Group Award Specification for:

HNC Data Analytics

Group Award Code: GM0N 15

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Contents

1 Introduction

This document was previously known as the Arrangements document. The purpose of this document is to:

- assist centres to implement, deliver and manage the qualification
- provide a guide for new staff involved in offering the qualification
- inform course managers, teaching staff, assessors, learners, employers and HEIs of the aims and purpose of the qualification
- provide details of the range of learners the qualification is suitable for and progression opportunities.

The current development began as a college/university initiative between the *University of Strathclyde* and three Glasgow colleges, in 2014, as part of the University's *Digital Academy* project. The subsequent involvement of SQA, resulted in formal qualifications being proposed (and developed), of which this is one. Although this qualification was developed in conjunction with the University and its partner colleges, this group award Specification proposes a national qualification, available to all (approved) Scottish centres.

HNC Data Analytics will provide a unique route within the suite of vocational Computing awards, being the first qualification of its kind (relating to big data) in the portfolio.

Title of award

The title of the group award is **HNC Data Analytics**. The naming of the award was given due consideration by the *Digital Academy* steering group during the initial review phase and concluded that it represented the essential content of mathematic, statistics and software development, and matched the name of the degree programme (at the University of Strathclyde) with which it offered articulation (B.Sc. Data Analytics). The name was also overwhelmingly supported by market research.

The key skills were initially identified in the consultations of the Digital Academy steering group, during a matching process of current college and university programs. The courses reviewed in the development process were developed in consultation with employers, further education and higher education.

HNC Data Analytics has been designed[1] to articulate with the University of Strathclyde's *B.Sc. in Data Analytics*.[2] Successful learners, from partner colleges, will be eligible to apply for direct entry to the second year programmes. Prior to this development, college students gained entry to the second year degree programs on successful completion of a relevant **HND** award. This qualification offers direct entry to year two without loss of time. It is anticipated that other partnerships between universities and colleges will, likewise, provide full articulation between this award and degree programmes.

The qualification was also designed to facilitate direct, or indirect, progression to employment. It has been designed to meet the growing demand for knowledge and skills in the area of big data.

[1] Through appropriate selection of optional units.
[2] It also articulates with Computer Science, Computer Science with Mathematics, and Software Engineering.

The main considerations in the development were to:

- provide additional curricula options within the existing portfolio of awards
- provide a curriculum with multiple progression routes
- develop an opportunity for colleges and universities to collaborate
- provide additional articulation routes between college and university for prospective students.

Demand for big data skills

Big data is an emerging technology that has received considerable media attention. The educational community has responded by starting to develop and offer qualifications in the area of data analytics.

Various research projects, relating to current and future employment, needs have identified knowledge and skills in big data as an emerging field of employment.

> *'96 per cent of respondents in a survey carried out by Deloitte assert that data analytics will become 'more important' or 'somewhat more important' during the next three years. Clearly, a data analytics evolution is well underway, and the discipline has, in many cases, established its emergence as a valuable business management tool."*[3]

