XSQA

Arrangements for:

National Certificate in Computing: Technical Support at SCQF level 5

National Certificate in Computing: Technical Support at SCQF level 6

Group Award Codes:
(GD7P 45)
(GE48 46)

Validation date: November 2011

Date of original publication:

Version: 06 (October 2020)

Acknowledgement

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.

Version number	Description	Date
08	**Revision of Units:** FIKH 11 Computing: Computer Networking Fundamentals (finish date 31/07/2024) has been replaced by J519 45 Computing: Computer Networking Fundamentals (start date 01/08/2020). F1KF 11 Computing: Install and Maintain Computer Hardware (finish date 31/07/2024) has been replaced by J51A 45 Computing: Install and Maintain Computer Hardware (start date 01/08/2020). F1KP 11 Computing: Install and Maintain Computer Software (finish date 31/07/2024) has been replaced by J51B 45 Computing: Install and Maintain Computer Software (start date 01/08/2020) for the Computing: Technical Support framework only	30/10/20
07	FN84 11 Mathematics for Interactive Computing has been added into GE48 46 NC in Computing: Technical Support Level 6 as an optional unit.	10/10/2016
06	H2N5 12 Network Fundamentals, H2N6 12 Security Fundamentals and H2N7 12 Server Administration Fundamentals have been added into GE48 46 NC in Computing: Technical Support Level 6 as optional units.	16/05/2016
05	H9E2 45 Data Security, H9J0 45 Digital Forensics and H9HY 45 Ethical Hacking from NPA Cyber Security at SCQF level 5 have been added to GD7P 45 NC in Computing: Technical Support at SCQF level 5 as optional units. H9E2 46 Data Security, H9J0 46 Digital Forensics and H9HY 46 Ethical Hacking from NPA Cyber Security at SCQF level 6 have been added to GE48 46 NC in Computing: Technical Support at SCQF level 6 as optional units.	05/04/2016
04	F1FH 12 PC Passport – Working with IT Security for Users and H60C 45 Computing: Academic Skills have been added to GD7P 45 NC in Computing: Technical Support Level 5 & GE48 46 NC in Computing: Technical Support Level 6 as optional units	19/11/2015
03	Computing: Technical Support (GD7P 45,level 5) F181 11 Computing: Web Design Fundamentals *has been revised by* H614 45 Computing: Website Graphics *and will finish on* 31/07/2016.	12/11/2014
02	H23W 74 Literacy and H23W 75 Literacy have been added as an alternative to F3GB 10 Communication and F3GB 11 Communication. H225 74 Numeracy and H225 75 Numeracy have been	13/05/2014

		added as an alternative to F3GF 10 Numeracy and F3GF 11 Numeracy.	
	01	Original Document	

Contents

1   Introduction

This is the Arrangements Document for the National Certificates (NC) in Computing: Technical Support at SCQF level 5 and SCQF level 6, which were validated in October 2011. This document includes: background information on the development of the Group Awards, their aims, guidance on access, details of the Group Award structures, and guidance on delivery. Computing: Technical Support at SCQF levels 5 and 6 were developed and validated under the design principles for National Certificates.

The awards diversify the current provision at National Certificate level by providing a specialist stream. The awards offer broad essential skills and underpinning knowledge in the specialist areas of desktop support and network technology. In the wider context both frameworks enhance competence in problem solving, team working and general IT.

The main knowledge and skills included in the Group Award have been mapped against the relevant elements of the relevant National Occupational Standards (NOS) (see Appendix 1).

2   Rationale for the development of the Group Awards

The Scottish Government report of March 2011 "Scotland's Digital Future: A Strategy for Scotland" urged colleges and universities to refresh the Scottish curriculum with industry rich skills, ensuring Scotland is at the forefront of digital technology.

The purpose of developing these awards was to expand SQA provision at non-advanced level, providing specialist focus on the IT sub disciplines of desktop support and network technology. The extant National Certificates in Digital Media Computing at SCQF levels 4, 5 and 6 were regarded as comprehensive and spanning several computing disciplines, but without providing the dedicated, specialist focus which Computing: Technical Support awards could offer. IT support and networking candidates require a significant degree of technical expertise to work in the employment sector or in preparation for further study. These awards were designed to fill this skills gap and offer candidates earlier opportunities to specialise on their chosen career path.

The Sector Skills Council e-skills UK have established National Occupational Standards which reflect the evolution and change of system and networking technologies, and the skills and knowledge required to work effectively with them. New Units in these awards were written to align with these competences.

Relationship to other SQA awards

The provision of awards at SCQF levels 5 and 6 meet the requirements of candidates at an entry-level, matching their ability and enabling progression at an appropriate pace to further levels of study. Given that there is currently a National Certificate in Digital Media Computing at SCQF level 4 which offers foundation knowledge in the diverse spectrum of computing subjects, SCQF levels 5 and 6 were determined to be suitable for these awards.

These awards are designed to provide early specialism in the area of Technical Support. The SCQF Level 5 NC Computing: Technical Support has been designed as an introduction to the subject, providing grounding for further study and progression to SCQF Level 6. At SCQF Level 6 the NC Computing: Technical Support will develop candidates' skills and knowledge in preparation for further study. For example, they could progress to HNC Computing (G7GL 15) or HNC Computer Networking (G7DX15).

