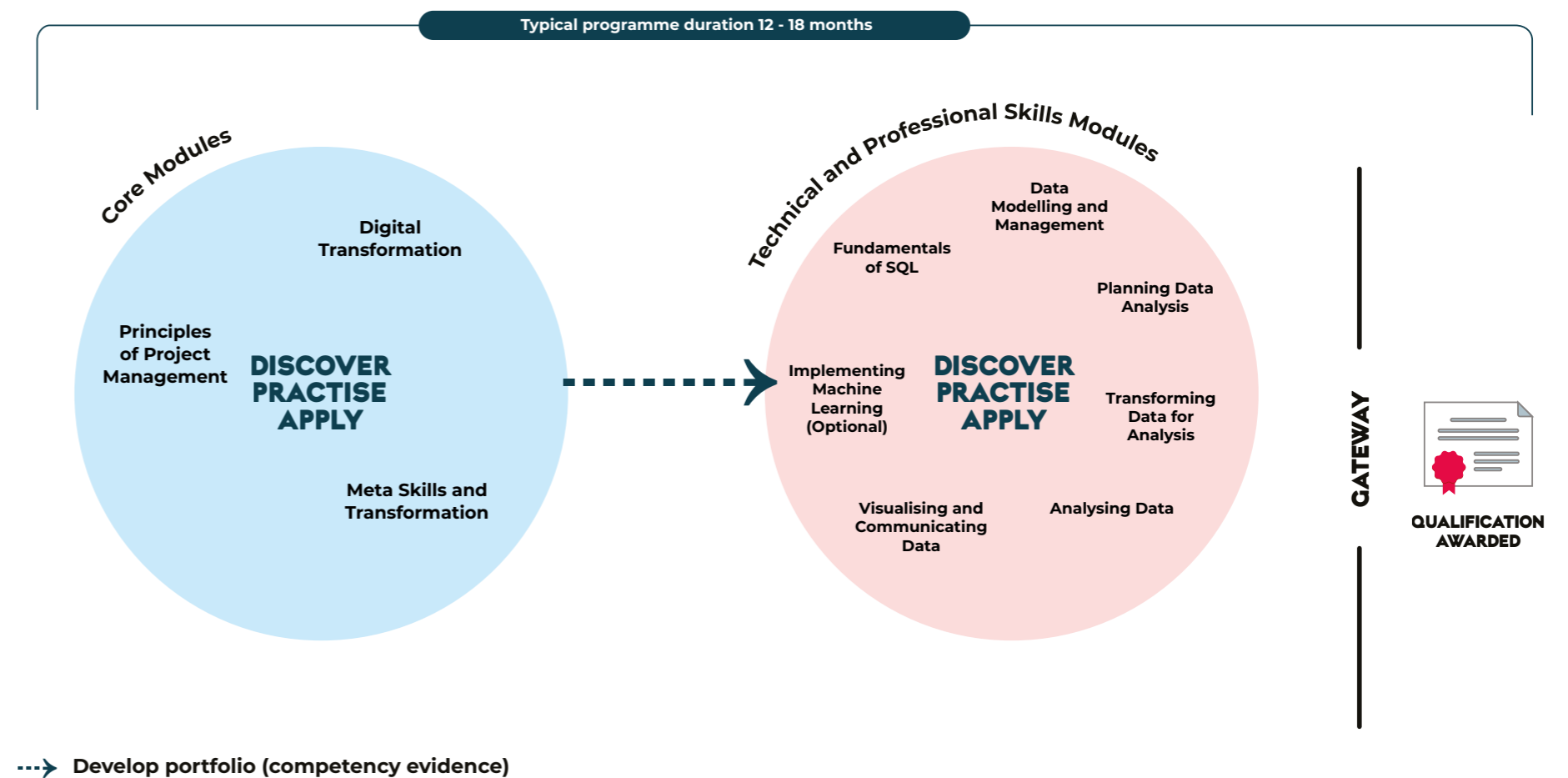
PRACTISE

Learners will practise their new-found knowledge by completing activities - online, in the live events and (most importantly) directly at work in their day-to-day role.