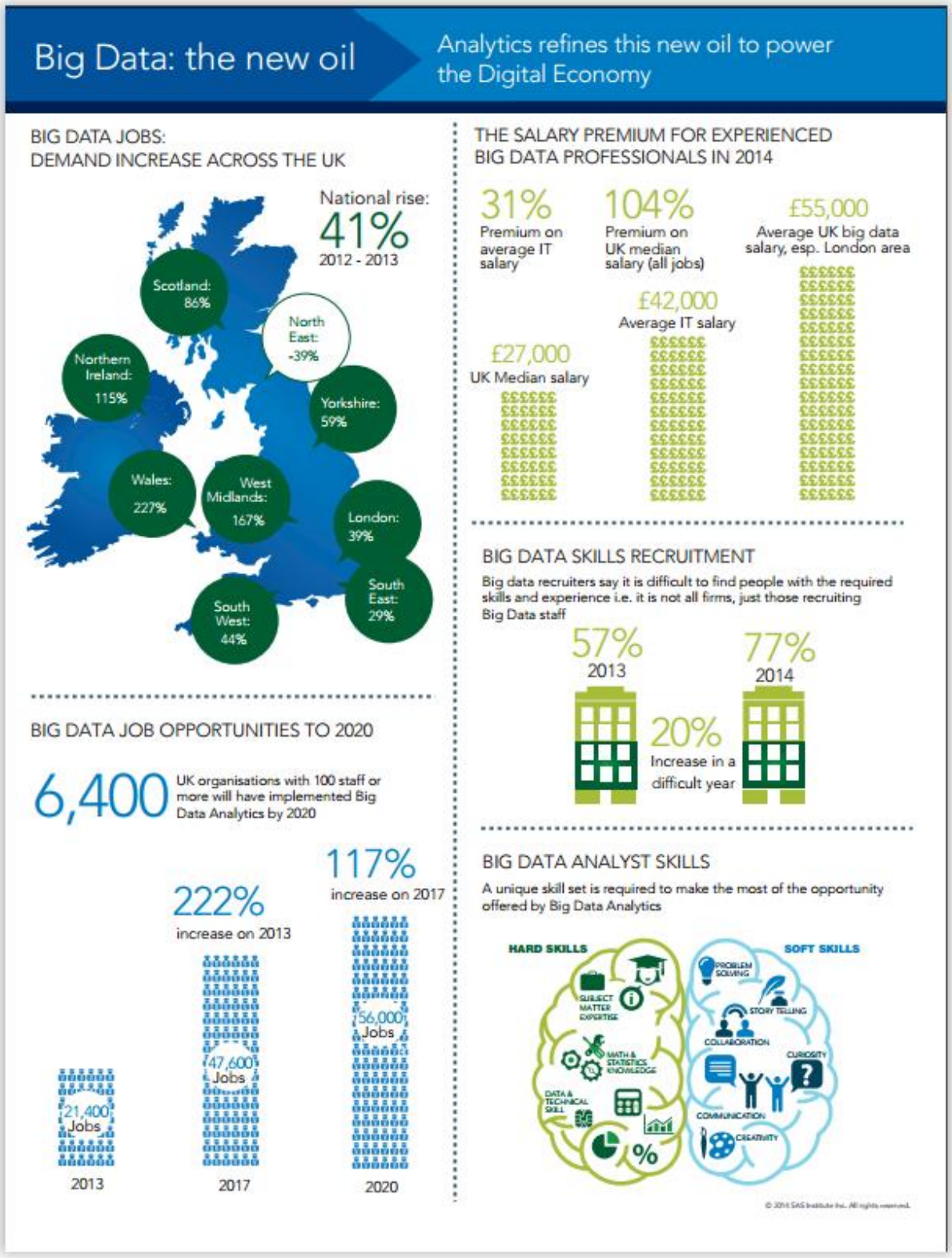
> *'Britain is expected to create an average of 56,000 big data jobs a year until 2020, according to a report by the Tech Partnership employers' network and SAS, a business analytics company."*[4]

> *'The results of the survey — Big Data Analytics Assessment of Demand for Labour and Skills 2013–2020 carried out by the Tech Partnership and SAS revealed a tenfold increase in demand for big data staff in the past five years, with vacancies rising from 1,800 in 2008 to 21,400 in 2013 — an average annual increase of 212 per cent. Over the past year, there's been a 41 per cent increase in the number of big data jobs posted — in contrast to demand for IT and data warehouse/business intelligence staff, which have fallen by 9 per cent and 6 per cent respectively. Building analytical capabilities is vital if the UK is to remain competitive in the global information economy. The explosion of data, which has been likened to the new corporate oil, is set to continue at an exponential rate."*[5]

[3] The Analytics Advantage. Tom Davenport, Harvard Business School

[4] Financial Times, October 2014

[5] Mark Wilkinson, Managing Director, SAS UK & Ireland.



Finding the refiners of the 'new corporate oil' A SAS perspective on Tech Partnerships' Big Data Analytics: Assessment of demand for labour and skills 2013-2020.