In addition, these awards have been closely written with consideration to the existing provision at the non-advanced SCQF levels 4 and 5 (Digital Media Computing).

3   Aims of the Group Awards

The awards are designed to provide the underpinning knowledge for further study at undergraduate level with potential progression options including to the HN Computer Networking and Internet Technology, Computing: Technical Support, HN Networking awards or entering the workplace in a junior capacity.

The awards are concerned with the competences required to work with technological infrastructure in an IT environment. They build on the proficiencies required for planning, designing and implementing the hardware, network and software backbone required to support IT/technology application services and systems within organisations.

The awards offer a significant portion of broader IT subjects to permit candidates to progress to other computing related disciplines.

The primary aim of the SCQF level 5 qualification is to prepare candidates for further study at SCQF level 6. At SCQF level 6 the skills and knowledge developed will prepare candidates for further study at SCQF level 7, but also provide the fundamental skills that may allow entry to the job market in a junior IT role. Aligning the Units within the awards to National Occupational Standards ensures that candidates leaving at SCQF level 6 have the current skills required to enter the workplace and undertake a junior IT role.

3.1   Principal aims of the Group Awards

The **principal aims** of the SQCF level 5 award are to enable candidates to:

1 Develop basic knowledge of a range of hardware infrastructures required for the provision of IT/technology systems
2 Develop basic knowledge of a range of software infrastructures and acquire competence in selecting and configuring them for a given task
3 Develop an understanding of networking concepts and infrastructures required for the provision of IT/technology systems
4 Develop an understanding of common standards and protocols and how they work together
5 Progress development of skills in general ICT
6 Progress development of Core Skills in Communication, Numeracy, Problem Solving and Working with Others

7   Develop vocational skills relating to the National Occupational Standards, (while acknowledging that the award is not intended to deliver occupational competence which would be demonstrated in a work context)
8   Prepare candidates for progression to further study in NC Computing Technical Support at SCQF Level 6.

The **principal aims** of the SCQF level 6 award are to enable candidates to:

1   Develop knowledge of a range of hardware infrastructures required for the provision of IT/technology systems
2   Develop knowledge of a range of software infrastructures and enhance competence in selecting and configuring them for a given task
3   Develop knowledge of a range of network infrastructures required for the provision of IT/technology systems
4   Develop understanding of architectural principles, standards and protocols and how they work together
5   Develop knowledge of administering IT/technology systems to support organisations
6   Progress development of Core Skills in Communication, Numeracy, Problem Solving and Working with Others
7   Prepare for progression to further study at SCQF level 7 or to related employment in junior posts
8   Enhance any knowledge and competences already gained from experience in a workplace or elsewhere.

General aims of the Group Awards

Other aims of these awards are to:

1   Develop candidates' sense of physical emotional and mental wellbeing and other personal attributes essential for success in working life, including employability skills
2   Develop successful, motivated candidates who can think independently and creatively
3   Develop confident candidates who can relate to others and manage themselves
4   Develop responsible citizens who can evaluate environmental issues related to technology
5   Develop effective contributors who can communicate in different ways in different settings and with different people
6   Enable progression within the SCQF framework

3.2   Target groups

The main target group for NC Computing: Technical Support at SCQF level 5 is likely to be candidates of school leaving age who have achievement at SCQF level 4, and adult learners. A proportion of this client group is expected to result from progression from SCQF Level 4 courses.

The main target group for the NC Computing: Technical Support at SCQF level 6 is likely to be candidates progressing from NC Computing: Technical Support at SCQF level 5. Other potential target groups include school leavers, adult returners to formal education after an employment break and those wishing to change their career path.

The inclusion of NPAs within the SCQF Level 5 award structure will also encourage candidates who may wish to embark on a shorter / part time course of study and build credits towards a Group Award.

3.3   Employment opportunities

The primary aim of the SCQF level 5 award is to prepare candidates for further study at SCQF level 6. Candidates would be unlikely to gain employment after successful completion of this award.

At SCQF level 6 the skills and knowledge developed will prepare a candidate for further study at SCQF level 7 but will also provide the fundamental skills that may allow entry the job market in a junior IT role.

4   Access to the Group Awards

Access to Computing: Technical Support at (SCQF Level 5) is at the discretion of centres. However, it is recommended that candidates have established levels of competence and knowledge as indicated by:

- National Certificate Digital Media Computing (SCQF level 4 or SCQF level 5)
- 3 NQ awards at SCQF level 4/Intermediate 1
- 3 Standard Grades at General level

or equivalent qualifications or experience.

Candidates would be expected to have the following Core Skills entry profile:

Core Skill	Entry SCQF Level
Communication	Level 3 or above
Numeracy	Level 3 or above
ICT	Level 4 or above
Working with others	Level 3 or above
Problem Solving	Level 3 or above

Access to Computing: Technical Support at (SCQF Level 6) is at the discretion of centres. However, it is recommended that candidates have established levels of competence and knowledge as indicated by:

- National Certificate Computing: Technical Support (SCQF level 5)
- 3 NQ awards at SCQF level 5/Intermediate 2
- 3 Standard Grades at Credit level

or equivalent qualifications or experience.