APPLY

Learners will apply what they've discovered and practised at work. They will actively contribute to your organisation whilst building their portfolio of evidence (showing how they've applied their new skills) to gain their qualification.
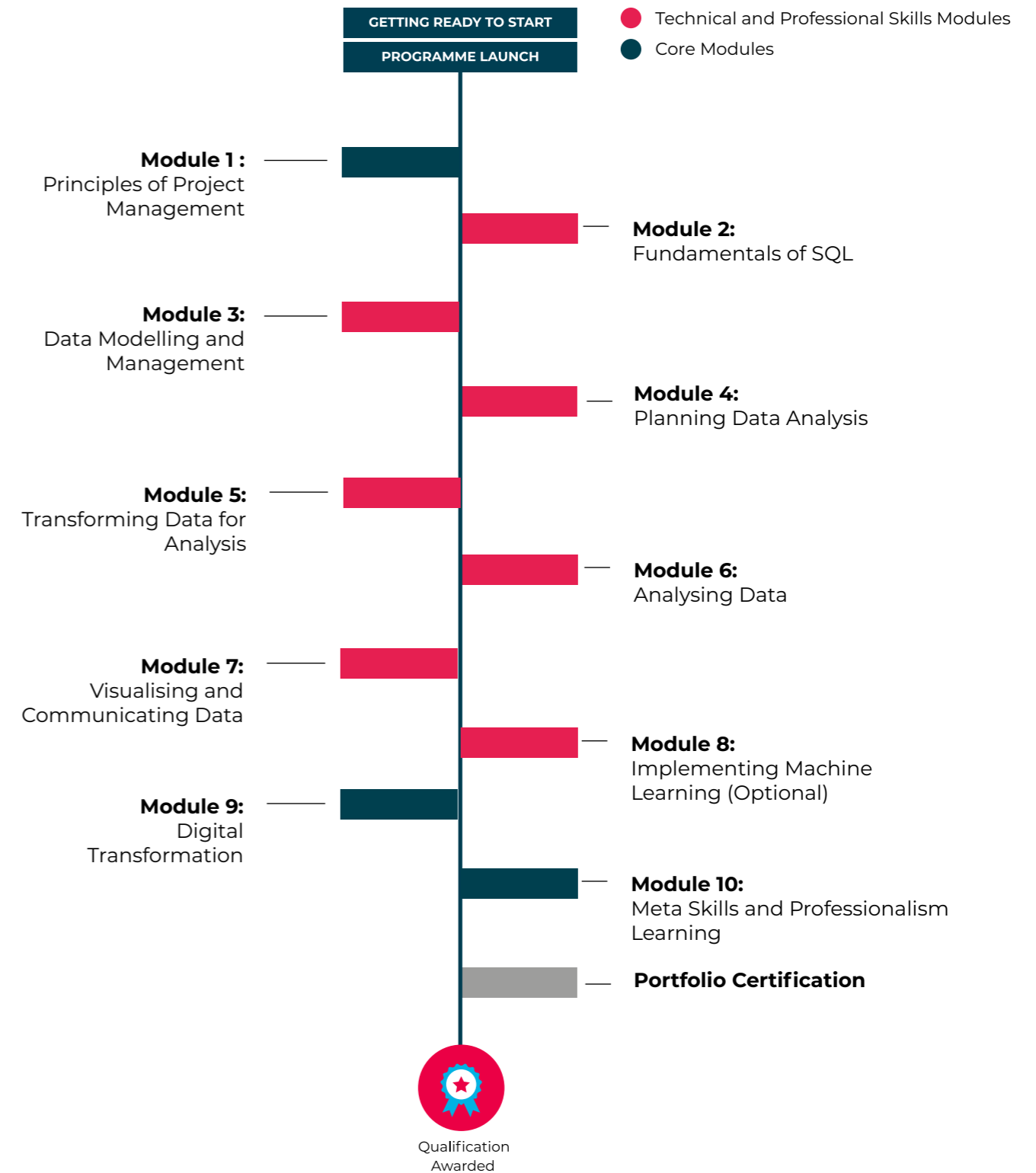
Data Analyst SCQF 8

Typical programme duration 12 - 18 months

Core Modules

- Digital Transformation
- Principles of Project Management
- **DISCOVER PRACTISE APPLY**
- Meta Skills and Transformation

Technical and Professional Skills Modules

- Data Modelling and Management
- Fundamentals of SQL
- Planning Data Analysis
- Implementing Machine Learning (Optional)
- **DISCOVER PRACTISE APPLY**
- Transforming Data for Analysis
- Visualising and Communicating Data
- Analysing Data