2 Qualification structure

HNC Data Analytics is made up of 12 SQA unit credits (96 SCQF credit points). 6 credits (48 SCQF points) are mandatory and at least 6 credits (48 SCQF credit points) are selected from a list of options.

2.1 Structure

The qualification comprises mandatory units and optional units. All of the units in the mandatory section must be undertaken by learners (see table below).

Table 1: Mandatory units within the award

4 code	2 code	Unit title	SCQF level	SCQF credit points	SQA credit
HH7X	34	Data Analytics: Graded Unit 1	7	8	1
H173	34	Developing Software: Introduction	7	8	1
H8W8	34	Big Data	7	8	1
H7K1	34	Engineering Mathematics 2	7	8	1
H8XT	33	Statistics for Science 1	6	8	1
H175	34	Computer Systems Fundamentals	7	8	1

In addition to these mandatory units, learners must select at least 6 credits (48 SCQF credit points) from the list of optional units (see below).

Table 2: Optional units within the award

4 code	2 code	Unit title	SCQF level	SCQF credit points	SQA credit
H1EM	34	Cloud Computing	7	8	1
HH7V	35	Computer Systems and Organisation	8	8	1
H8W9	35	Data Science	8	8	1
H9E2 H17V	46 or 34	Data Security or Security Concepts	6 7	8 16	1 2
DV6E	34	Database Fundamentals	7	8	1
HF85	34	Emerging Technologies and Experiences	7	8	1
H7K2	34	Engineering Mathematics 3	7	8	1

Table 2: Optional units within the award (cont)

4 code	2 code	Unit title	SCQF level	SCQF credit points	SQA credit
H7K3	35	Engineering Mathematics 4	8	8	1
H7K4	35	Engineering Mathematics 5	8	8	1
HH7W	34	Machines, Languages and Computation	7	16	2
DV84	34	Managing Information	7	8	1
H17R	35	Mobile Technology	8	8	1
H1F7	34	Professionalism and Ethics in Computing	7	8	1
HA4C	34	Software Development: Analysis and Design	7	16	2
H171	35	Software Development: Object Oriented Programming	8	16	2
H17X	34	Software Development: Programming Foundations	7	8	1
DH3J	34	SQL: Introduction	7	8	1
H8XV	34	Statistics for Science 2	7	8	1
H178	34	Team Working in Computing	7	8	1

Specific articulation arrangements may mandate specific optional units. For example, the arrangement between the University of Strathclyde and its partner colleges restricts the choice of optional units for learners who wish to progress to that institution.

Where learners are expected to progress directly to employment a few skills could be considered to prepare learners for industry. Professionalism and Ethics in Computing and Team Working in Computing achieve skills which are desirable in industry.

3 Aims of the qualification

The principal aim is to prepare learners for progression to higher education and/or relevant employment in the fields of data analytics, computing, statistics or mathematics. This qualification has been designed to provide a distinctive route within the suite of vocational Computing awards.

3.1 General aims of the qualification

The general aims of this award are:

1 To provide a qualification with various entry and exit points.
2 To enhance learners' employment prospects, particularly relating to the Mathematics and Statistic professions.
3 To develop learners' knowledge and skills in mathematics, statistics and software development.
4 To develop transferable skills required by employers and/or universities.
5 To develop computational thinking.

3.2 Specific aims of the qualification

The specific aims of this award are:

6 To provide skills and knowledge to enable student articulation to a second year higher education program and/or progress to higher level within further education.
7 To focus on skills in Mathematics including Trigonometry, Calculus, Algebra and Matrices
8 To focus on skills in Statistical techniques used in scientific analysis.
9 To develop an awareness of the application of statistics to science.
10 To develop a foundation knowledge of the theory, techniques and management of big data.
11 To develop an awareness of the social, industrial and interdisciplinary contexts in which Data Analytics is used.
12 To focus on skills in software development.
13 To develop learners' knowledge and skills in planning, developing and evaluation in the fields of analytics and statistics.
14 To develop employment skills and enhance learners' employment prospects for entry into the analytics, statistics or related professions.
15 To develop study and research skills.