Candidates would be expected to have the following Core Skills entry profile:

Core Skill	Entry SCQF Level
Communication	Level 4 or above
Numeracy	Level 4 or above
ICT	Level 5 or above
Working with others	Level 4 or above
Problem Solving	Level 4 or above

5 Group Award structures

In order to achieve a National Certificate, candidates must gain 12 credits (72 SCQF level points).

Level 5

Candidates will be awarded a National Certificate in Computing: Technical Support at SCQF Level 5 on successful completion of:

- 48 SCQF points from the Mandatory section of the award (inclusive of Mandatory Option Groups 1 and 2). This includes 36 SCQF points at Level 5, plus 12 SCQF level points at Level 4 or 5
- 24 SCQF points from the Optional section of the award, all at SCQF Level 5

Level 6

Candidates will be awarded a National Certificate in Computing: Technical Support at SCQF Level 6 on successful completion of:

- 48 SCQF points from the Mandatory section of the award (inclusive of Mandatory Option Groups 1 and 2). This includes 36 SCQF points at Level 6 plus 12 SCQF points at Level 5 or 6
- 24 SCQF points from the Optional sections of the award at Level 6. This includes a maximum of 12 contributing points from Optional Group 3.

5.1 Level 5 structure

The option of Communication/Numeracy at both SCQF Levels 4 and 5 allows centres to choose a level appropriate to candidates.

Mandatory section

Code	Unit Title	SCQF level	SQA Credit Value	SCQF credit points
F1KD11	Computing: Troubleshoot and Secure IT Systems	5	1	6
FW02 11	Computer Systems Architecture	5	1	6
F1KR 11	Computing: Computer Hardware and Systems	5	1	6
J519 45*	Computing: Computer Networking Fundamentals	5	1	6
FX1G11	Computer Networking: Project Design and Implementation	5	1	6

Code	Unit Title	SCQF level	SQA Credit Value	SCQF credit points
FW04 11	Computing: Installing a Stand Alone System	5	1	6

Mandatory Option Group 1 (1 credit required)

Code	Unit Title	SCQF level	SQA Credit Value	SCQF credit points
F3GB 10 OR *H23W 74	Communication Literacy	4	1	6
F3GB 11 OR *H23W 75	Communication Literacy	5	1	6
H60C 45	Computing: Academic Skills	5	1	6

*Refer to history of changes for revision details.

Mandatory Option Group 2 (1 credit required)

Code	Unit Title	SCQF level	SQA Credit Value	SCQF credit points
F3GF 10 OR *H225 74	Numeracy Numeracy	4	1	6
F3GF 11 OR *H225 75	Numeracy Numeracy	5	1	6

*Refer to history of changes for revision details.

Optional Section – 4 credits required

Code	Unit Title	SCQF level	SQA Credit Value	SCQF credit points
J51B 45*	Computing: Install and Maintain Computer Software	5	1	6
J51A 45*	Computing: Install and Maintain Computer Hardware	5	1	6
F1FC11	PC Passport: IT Software – Word Processing and Presenting Information	5	1	6
F1FB11	PC Passport: IT Software – Spreadsheet and Database	5	1	6
F1FA11	PC Passport: IT Systems	5	0.5	3
F1FH 11	PC Passport: Working with IT Security for Users	6	0.5	3
FX1H11	Computing: Install, Configure and Test ICT Networks	5	1	6
FY7811	Computing: Install and Configure Networked Hardware and Software	5	1	6
*H614 45	Computing: Website Graphics	5	1	6
F3GC11	Information and Communication Technology	5	1	6
DF2Y11	Software Development	5	1	6
EB4V11	Introduction To Computer Programming:	5	1	6

	Practitioners			
H9E2 45	Data Security	5	1	6
H9J0 45	Digital Forensics	5	1	6
H9HY 45	Ethical Hacking	5	1	6

*Refer to history of changes for revision details.

Total required – 12 credits

5.1.1 National Progression Award in Computer Networks and Systems (G9J8 45)

Within the level 5 NC, candidates can concurrently gain the National Progression Award in Computer Networks and Systems at SCQF Level 5 (G9J8 45). This requires successful completion of the following single-credit Units:

Computing: Computer Networking Fundamentals (F1KH 11)
Computing: Install and Maintain Computer Software (F1KP 11)
Computing: Install and Maintain Computer Hardware (F1KF 11)

In order to be certificated for this award, centres must additionally enter candidates under the relevant Group Award code (G9J8 45).

5.2 Level 6 Framework

The option of Communication/Numeracy at both SCQF Levels 5 and 6 allows centres to choose a level appropriate to candidates.

The options sections include one group of general IT Units with centres limited to choosing a maximum of 2 credits in this area.

Mandatory – 6 credits required

Code	Unit Title	SCQF level	SQA Credit Value	SCQF credit points
FX1M 12	Computing: Troubleshoot Desktop Operating Systems	6	1	6
F3T3 12	Computing: Plan and Build a Computer Network	6	1	6
FW03 12	Computer Systems Architecture	6	1	6
F3SY 12	Computing: Computer Hardware and Systems	6	1	6
FW01 12	Management of Projects	6	1	6
FW05 12	Computing: Systems Monitoring and Operations	6	1	6

Mandatory Option Group 1 (1 credit required)

Code	Unit Title	SCQF level	SQA Credit Value	SCQF credit points
F3GB 11 OR	Communication	5	1	6

Code	Unit Title	SCQF level	SQA Credit Value	SCQF credit points
*H23W 75	Literacy			
H60C 45	Computing: Academic Skills	5	1	6
F3GB 12	Communication	6	1	6

*Refer to history of changes for revision details.