GATEWAY

QUALIFICATION AWARDED

┈┈▶ **Develop portfolio (competency evidence)**

THE LEARNER'S JOURNEY

Programme timeline | Duration: Typical programme duration 12 - 18 months

GETTING READY TO START

PROGRAMME LAUNCH

● Technical and Professional Skills Modules

● Core Modules

Module 1 :
Principles of Project
Management

Module 2:
Fundamentals of SQL

Module 3:
Data Modelling and
Management

Module 4:
Planning Data Analysis

Module 5:
Transforming Data for
Analysis

Module 6:
Analysing Data

Module 7:
Visualising and
Communicating Data

Module 8:
Implementing Machine
Learning (Optional)

Module 9:
Digital
Transformation

Module 10:
Meta Skills and Professionalism
Learning

Portfolio Certification

Qualification
Awarded

PROGRAMME STRUCTURE

Programme Launch

The Programme Launch will introduce learners to the Data Analyst L8 Apprenticeship, this module will be introduced by a digital session covering:

- Importance and integration of the Meta skills.
- Assessment/Certification/ Qualifications
- Time commitment, planning calendar, mapping document for Data Analyst L8
- Setting expectations
- Introduce Bud, Cloud Academy and other technology requirements
- Introduce the technical learning resource to support understanding of SQL

Assessment

There are no tests or exams involved in completing this apprenticeship. All learners will complete a portfolio of evidence, based on the modules completed on programme. Learners will be guided by their skills coach to achieve this.

There are a number of assessment methods that learners can use to generate and record evidence. Some of these are completed by themselves, such as personal reflective statements and product evidence (annotated screenshots).

Additionally, learners can collaborate with their skills coach to carry out presentations, observations, questioning and professional recorded discussions. Your employer may also provide witness testimonies on your behalf. These assessment methods are used to capture a learner's knowledge and skills across the range of competencies.
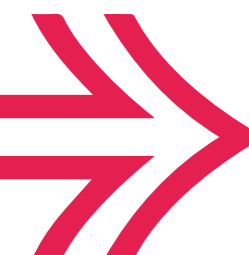
THE CORE, TECHNICAL & PROFESSIONAL SKILLS MODULES

The technical and core modules focus on the knowledge and skills required in detail. After each module learners will 'apply' what they've learned at work on current projects.

Module 1: ⚫
Principles of Project Management

This module introduces learners to the world of project management and explores the fundamental business concepts of legislation, codes of practice, safe systems of work, and risk and impact assessments for project activities. As a result of this module learners will be able to:

- Develop skills in creating effective business cases and understanding different methodologies for planning and delivering project activities.

- Identify and analyse risks and opportunities using appropriate tools and processes, including quantitative and qualitative measures of risk analysis.

- Explain the importance of monitoring and controlling a project, including using industry-specific tools and software, and establishing change control processes.

- Develop skills in evaluating and monitoring the benefits and challenges of project activities, presenting progress to stakeholders in different ways and formats, and effectively liaising with internal and external stakeholders.

- Module duration: 4 weeks
- Classroom attendance: 1 day

Module 2: 🔴
Fundamentals of SQL

This module facilitates individuals in understanding the fundamentals of SQL. Practical activities and hands-on tasks will be provided to support individuals in understanding SQL and how it is used within different environments.

This module/learning path will also support more advanced data modelling understanding, embedded within the technical modules.

- Module duration: 2 weeks
- Classroom attendance: 4 days

Module 3: 🔴
Data Modelling and Management

This module provides an insight into the fundamentals of data modelling and management. It introduces a range of concepts, tools and techniques, to facilitate individuals in utilising knowledge of data sources, and managing this process. The application of query and modelling is used to support more advanced understanding of databases, metadata and database queries using SQL.

Learners will gain an understanding of collection methods, storage and management, in addition, learners will also be required to demonstrate awareness of data security and data governance.

- Module duration: 6 weeks
- Classroom attendance: 2 days

Module 4: 🔴
Planning Data Analysis

This module provides an insight into the process of planning data analysis. The focus of this module, is to ensure that learners have a fundamental understanding of business problems and planning activities.

From this understanding, learners can focus on planning effective data analysis solutions, successfully, and securely. This module also involves delivering data insights and supporting data driven decision-making.

- Module duration: 4 weeks
- Classroom attendance: 1 day

Module 5: 🔴
Transforming Data for Analysis

This module provides an insight into how individuals manage data assets to support data analysis. It involves using the methods and techniques of modern digital data management to implement data modelling, data storage, data security and data governance, which deliver and enhance the value of the organisation's data assets.

- Module duration: 4 weeks
- Classroom attendance: 2 days

🔴 Technical and Professional Skills Modules
⚫ Core Modules

Module 6: ●
Analysing Data

This module examines the ways in which data can be analysed to support problem solving and effective business decision-making.