3.3 Graded unit

The purpose of the graded units is to assess the learner's ability to integrate and apply the Knowledge and/or Skills gained in the individual units in order to demonstrate that they have achieved the principal aims of the qualifications.

The Graded Unit 1 is assessed and a grade of A, B or C is awarded to learners. The graded unit may be one of two types of graded units: a project or an examination. The QDT selected an **examination-type** of graded unit. An examination was chosen for several reasons, including:

- **Appropriateness**: An examination was selected to assess the underpinning knowledge and understanding within the award. The qualification contains a significant body of knowledge that is best assessed by an examination.
- **HE articulation**: An examination facilitates progression to degree courses, and was supported by HE in our consultations.
- **Consistency**: The existing HNC Computing uses an examination.

4 Recommended entry to the qualification

Entry to this qualification is at the discretion of the centre. The following information on prior knowledge, skills, experience or qualifications that provide suitable preparation for this qualification has been provided by the Qualification Design Team as guidance only.

Learners would benefit from having attained the skills, knowledge and understanding required by one or more of the following or equivalent qualifications and/or experience:

- Two new National Courses at Higher, one of which should be Mathematics at level B or above and one relevant computing related subject at grade C or above, based on the *Curriculum for Excellence*, together with three passes at National 5 level in appropriate subjects.
- Relevant industrial experience.

Different combinations of relevant National Qualifications, vocational qualifications and equivalent qualifications from other awarding bodies may also be acceptable, as would suitable vendor qualifications at an appropriate level.

4.1 Core Skills entry profile

The Core Skill entry profile provides a summary of the associated assessment activities that exemplify why a particular level has been recommended for this qualification. The information should be used to identify if additional learning support needs to be put in place for learners whose Core Skills profile is below the recommended entry level or whether learners should be encouraged to do an alternative level or learning programme.

Core Skill	Recommended SCQF entry profile	Associated assessment activities
Communication	Intermediate 2 (SCQF level 5)	The Core Skill of *Communications* at SCQF level 6 is embedded in the optional unit *Professionalism and Ethics in Computing*.
Numeracy	Intermediate 2 (SCQF level 5)	The Qualification Design Team have embedded the Core Skill of *Numeracy* at SCQF level 5 within the mandatory unit *Computer Systems Fundamentals* and SCQF level 6 within the mandatory unit *Big Data*. Included in the framework as optional Mathematics units to offer a higher Core Skill exit level (refer to end of Section 4.1 for more information).
Information and Communication Technology (ICT)	Intermediate 2 (SCQF level 5)	The Core Skill of *ICT* at SCQF level 6 is embedded in the mandatory unit *Big Data* and within the optional unit *Team Working in Computing*.

Core Skill	Recommended SCQF entry profile	Associated assessment activities
Problem Solving	Intermediate 2 (SCQF level 5)	The Core Skill component of Critical Thinking which is part of the *Problem Solving* Core Skill is embedded within the mandatory unit of *Developing Software: Introduction*. Included in the framework as optional units are *Software Development: Programming Foundations* and *Software Development: Object Oriented Programming* to offer additional component of Critical Thinking
Working with Others	Intermediate 2 (SCQF level 5)	The Core Skill of *Working with Others* at SCQF level 6 is embedded in the optional unit *Team Working in Computing*.

5 Additional benefits of the qualification in meeting employer needs

This qualification was designed to meet a specific purpose and what follows are details on how that purpose has been met through mapping of the units to the aims of the qualification. Through meeting the aims, additional value has been achieved by linking the unit standards with those defined in National Occupational Standards and/or trade/professional body requirements. In addition, significant opportunities exist for learners to develop the more generic skill, known as Core Skills through doing this qualification.