Mandatory Option Group 2 (1 credit required)

Code	Unit Title	SCQF level	SQA Credit Value	SCQF credit points
F3GF 11 OR *H225 75	Numeracy Numeracy	5	1	6
F3GF 12	Numeracy	6	1	6
FN84 11	Mathematics for Interactive Computing	5	1	6

Optional group 3 (from 0 to 2 credits required)

Code	Unit Title	SCQF level	SQA Credit Value	SCQF credit points
F1FF 12	PC Passport: Working with Internet and On-line Communications	6	1	6
F1FE 12	PC Passport: Working with IT Software – Word Processing and Presenting Information	6	1	6
F1FJ 12	PC Passport: Working with IT Software – Spreadsheet and Database	6	1	6
F1FH 12	PC Passport: Working with IT Security for Users	6	0.5	3
F3GC 12	Information and Communication Technology	6	1	6
H9E2 46	Data Security	6	1	6
H9J0 46	Digital Forensics	6	1	6
H9HY 46	Ethical Hacking	6	1	6
H2N5 12	Security Fundamentals	6	1	6
H2N6 12	Network Fundamentals	6	1	6
H2N7 12	Server Administration Fundamentals	6	1	6

Optional group 4 (from 2 to 4 credits required)

Code	Unit Title	SCQF level	SQA Credit Value	SCQF credit points
F3T0 12	Computing: Installing and Maintaining Hardware	6	1	6
F3T1 12	Computing: Installing and Maintaining Software	6	1	6
FX1L 12	Computing: Networking Technologies	6	1	6
F3T4 12	Computing: Troubleshoot and Secure IT Systems	6	1	6
FX1T 12	Computing: Routing Concepts	6	1	6
FX1N 12	Computing: Network Management and	6	1	6

	Security			
FX1P 12	Copper Cabling: An Introduction	6	1	6
FW06 12	Computing: Technical Documentation and Procedures	6	1	6
FY9N 12	Computing: Networked Small Office Home Office	6	1	6
FX1K 12	Computing: IT Support for End Users	6	1	6
FX1R 12	Green IT	6	1	6

Total required – 12 credits

5.3 National Occupational Standards

From ongoing consultation with IT professionals, trainers, employers and government agencies, e-skills UK have produced National Occupational Standards for IT professionals. These detail competences required by employees entering the IT market and are published at competence levels 1 to 3, with levels 2 and 3 corresponding to SCQF levels 5 and 6. The National Occupational Standards relevant to this award are the IT Practitioners and Professionals, with some Units relating to IT Users catalogue.

The mandatory section of the SCQF level 5 NC makes significant contribution to the National Occupational Standards (QCF) level 2 competences within the IT Practitioners and Professionals suite. The Units Computing: Troubleshoot and Secure IT Systems, Computer Systems Architecture, Computing: Computer Hardware and Systems, Computer Networking: Project Design and Implementation and Computing: Installing a Stand Alone System all have partial mapping to the competences in this suite.

The SCQF level 6 NC has strong alignment to the National Occupational Standards (QCF) level 3. The Units Computing: Troubleshoot Desktop Operating Systems, Computing: Plan and Build a Computer Network, Computer Systems Architecture, Computing: Systems Monitoring and Operation, Management of Projects and Computing: Computer Hardware and Systems all have direct correlation to the competences set out for an employee working at this level within industry.

5.4 Articulation, professional recognition and credit transfer

Target Group

The Group Awards are aimed at a client group with a basic level of knowledge and understanding of computing and IT who wish to develop their knowledge in the sub-discipline of technical support. While aimed at the specialist technical support and networking sub-disciplines, these awards are flexible enough in the core competences to allow for progression routes to other computing-related Higher National awards. It is expected that candidates would enter NC Computing: Technical Support at SCQF level 6 from the SCQF level 5 NC. However, capable candidates may also enter the level 6 NC from the relevant NC Digital Media Computing at SCQF Level 5.