Using appropriate tools and techniques, learners will demonstrate an understanding of business requirements and constraints. Appropriate data analytical and statistical techniques will be applied on available data, to discover new trends, patterns, and relationships.

- Module duration:5 weeks
- Classroom attendance: 2 days

Module 7: ●
Visualising and Communicating Data

This module provides learners with an opportunity to select, design and present insights and visualisations to a wider target audience.

Learners will utilise transparent narratives and visual data summaries to illustrate and support the insights in line with organisational requirements.

- Module duration: 5 weeks
- Classroom attendance: 2 days

Module 8: ●
Implementing Machine Learning (Optional)

Learners will be selecting and applying machine learning techniques to extract information from data.

Learners will be using available data sets and business problems to select appropriate machine learning algorithms and apply these techniques to the data sets to solve problems.

Learners will also be deploying models into production environments to provide predictive analytics and decision support.

- Module duration: 5 weeks
- Classroom attendance: 0 days

Module 9: ●
Digital Transformation

In this blended module learners develop core knowledge of the Digital Transformation.

- Demonstrate the significance of digital transformation in businesses and the principles of business change.
- Develop skills in modelling business processes and formulating proposals for new digital technology solutions, including cost-benefit analysis.
- Identify the legislative and regulatory requirements, organisational policies, and safe use of digital technology equipment in the workplace.
- Explain how digital technologies can be integrated within business processes to reduce costs, enhance performance, and improve productivity and service benefits.
- Recognise the current issues and ethical aspects associated with the implementation of digital transformation in businesses.

- Module duration: 4 weeks
- Classroom attendance: 1 day

Module 10: ●
Meta Skills and Professionalism

In this online module learners develop their core knowledge of Meta Skills & Professionalism.

- Enabling learners to understand the purpose and importance of meta-skills, how they relate to one's work and how to use reflective practice to identify gaps in knowledge and skills.
- Recognise the importance and impact of personal professionalism within the organisation and develop strategies to participate effectively in performance reviews.
- Learn how to set SMART goals, prepare development plans, and identify sources of up-to-date information to support continuous professional development.
- Describe the benefits and impact of CPD, including how to measure and record progress against key performance indicators.
- Develop strategies for managing well-being in the workplace and seeking and acting on feedback to improve skills and knowledge using various learning models and styles.

- Module duration: 3 weeks
- Classroom attendance: N/A

Qualifications earned

Learners will earn the following qualification:

- Data Analytics L8

● Technical and Professional Skills Modules

● Core Modules

LEARNING OUTCOMES

Apprentices will be assessed on all areas which emphasise the importance of both technical and core skills in the workplace.

CORE MODULES:

Principles of Project Management
- Introduction to Projects
- Stakeholders
- Business Cases
- Project Planning
- Risk Management
- Project Monitoring and Change Control
- Closing a Project

Digital Transformation
- Introduction to Digital Transformation and Digital Economy
- Business Processes
- Benefits of Digital Transformation
- Implementation of Digital Change
- Legal Landscape
- Professional Standards
- Safe Use of Digital Technology

Meta Skills and Professionalism
- What are Meta Skills
- Personal Professionalism
- Learning Styles
- Personal Reflection and Performance Reviews
- SMART Objective Setting
- Developing Development Plans Career Planning and CPD
- Feedback
- Wellbeing

TECHNICAL AND PROFESSIONAL MODULES:

Fundamentals of SQL
- Understanding the Fundamentals of SQL.

Data Modelling and Management
- Data Sources and Structures
- Access and Process Data
- Data Management
- Data Modelling and Databases

Planning Data Analysis
- Context and Value of Data
- Business and Stakeholder Requirements
- Planning Data Activities
- Statistics and Algorithms
- Risk, Ethics and Privacy

Transforming Data for Analysis
- Understanding Data Concepts
- Transforming Data
- Data Quality Issues

Analysing Data
- Understand Data Analysis
- Statistical Tools and Techniques
- Machine Learning Principles