5.1 Mapping of qualification aims to units

Code	Unit title	Aims														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
HH7X 34	Data Analytics: Graded Unit 1	X	X	X	X	X	X			X	X	X			X	X
H173 34	Developing Software: Introduction	X		X	X		X						X	X		X
H175 34	Computer Systems Fundamentals	X				X	X									
H17X 34	Software Development: Programming Foundations	X		X	X		X									X
H171 35	Software Development: Object Oriented Programming	X		X	X		X						X	X		X
H7K1 34	Engineering Mathematics 2	X	X	X	X		X	X							X	
H7K2 34	Engineering Mathematics 3	X	X	X	X		X	X							X	
H7K3 35	Engineering Mathematics 4	X	X	X	X		X	X							X	
H8W8 34	Big Data	X					X			X	X	X		X	X	X
H8W9 34	Data Science	X					X			X	X	X		X	X	X
H8XT 33	Statistics for Science 1	X	X	X	X		X		X	X				X	X	
H8XV 34	Statistics for Science 2	X	X	X	X		X		X	X				X	X	
HH7W 34	Machines, Languages and Computation	X				X	X									X
HH7V 35	Computer Systems and Organisation	X				X	X									X

5.2 Mapping of National Occupational Standards (NOS) and/or trade body standards

[6]The National Occupational Standards for IT professionals are industry standards for skills, developed in collaboration with employers, professional bodies and others. They are continually updated for all key disciplines of the tech profession, and provide the building blocks for qualifications and training. The standards have been developed in line with the Skills Framework for the Information Age (SFIA).

The purpose of the standards is to:

- define the capabilities (performance, knowledge and understanding) required to operate as an IT professional.
- make it easier for employers to describe job roles, externally and internally.
- provide a standard taxonomy for recognising the skills levels of employees and setting development objectives.
- enable the benchmarking of degrees and training courses against employer needs
- help training providers and educators to develop courses that meet the needs of the tech sector.
- provide guidance to regulators when accrediting qualifications.

The IT Professional Standards are organised in eight disciplines for the profession. They are split by levels — from new entrants (level 3) to experienced technical leads/senior managers (level 6) — with a level 2 foundation level for some of the standards.

The eight disciplines categories are:

- Architecture, Analysis and Design
- Business Change Management
- Data Analytics
- Information Management
- Information Security
- IT Service Management and Delivery
- Networks
- Solution Development and Implementation

The two categories relevant to the HNC Data Analytics are:

(A) Data Analytics at level 3
(B) Solution Development and Implementation at level 3

[6] https://www.thetechpartnership.com/standards-and-quality/it-professional-standards/

Data Analytics	
Level 3 (0–2 years)	
Data Management	**ESKITP8013.01** Assist in delivering the data management Infrastructure to support data analysis and reporting
Data Analysis	**ESKITP8023.01** Assist in delivering routine data analysis studies
Data Science	**ESKITP8033.01** Assist in delivering data driven business insights

Solution Development and Implementation	
Level 3 (0–2 years)	
Software Development	**ESKITP5023** 5023.01 Assist with the management of software development activities 5023.02 Carry out software development activities under direction
IT/Technology Solution Testing	**ESKITP5033** 5033.01 Carry out IT/Technology solution testing activities under direction
Systems Integration	**ESKITP5043** 5043.01 Perform systems integration activities as directed
IT Technology Systems Installation	**ESKITP5053** 5053.01 Assist with gathering and documenting information to support systems installation, implementation and handover
Software Development Process Improvement	**ESKITP5063** 5063.01 Recognise the usage of a range of software methods and approaches, under the direction of superiors

Code	Unit title	National Occupational Standard								
		ESKITP8013	ESKITP8023	ESKITP8033	ESKITP5023		ESKITP5033	ESKITP5043	ESKITP5053	ESKITP5063
		.01	.01	.01	.01	.02				
HH7X 34	Data Analytics: Graded Unit 1									
H173 34	Developing Software: Introduction				X	X	X		X	X
H175 34	Computer Systems Fundamentals									
H17X 34	Software Development: Programming Foundations				X	X	X		X	X
H171 35	Software Development: Object Oriented Programming				X	X	X		X	X
H7K1 34	Engineering Mathematics 2		X	X						
H7K2 34	Engineering Mathematics 3		X	X						
H7K3 35	Engineering Mathematics 4		X	X						
H8W8 34	Big Data	X	X	X						
H8W9 34	Data Science	X	X	X						
H8XT 33	Statistics for Science 1	X	X	X						
H8XV 34	Statistics for Science 2	X	X	X						
HH7W 34	Machines, Languages and Computation									
HH7V	Computer Systems									

35	and Organisation									

The following table summarises the relevant standards that have influenced the design of the HNC Data Analytics.