Relationship to other SQA awards
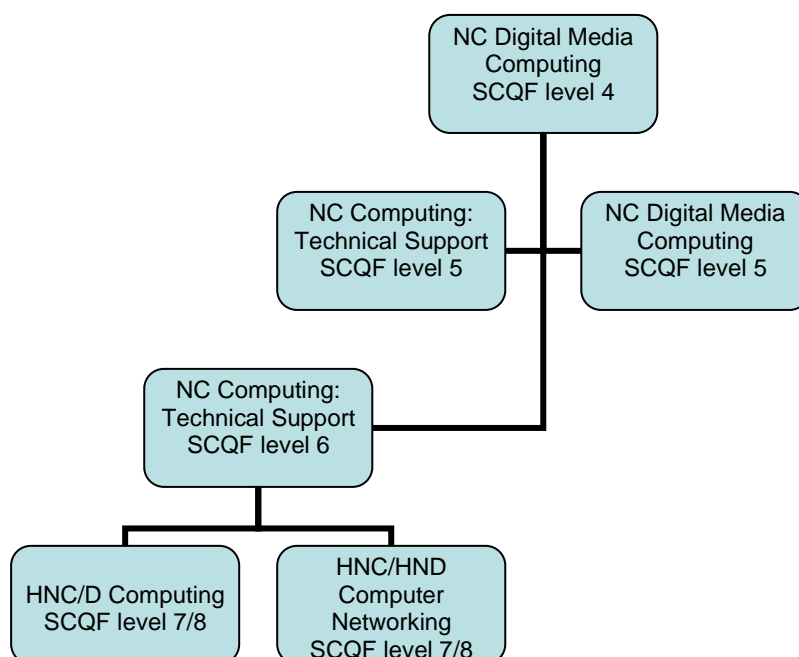
Candidates may progress directly from level 5 to HN at the discretion of the centre, though this is expected to be in exceptional cases.

The awards also have a relationship to NPA in Computer Networks and Systems with its component Units included in the National Certificate frameworks. A candidate may have the opportunity of gaining these as additional awards through careful choice of optional Units within the National Certificate Group Award. The Units that comprise the NPA are shown below:

NPA Computer Systems and Networks (G9J8 45)		Hours	Credit value
F1KF 11	Computing: Install and Maintain Computer Hardware	40	1
F1KP 11	Computing: Install and maintain Computer Software	40	1
F1KH 11	Computing: Computer Networking Fundamentals	40	1

6 Approaches to delivery and assessment

Delivery Modes

The Computing: Technical Support NCs can be offered in the following modes:

Full time
A Group Award offered in this mode could run over a 9 month period with candidates undertaking a minimum of 4 Units per week (3 hours per Unit, per week) based on a 3 block educational year.

Full time fast track
A Group Award offered in this mode would be expected to run over an intense

6 month period with candidates undertaking a minimum of 3 Units per week (6 hours per Unit, per week), based on a 3 block educational year.

Part time (day or evening)
A cluster within the National Certificate Computing: Technical Support (SCQF Level 5) award could be offered on a part time basis. Embedded in the Group Award are the Units which comprise the framework of the National Progression Award in Computer Networks and Systems at SCQF Level 5. This involves 3 Units. This could be concluded over a 16 week evening period with candidates undertaking 2 credits per week for 11 weeks (3 hours per Unit per week) and 1 credit over 5 weeks (6 hours for 1 Unit, per week).

Assessment
Most of the Units involve a balanced mix of practical assessment with underlying theoretical knowledge. In some of these Units it would be advantageous to assess the knowledge aspect of the Unit after the practical aspect, to allow candidates to apply/integrate their knowledge and skills.

E-learning and e-assessment
The Units in the awards have been designed to evidence knowledge and understanding, as well as practical ability. Where knowledge and understanding is being assessed it would be acceptable and encouraged for centres to facilitate electronic means of assessment when possible. In the case of assessing practical activity centres would be encouraged to approve the use of web 2.0 technologies to assist in the generation of e-portfolios and checklists. Centres are encouraged to adhere to any guidelines put in place by SQA when using this means of assessing and ensure assessor authentication of the performance and product evidence. Given the practical nature of the vast proportion of these awards, it is unlikely that they could be delivered entirely by e-learning.

Core Skills
Part of the aim of these awards is to provide opportunities for candidates to develop Core Skills, and Communication and Numeracy are mandatory in both. The SCQF level of these Core Skills can be either 4 or 5, allowing centres flexibility. The Core Skill of ICT is available in each framework at the level of the respective award.

Exit Core Skills
A candidate completing the NC Computing: Technical Support at SCQF level 5 will have achieved the following Core Skills profile:

Communication at SCQF level 4 or above. This will be certificated as a discrete Unit in the mandatory section.
Numeracy at SCQF level 4 or above. This will be certificated as a discrete Unit in the mandatory section.

A candidate will also have opportunity to develop the following:
ICT at SCQF level 5 or above. This will be signposted throughout the mandatory and optional Units in the award.
Problem Solving at SCQF level 5 or above. This will be signposted throughout the mandatory and optional Units in the award.
Working with Others at SCQF level 5 or above. This will be signposted throughout the mandatory and optional Units in the award.

A candidate completing the NC Computing: Technical Support at SCQF Level 6 will have achieved the following Core Skills profile:
Communication at SCQF level 5 or above. This will be certificated as a discrete Unit in the mandatory section.
Numeracy at SCQF level 5 or above. This will be certificated as a discrete Unit in the mandatory section.

A candidate will also have opportunity to develop the following:
ICT at SCQF level 6. This will be signposted throughout the mandatory and optional Units in the award.
Problem Solving at SCQF level 6. This will be signposted throughout the mandatory and optional Units in the award.
Working with Others at SCQF level 6. This will be signposted throughout the mandatory and optional Units in the award.

The exit levels for the Core Skills have been derived from the requirements of entry to the next level. At SCQF level 6 NC Computing: Technical Support candidates would be expected to enter with a Core Skill of Numeracy and Communication at SCQF level 4 (Intermediate 1). This will be certified by means of discrete mandatory Units in the SCQF level 5 award.