Visualising and Communicating Data
- Visualisations
- Effective Communication

Implementing Machine Learning (Optional)
- Understanding Machine Learning
- Statistics and Algorithms to support Machine Learning
- Machine Learning Methods and Strategies
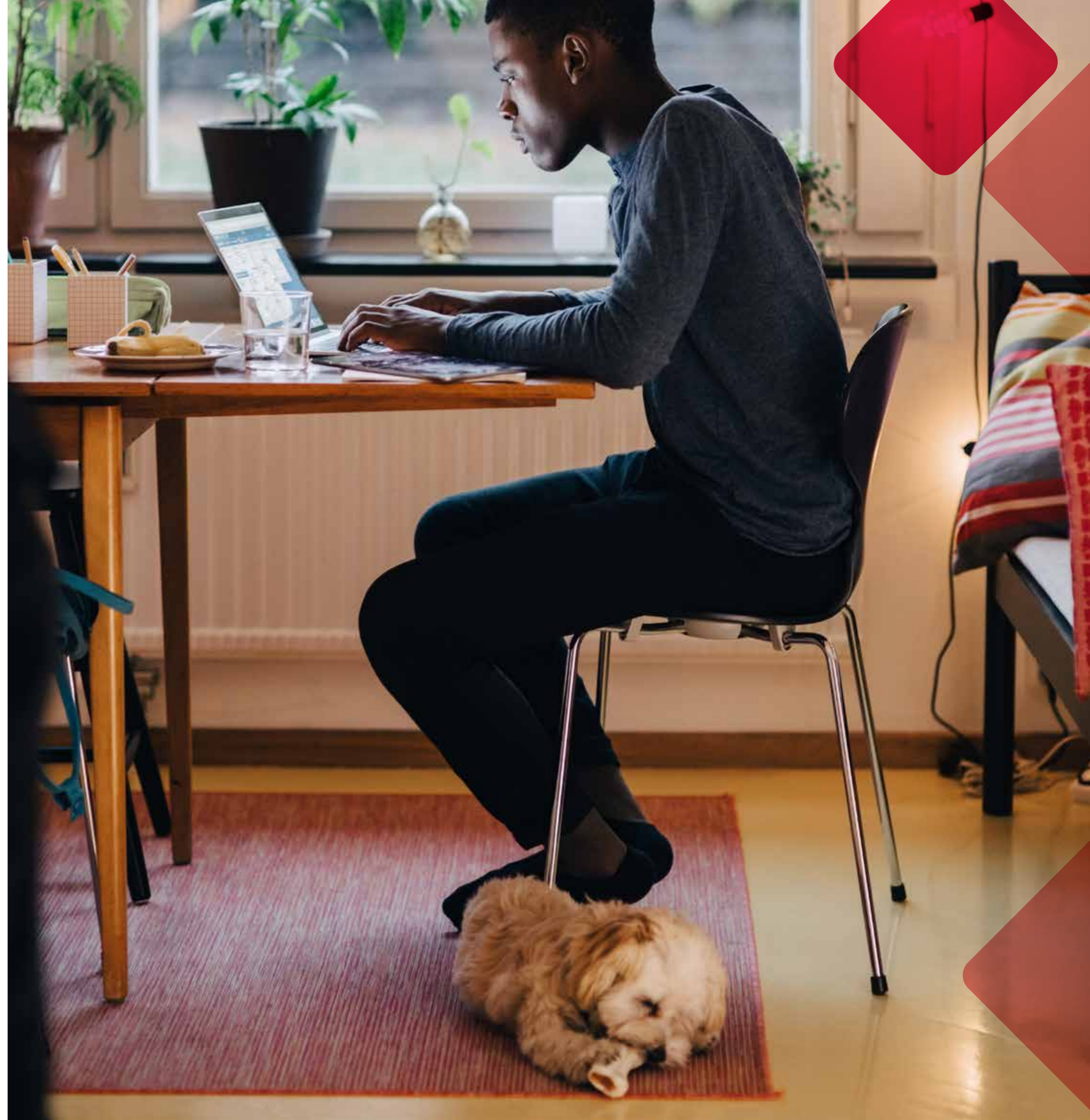- Machine Learning Models and Design

EXPANDING YOUR TECHNICAL SKILLS WITH cloud academy
A QA COMPANY

Our apprentices are given full access to our proprietary Cloud Academy platform for the duration of their programme.

Cloud Academy brings the very latest and up-to-date content to our apprentices through single units, courses and comprehensive learning paths to really build on the core learning outcomes defined within the programme. Furthermore, apprentices are able to prepare for the full suite of vendor qualifications across AWS, GCP and Azure and much more.

Cloud Academy users also benefit from Hands-On Labs, Lab Challenges and Lab Playgrounds providing a safe, sandbox environment in which our learners are able to practise in real time through guided walkthroughs or through their own exploration.

Check out the Training Library - Cloud Academy.

FOR MORE INFORMATION, PLEASE CONTACT

qa.com/contact

Skills Development Scotland

MODERN APPRENTICESHIPS