5.3 Mapping of Core Skills development opportunities across the qualification

Some of the units below have the Core Skills or Core Skills components (at SCQF level 5 or 6) embedded (E) within the units, which means learners who achieve the unit will automatically have their Core Skills profile updated on their certificate. Some of the units provide the opportunities to develop the Core Skills which are signposted within the units (S).

Unit code	Unit title	Communication		Numeracy		ICT		Problem Solving			Working with Others	
		Written	Oral	Using Number	Using Graphical Information	Accessing Information	Providing/Creating Information	Critical Thinking	Planning and Organising	Reviewing and Evaluating	Working Co-operatively with Others	Reviewing Co-operative Contribution
HH7X 34	Data Analytics: Graded Unit 1											
H173 34	Developing Software: Introduction					S (SCQF 6)	S (SCQF 6)	E (SCQF 6)				
H7K1 34	Engineering Mathematics 2			E (SCQF 6)								
H8W8 34	Big Data			S (SCQF 6)		S (SCQF 6)	S (SCQF 6)					
H8XT 33	Statistics for Science 1				S (SCQF 6)			S (SCQF 6)				
H1F7 34	Professionalism and Ethics in Computing	E (SCQF 6)										
H178 34	Team Working in Computing	E (SCQF 6)	E (SCQF 6)								E (SCQF 6)	E (SCQF 6)

5.4 Assessment Strategy for the qualification

The units listed below are the mandatory units within the HNC Data Analytics. The following are the recommended assessment method(s) for each unit, bearing in mind that there may be more than one assessment in a unit.

Unit	Assessment			
	Outcome 1	**Outcome 2**	**Outcome 3**	**Outcome 4**
Data Analytics: Graded Unit 1	Examination Question — controlled and supervised conditions			
Developing Software: Introduction	Practical assessment — controlled supervised conditions	Production of a technical guide — controlled supervised conditions		
Engineering Mathematics 2	Examination questions — controlled supervised conditions	Examination questions — controlled supervised conditions	Examination questions — controlled supervised conditions	
Big Data	Essay	Essay	Essay	Essay
Statistics for Science 1	Examination questions — controlled supervised conditions	Examination questions — controlled supervised conditions		

6 Guidance on approaches to delivery and assessment

The HNC Data Analytics is designed for learners who want to enter the fields of Mathematics and Data Analytics. The course is also intended to allow students direct progression to the second your of some HE courses.

Centres are encouraged to consideration units regard to compatibility for articulation to local HE establishments.

The qualifications will also prepare learners for progression to further education, Higher Education or occupational qualifications in the workplace.

The choice of delivery pattern is at the discretion of the centre. It is anticipated that centres will ensure that as much of the relevant mandatory content as possible is covered prior to commencing delivery of the graded unit.

Centres should ensure that when planning a course delivery programme, it reflects the needs and requirements of the learners. The qualifications can be delivered in a number of ways:

- Full time
- Full-time fast track
- Day release
- Part-time evening
- Open Learning

A wide range and combination of teaching, learning and assessment methods may be used by centres. A combination of the following suggested delivery methods could be adopted by centres:

- Lecturers
- Tutorials
- Study packs
- Problem based scenarios
- Case studies
- Group work
- Online materials
- IT based teaching materials
- Projects
- Virtual Learning Environments

6.1 Sequencing/integration of units

Sequence of delivery

The following are suggestions only, delivery sequence will be at the discretion of the centre.