A Core Skills mapping for all mandatory and new Units can be found in Appendix 2.

Example Delivery – Level 5 Award

The management and scheduling of Unit delivery is at the discretion of centres and may be influenced by staffing and resources. However it is recommended that centres delivering the Unit Computing: Computer Networking Fundamentals, do so prior to delivering any of the other optional networking Units. It may be beneficial for candidates to undertake the mandatory Unit Numeracy prior to or alongside Computer Systems Architecture, given its numerical content. Centres may also find it useful to offer general IT applications Units such as PC Passport: IT Software - Word Processing and Presenting Information or Information and Communication Technology to give candidates some general computer knowledge and help facilitate future research/assessments. If the Unit Software Development is chosen, it is proposed that centres offer Introduction to Computer Programming: Practitioners as a precursor.

An exemplar delivery schedule for the NC Computing: Technical Support at SCQF level 5 is shown below, based on 12 credits over a 3 x 11 week delivery. While most centres deliver 18 credits (6 per block), the requirement for the National Certificate is 12 credits.

Block 1 – 4 credits (1 at SCQF level 4, 3 at SCQF level 5)

Unit	SCQF Level
Numeracy	4
Computing: Computer Hardware and Systems	5
Computing: Installing a Stand Alone System	5
Information Communication Technology	5

Block 2 – 4 credits (4 at SCQF level 5)

Unit	SCQF Level

Computer Systems Architecture	5
Computing: Troubleshoot and Secure IT Systems	5
Introduction To Computer Programming: Practitioners	5
Computing: Computer Networking Fundamentals	5

Block 3 – 4 credits (1 at SCQF level 4, 3 at SCQF level 5)

Unit	SCQF Level
Computer Networking: Project Design and Implementation	5
Computing: Install, Configure and Test ICT Networks	5
Communication	4
Software Development	5

Total Credits = 12 (10 at SCQF level 5, 2 at SCQF level 4).
Award = National Certificate in Computing: Technical Support (SCQF level 5)

Example Delivery – Level 6 Award

In delivering the SCQF Level 6 award it might prove useful to deliver a generic IT Unit such as PC Passport: Working with Internet and On-line Communications early in the delivery as it may provide valuable research skills that could prove useful in later Units.

Many of the Units can be delivered to provide workplace experience for candidates. The mandatory Unit Computing: Troubleshoot Desktop Operating Systems might be delivered using virtualisation software.

Simulation software might be used when delivering the optional Unit Computing: Routing Concepts, although there is no requirement for this. There may be an opportunity to contextualise part of the mandatory Unit Communication by integrating this with the optional Unit Management of Projects or with Computing: Technical Documentation and Procedures.
An exemplar delivery schedule for the NC Computing: Technical Support at SCQF level 6 is shown below based on 12 credits over a 3 x 11 week delivery. While most centres deliver 18 credits (6 per block), the requirement for the National Certificate is 12 credits.

Block 1 – 4 credits (1 at SCQF level 5, 3 at SCQF level 6)

Unit	SCQF Level
Numeracy	5
Computing: Computer Hardware and Systems	6
PC Passport: Working with Internet and On-line Communications	6
Computer Systems Architecture	6

Block 2 – 4 credits (4 at SCQF level 6)

Unit	SCQF Level
Computing: Systems Monitoring and Operation	6
Computing: Troubleshoot Desktop Operating	6

Systems	
Computing: Networking Technologies	6
Computing: Plan and Build a Computer Network	6

Block 3 – 4 credits (1 at SCQF level 5, 3 at SCQF level 6)

Unit	SCQF Level
Computing: IT Support for End Users	6
Green IT	6
Management of Projects	6
Communication	5

Total Credits = 12 (10 at SCQF level 5, 2 at SCQF level 5).
Award = National Certificate in Computing: Technical Support (SCQF level 6)

7 General information for centres

Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. 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 Group Awards 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)**.

8 General information for candidates

Computing: Technical Support at SCQF level 5
This National Certificate (NC) been designed to introduce you to the core concepts, knowledge and skills required for further study in the area of technical support. Its main purpose is to prepare you for progression into the NC in Computing: Technical Support at SCQF level 6. It will provide you with underpinning knowledge and skills within this specialist area and develop competences in troubleshooting a desktop, hardware & software configuration and introductory networking.

Computing: Technical Support at SCQF level 6
This National Certificate will develop the skills learned at SCQF level 5, preparing you for further study, such as in Computing at HN level (SCQF level 7). The knowledge and skills developed through this Group Award may enable you to move into employment in an entry level technical support position. The NC will prepare you with essential industry knowledge and

skills, developing competences in planning, building and troubleshooting hardware, software and network infrastructure.

Content of the National Certificates

In order to meet the current industry skills demands, Units within both NCs have been written with clear reference and alignment to National Occupational Standards.

In order to successfully achieve a National Certificate in Computing: Technical Support (at either level) you must achieve 12 SQA credits.

