Professional Certificate in Applied Data Programming

(SCQF Level 7)

What is the "Professional Certificate in Applied Data Programming" (ADP)?

Aimed at new or developing data professionals, Newtyne's bespoke "Professional Certificate in Applied Data Programming" (we call it our 'ADP' for short) is a practical workplace qualification, designed to apply and extend the learning from our highly successful Academy for Data Analysts programme.

The qualification has been developed by Newtyne and is certificated and quality assured by the Scottish Qualifications Authority (SQA). The qualification has also been credit rated by the SQA at Level 7 on the Scottish Credit and Qualifications Framework (SCQF). This gives learners the assurance of a rigorous, comprehensive and valuable learning programme, assessed against national and international standards.

Throughout the programme, learners will be continually assessed by our expert tutors, all of whom are qualified Assessors and Internal Verifiers.

There is a mix of technical and practical units, with assessment of the technical units by online examination to check knowledge. Further assessment of these units is by means of Product Evaluation Assessments (PEAs), designed to assess practical ability. Learners must achieve at least 70% pass to attain certification.

Learners will then go on to apply their technical knowledge in a real-world, data-driven, workplace challenge, using core business skills, also taught and assessed as part of the practical unit from the ADP. This includes topics such as communication and influencing others, critical-thinking, problem solving and business writing.

These highly valued employability skills will be assessed by means of an assignment in which you will research an organisation's strategic goals, identify a significant data-driven business challenge, evaluate different methods to solve the challenge and write a report evaluating and justifying your selected approach. You will then further justify your chosen approach in a presentation to our panel of expert assessors.

Overall, the full programme is designed to take between 12-18 months to achieve.

Learning Overview:

The qualification is delivered by using blended learning techniques via our digital learning platform with comprehensive hands-on exercises and assignments throughout to help assess and reinforce learning. Don't worry - our expert tutors will be on hand all the way to guide and support you.

Our ADP is made up of five Technical Units, all centred around a commonly used Data Programming Language, plus one further, Practical Unit. The Units, with key Learning Outcomes are summarised below:

Technical Units:

Unit 1. Fundamentals - This first unit is aimed at learners who need to understand and apply fundamental knowledge and skills when using a data programming language. Key Learning Outcomes are:

1. Explain the basic elements of a data programming language.
2. Discuss fundamental Programming concepts.
3. Describe five set procedures to summarise data.
4. Use basic inputs and outputs.

Unit 2. Intermediate Skills – This next unit will help learners understand and apply an intermediate level of knowledge and skill, when using a data programming language, building on the "Fundamentals" unit previously studied. Learning Outcomes for this unit are:

1. Describe how functions are used to transform data.
2. Describe how Data Step techniques are used to manipulate data.
3. Save formats and export data.
4. Use basic Macro processing.

Unit 3. Apply the use of Macros – Continuing the learning journey, this next unit helps learners understand and apply a more advanced level of knowledge and skill by using Macros within a data programming language. Learning Outcomes are as follows:

1. Describe how to create Macro Programs.
2. Implement advanced processes using Macros.

Unit 4. Using Structured Query Language (SQL) within a Data Programming Language – this fourth unit will help learners understand and apply a professional level of knowledge and skill by using SQL within a data programming language. The key Learning Outcomes are:

1. Explain the basic elements of using SQL within a data programming language.
2. Use methods for presenting and querying data using SQL.
3. Manipulate datasets using SQL.

Unit 5. Generate Output (Optional) – This fifth optional unit enables learners to understand and apply a further professional level of knowledge and skill by generating output from a data programming language. The key Learning Outcomes are:

1. Explain the use of the Output Delivery System.
2. Describe how to create reporting options.
3. Describe how to create and manipulate Tables.

Practical Unit:

Unit 6. Application of Technical Skills to Solve a Data-Driven Business Challenge – This sixth, practical unit will enable learners to understand and apply fundamental knowledge and business skills in the workplace, using a data programming language to solve a data-driven business challenge. The key Learning Outcomes for this unit are as follows:

1. Describe the strategic environment in which your organisation operates.
2. Research the need for a data provision solution within your organisation.
3. Create an Action Plan to justify how you will solve a data-driven business challenge.
4. Implement your solution to a data-driven business challenge.
5. Justify your overall approach to solving a data-driven business challenge.

All units are mandatory, except Unit 5, which is optional. The learning in Units 1-5 is underpinned by our Newtyne Academy for Data Analysts Programme.

By the end of the qualification, learners will have sufficient knowledge and both the technical and core business skills to successfully extract, analyse and present data, as well as be able to think critically to solve a real-world, data-driven business challenge.

SQA Certification
Once all units have been assessed as 'achieved' and internally verified by Newtyne, learners will be awarded a commemorative certificate and detailed record of attainment from the SQA, as well as a digital badge from Newtyne. The benefit of a digital badge is that it enables you to share your achievement across various social media platforms, such as LinkedIn and Facebook, so that you can demonstrate your verifiable knowledge and skills to future employers and your networks.

SAS Language Training Certification
Known as 'Recognition of Prior Learning', learners who have already obtained The SAS Base Certification may automatically qualify as having attained Units 1 and 2 of the ADP.

Learners who do not possess the SAS Base Certification will still be able to have their work from Units 1 and 2 assessed by Newtyne as part of the ADP – all to the same exacting standards.

To help you prepare, you will be given access to our exam preparation tool MemoTrainer™ and the opportunity to sit mock exams.