- It is suggested the four core units to be delivered and assessed prior to the commencement of the Graded Unit 1
- The three mathematics units if selected should be delivered in sequential order
- Software Development Introduction unit should precede any subsequent Software units

Any possibility for integration of assessments should be investigated. Where the opportunity arises it may be appropriate to deliver the units concurrently.

6.2 Recognition of Prior Learning

SQA recognises that learners gain knowledge and skills acquired through formal, non-formal and informal learning contexts.

In some instances, a full group award may be achieved through the recognition of prior learning. However, it is unlikely that a learner would have the appropriate prior learning and experience to meet all the requirements of a full group award.

The recognition of prior learning may **not** be used as a method of assessing in the following types of units and assessments:

- HN graded units
- Course and/or external assessments
- Other integrative assessment units (which may or not be graded)
- Certain types of assessment instruments where the standard may be compromised by not using the same assessment method outlined in the unit
- Where there is an existing requirement for a licence to practice
- Where there are specific health and safety requirements
- Where there are regulatory, professional or other statutory requirements
- Where otherwise specified in an Assessment Strategy

More information and guidance on the *Recognition of Prior Learning* (RPL) may be found on our website **www.sqa.org.uk**.

The following sub-sections outline how existing SQA unit(s) may contribute to this group award. Additionally, they also outline how this group award may be recognised for professional and articulation purposes.

6.2.1 Articulation and/or progression

This development originated from an initiative between three Colleges and a University in Glasgow.

The initiative is referred to as The Digital Academy. The original initiative identified co-delivery of the first year of a degree course.

- The students would primarily be university students
- Students would have dual registrations
- Dual facilities within College and University
- Successful completion of the course would provide an automatic articulation to one of three Degree courses within the Mathematics and Statistics department

The QDT team insisted alternative progression routes were presented to learners. The six core units and nine pre-agreed optional units would allow articulation to

- the second year of a degree in some higher education establishments.

6.3 Opportunities for e-assessment

Opportunities for e-assessment will be presented where multiple choice assessments is the chosen method of assessment. Many further education establishments have online portals available to staff and student. These portals have security setting which will allow control of access to assessments

Where appropriate the centre should try to adopt ICT. The use of social media should be encouraged. Innovative methods such as the use of video or audio evidence could be utilised where appropriate.

Centres should adopt tests supported by SOLAR (**www.sqasolar.org.uk**) where appropriate.

6.4 Support materials

Assessment Support Packs are available for the following units:

Core units

Developing Software: Introduction
Data Analytic: Graded Unit 1
Big Data
Engineering Mathematics 2
Statistics for Science 1
Computer Systems Fundamentals

Optional units

Software Development: Programming Foundations
Software Development: Object Oriented Programming
Engineering Mathematics 3
Engineering Mathematics 4
Engineering Mathematics
Data Science
Statistics for Science 2
SQL: Introduction

6.5 Resource requirements

SQA e-learning materials are available for five of the core units listed below.

url: http://hnd-computing.com/

Developing Software: Introduction
Big Data
Engineering Mathematics 2
Statistics for Science 1
Computer Systems Fundamentals

7 General information for centres

Equality and inclusion

The unit specifications making up this group award have been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners will be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence. Further advice can be found on our website **www.sqa.org.uk/assessmentarrangements**.

Internal and external verification

All instruments of assessment used within this/these qualification(s) should be internally verified, using the appropriate policy within the centre and the guidelines set by SQA.

External verification will be carried out by SQA to ensure that internal assessment is within the national guidelines for these qualifications.

Further information on internal and external verification can be found in *SQA's Guide to Assessment* (**www.sqa.org.uk/GuideToAssessment**).

8 Glossary of terms

Embedded Core Skills: is where the assessment evidence for the unit also includes full evidence for complete Core Skill or Core Skill components. A learner successfully completing the unit will be automatically certificated for the Core Skill. (This depends on the unit having been successfully audited and validated for Core Skills certification.)