The level 5 NC is made up of the following mandatory Units, each of which equates to 1 SQA credit:

1   Computing: Troubleshoot and Secure IT Systems
2   Computer Systems Architecture
3   Computing: Computer Hardware and Systems
4   Computing: Network Fundamentals
5   Computing: Installing a Stand Alone System
6   Computer Networking: Project Design and Implementation
7   Communication
8   Numeracy

You must achieve the minimum of SCQF level 4 in both the Communication and Numeracy Units. Your centre will deliver four additional credits from a variety of Units covering a breadth of technical and general IT skills.

Completion of the SCQF level 5 NC can naturally lead to the National Certificate in Computing: Technical Support at SCQF Level 6, although you may progress to any relevant, computing-related study at this level.

The level 6 NC is made up of the following mandatory Units, each of which equates to 1 SQA credit:

1   Computing: Troubleshoot Desktop Operating Systems
2   Computer Systems Architecture
3   Computing: Computer Hardware and Systems
4   Computing: Computing: Plan and Build a Computer Network
5   Computing: Systems Monitoring and Operation
6   Management of Projects
7   Communication
8   Numeracy

You must achieve the minimum of SCQF level 5 in both the Communication and Numeracy Units. Your centre will deliver four additional credits from a variety of Units covering a breadth of technical and general IT skills.

Completion of the SCQF level 6 NC allows progression to any relevant, computing-related study at HN level.

Assessment

These awards are designed to develop your practical skills supported by underpinning knowledge and understanding. A large share of assessment activity will be practical, using computer hardware, software and network

technologies. You can expect to plan for, implement and troubleshoot a range of support activities using various IT infrastructures. Your performance will be observed and verified by assessors. You will make use of log books and other documents in recording evidence, which may include online evidence using web based tools. For some Units, knowledge and understanding will be assessed under closed book supervised conditions. These tests may take the form of online assessment.

9 Glossary of terms

SCQF: This stands for the Scottish Credit and Qualification Framework, which is a new way of speaking about qualifications and how they inter-relate. We use SCQF terminology 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: One SCQF credit point equates to 10 hours of learning. NQ Units at SCQF levels 2–6 are worth 6 SCQF credit points, NQ Units at level 7 are worth 8 SCQF points.

SCQF levels: The SCQF covers 12 levels of learning. 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.

Dedicated Unit to cover Core Skills: This is a non-subject Unit that is written to cover one or more particular Core Skills.

Embedded Core Skills: This is where the development of a Core Skill is incorporated into the Unit and where the Unit assessment also covers the requirements of Core Skill assessment at a particular level.

Signposted Core Skills: This refers to the opportunities to develop a particular Core Skill at a specified level that lie out with automatic certification.

Qualification Design Team: The QDT works in conjunction with a Qualification Manager/Development Manager to steer the development of the National Certificate/National Progression Award from its inception/revision through to validation. The group is made up of key stakeholders representing the interests of centres, employers, universities and other relevant organisations.

Consortium-devised National Certificates/National Progression Awards are those developments or revisions undertaken by a group of centres in partnership with SQA.

10 Appendices

Appendix 1: National Occupational Standards Mapping
Appendix 2: Core Skills Mapping

Appendix 1: National Occupational Standards

NC Computing Technical Support (SCQF level 5)

Mandatory Units and equivalent National Occupational Standards (NOS)

Mandatory Units	SCQF level	Equivalent NOS area of competence	Coverage
Computing: Troubleshoot and Secure IT Systems	5	IT Security for Users / Optimise IT System Performance	NOS Level 2
Computer Systems Architecture	5	IT/Technology infrastructure design and planning	NOS Level 2
Computing: Computer Hardware and Systems	5	Set up an IT System	NOS Level 2
Computing: Network Fundamentals	5	Set up an IT System	NOS Level 2
Computer Networking: Project Design and Implementation	5	IT / Technology infrastructure design and planning	NOS Level 2
Computing: Installing a Stand Alone System	5	Set up an IT System	NOS Level 2

Optional Units and equivalent NOS mapping

Unit title	SCQF level	Equivalent NOS area of competence	Coverage
Computing: Install and Maintain Computer Software	5	Set up an IT System	NOS Level 2
Computing: Install and Maintain Computer Hardware	5	Set up an IT System	NOS Level 2
PC Passport: IT Software – Word Processing and Presenting Information	5	Presentation Software Word Processing	NOS Level 2 NOS Level 2
PC Passport: IT Software – Spreadsheet and Database	5	Spreadsheet Software Database Software	NOS Level 2
PC Passport: IT Systems	5	Set up an IT System	NOS Level 2
Computing: Install, Configure and Test ICT Networks	5	IT/Technology infrastructure design and planning	NOS Level 2
Computing: Install, Configure and Integrate Networked Hardware and Software	5	IT/Technology infrastructure design and planning	NOS Level 2
Introduction To Computer Programming Practitioners	5	Software Development	NOS Level 2
Software Development	5	Software development	NOS Level 2
Web Design Fundamentals	5	Website software	NOS Level 2

NC Computing Technical Support (SCQF level 6)

Mandatory Units and equivalent NOS

Mandatory Units	SCQF level	Equivalent NOS area of competence	Coverage
Computing: Troubleshoot Desktop Operating Systems	6	IT Security for Users / Optimise IT System Performance	NOS Level 3
Computing: Plan and Build a Computer Network	6	IT/Technology infrastructure design and planning	NOS Level 3
Computer Systems Architecture	6	IT/Technology infrastructure design and planning	NOS Level 3
Computing: Computer Hardware and Systems	6	Set up an IT System	NOS Level 3
Computing: Systems Monitoring and Operations	6	Optimise IT System Performance	NOS Level 3
Management of Projects	6	IT/Technology Infrastructure Design and Planning	NOS Level 3

Optional Units and equivalent NOS

Optional Units	SCQF level	Equivalent NOS area of competence	Coverage
PC Passport: Working with Internet and On-line Communications	6	Use Email /IT Communication Fundamentals	NOS Level 3 / NOS Level 2
PC Passport: Working with IT Software – Word Processing and Presenting Information	6	Presentation Software Word Processing Software	NOS Level 3 NOS Level 3
PC Passport: Working with IT Software – Spreadsheet and Database	6	Spreadsheet Software Database Software	NOS Level 3 NOS Level 3
Computing: Installing and Maintaining Hardware	6	Set up an IT System	NOS Level 3
Computing: Installing and Maintaining Software	6	Set up an IT System	NOS Level 3
Computing: Networking Technologies	6	IT/Technology Infrastructure Design and Planning	NOS Level 3
Computing: Troubleshoot and Secure IT Systems	6	IT Security for Users / Optimise IT System Performance	NOS Level 3
Computing: Network Management and Security	6	IT / Technology Security Management	NOS Level 3
Copper Cabling: An Introduction	6	No mapping	NOS Level 3
Computing: Technical Documentation and Procedures	6	IT / Technology Service Help Desk and Incident Management	NOS Level 3
Computing: Networked Small Office Home Office	6	No mapping	NOS Level 3

Computing: IT Support for End Users	6	IT/Technology Service Catalogue and/or Service Level Management, Measurement and Reporting	NOS Level 3

Appendix 2: Core Skills Mapping

Computing Technical Support Level 5 KEY: S = Signposted E = embedded The shaded table rows indicate mandatory Units.	Communication		ICT		Numeracy		Problem Solving			Working with Others	
	Oral Communication	Written Communication	Accessing Information	Providing/Creating Information	Using Number	Using Graphical Info	Critical Thinking	Planning and Organising	Reviewing and Evaluating	Working Co-operatively with Others	Reviewing Co-operative Contribution
Computing: Troubleshoot and Secure IT Systems			S						S		
Computing: Computer Hardware and Systems			S						S		
Computing: Computer Networking Fundamentals			E(5)				E(5)	S		S	S
Communication (L4/ L5)	E	E									
Computing: Installing a Stand Alone System								S			
Computer Networking: Project Design and Implementation				S				S	S	S	S
Numeracy					E	E					
Computer Systems Architecture			S		S						
Computing: Install, Configure and Test ICT Networks		S	S				S	S		S	
Computing: Install, Configure and Integrate Networked Hardware and Software				S			S	S		S	
Computing: Install and Maintain Computer Software		S	E(5)	S			E(5)	S			
Computing: Install and Maintain Computer Hardware		S	E(5)				E(5)	S		S	
PC Passport: IT Software – Word Processing and Presenting Information		S	S	S		S			S		
PC Passport: IT Software – Spreadsheet and Database			S	S	S	S			S		
Introduction To Computer Programming: Practitioners					S		S	S	S		
Software Development					S		S	S	S		
Web Design Fundamentals			S	S							
Information Communication Technology		S	E	E			S				

Computing Technical Support Level 6 KEY: S = Signposted E = embedded The shaded table rows indicate mandatory Units.	Communication		ICT		Numeracy		Problem Solving			Working with Others	
	Oral Communication	Written Communication	Accessing Information	Providing/Creating Information	Using Number	Using Graphical Info	Critical Thinking	Planning and Organising	Reviewing and Evaluating	Working Co-operatively with Others	Reviewing Co-operative Contribution
Computer Systems Architecture					S		S				
Computing: Troubleshoot Desktop Operating System			S				S		S	S	S
Computing: Computer Hardware and Systems										S	S
Computing: Systems Monitoring & Operations		S	S					S			
Computing: Plan and Build a Computer Network		S						S		S	
Management of Projects	S	S						S	S	S	S
Communication (L5 / L6)	E	E									S
Numeracy (L5/L6)					E	E					
Computing: Networking Technologies		S						S		S	
Computing: Routing Concepts							S				
Computing: Network Management and Security		S	S					S			
Computing: Technical Documentation and Procedures		S		S				S			S
Computing: Networked Small Office Home Office			S					S		S	
Computing: Support for End Users (L6)				S			S			S	
Green IT			S	S					S		
PC Passport: Working with Internet and On-line Communications (L6)			S	S					S		
PC Passport: Working with IT Software – Word Processing and Presenting Information (L6)			S	S					S		
PC Passport: Working with IT Software – Spreadsheet and Database			S	S	S	S			S		
Information Communication Technology			E	E							
Computing: Installing and Maintaining Hardware (L6)								S	S		
Computing: Installing and Maintaining Software (L6)								S	S		
Computing: Troubleshoot and Secure IT Systems (L6)			S				S		S		