Finish date: The end of a group award's lapsing period is known as the finish date. After the finish date, the group award will no longer be live and the following applies:

- learners may not be entered for the group award
- the group award will continue to exist only as an archive record on the Awards Processing System (APS)

Graded unit: Graded units assess learners' ability to integrate what they have learned while working towards the units of the group award. Their purpose is to add value to the group award, making it more than the sum of its parts, and to encourage learners to retain and adapt their skills and knowledge. (Note to writer: delete if not applicable to product type)

Lapsing date: When a group award is entered into its lapsing period, the following will apply:

- the group award will be deleted from the relevant catalogue
- the group award specification will remain until the qualification reaches its finish date at which point it will be removed from SQA's website and archived
- no new centres may be approved to offer the group award
- centres should only enter learners whom they expect to complete the group award during the defined lapsing period

SQA credit value: The credit value allocated to a unit gives an indication of the contribution the unit makes to an SQA group award. An SQA credit value of 1 given to an SQA unit represents approximately 40 hours of programmed learning, teaching and assessment.

SCQF: The Scottish Credit and Qualification Framework (SCQF) provides the national common framework for describing all relevant programmes of learning and qualifications in Scotland. SCQF terminology is used throughout this guide to refer to credits and levels. For further information on the SCQF visit the SCQF website at **www.scqf.org.uk**.

SCQF credit points: SCQF credit points provide a means of describing and comparing the amount of learning that is required to complete a qualification at a given level of the Framework. One National unit credit is equivalent to 6 SCQF credit points. One National unit credit at Advanced Higher and one Higher National unit credit (irrespective of level) is equivalent to 8 SCQF credit points.

SCQF levels: The level a qualification is assigned within the framework is an indication of how hard it is to achieve. The SCQF covers 12 levels of learning. HNCs and HNDs are available at SCQF levels 7 and 8 respectively. Higher National units will normally be at levels 6–9 and Graded units will be at level 7 and 8. National Qualification group awards are available at SCQF levels 2–6 and will normally be made up of National units which are available from SCQF levels 2–7.

Subject unit: Subject units contain vocational/subject content and are designed to test a specific set of knowledge and skills.

Signposted Core Skills: refers to opportunities to develop Core Skills arise in learning and teaching but are not automatically certificated.

History of changes

It is anticipated that changes will take place during the life of the qualification and this section will record these changes. This document is the latest version and incorporates the changes summarised below. Centres are advised to check SQA's APS Navigator to confirm they are using the up to date qualification structure.

NOTE: Where a unit is revised by another unit:

- No new centres may be approved to offer the unit which has been revised.
- Centres should only enter learners for the unit which has been revised where they are expected to complete the unit before its finish date.

Version Number	Description	Date

Acknowledgement

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of this qualification.

9 General information for learners

This section will help you decide whether this is the qualification for you by explaining what the qualification is about, what you should know or be able to do before you start, what you will need to do during the qualification and opportunities for further learning and employment.

This HNC Data Analytics is suitable for a range of learners including:

- School leavers who wish to embark on a course which will lead to either higher education or IT industry employment.
- Employed or unemployed adults wishing to retrain for a career in the field of Mathematics and Statistic professions.

By undertaking the award you can take advantage of any arrangements that exist between FE colleges and Universities, for articulation into the 1st year, in some occasions the 2nd year of relevant University degree programs. A condition of this opportunity of articulation to a university typically requires successful completion of 15 units. The units required will be dependent on destination.

To achieve the HNC Data Analytics award you must successfully pass a minimum of 12 credits from the HNC Data Analytics award including all six of the mandatory units. Units are assessed by a combination of exams, projects and logs/portfolios. Included within the mandatory units is an examination — *Data Analytics: Graded Unit 1*.

In HNC Data Analytics you will be introduced to a range of introductory computing topics relating to computer systems, software development. You will also learn about Data management, mathematics and statistics.

It is essential to have obtained a Higher Mathematics at grade B and a Higher in a Computing related area. It would be advantageous to have prior knowledge of software development.

The optional units will offer a more advanced range of software, data management, statistics and mathematics units.