

## A Foundation Apprenticeship in Information Technology at SCQF level 6

- **GL55 46 (Hardware/System Support)**
- **GL54 46 (Software Development)**

This document provides you with information you will require to deliver a Foundation Apprenticeship in Information Technology.

If you need any further information please contact

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## Background

One of the key recommendations of Sir Ian Wood's review on developing the young workforce was to "develop better connectivity and co-operation between education and the world of work to ensure young people at all levels of education understand the expectations of employers, and that employers are properly engaged" (Scottish Government response to "Developing the Young Workforce; 2015). The Scottish Government set ambitious targets to ensure this connectivity is delivered through a partnership of schools, colleges/training providers and employers.

SDS, alongside other partners, is working with industry to increase the range of work based learning opportunities for pupils in the senior phase of secondary schools. One of the ways this is being achieved is through the development of Foundation Apprenticeships and SDS is leading this initiative. Foundation Apprenticeships will allow pupils to gain vocational qualifications that combine sector specific skills alongside the knowledge that underpins these skills in a workplace setting while still at school.

The Foundation Apprenticeship in Information Technology is designed to provide S5 and S6 pupils opportunities to develop skills and knowledge for entry into a career in the IT sector. It also contributes directly to achievement of the Modern Apprenticeship in IT and Telecoms by attainment of the core units of the MA qualification.

## The Information Technology sector in Scotland

There are more than 7,000 workplaces in Scotland's IT & Telecoms industry – 84% of which are IT and 16% Telecoms. 89% of these are services orientated. Though micro firms make up 92% of the number of IT & Telecoms workplaces in Scotland, they employ just 25% of the sector workforce. By contrast, companies with 200 or more employees make up less than 1% of the number of workplaces but employ the largest proportion (37%) of the workforce.

In terms of its workforce, there are 100,000 people (or one in every twenty fifth person working in Scotland) employed in IT & Telecoms – 56,000 (56%) of which work in the IT & Telecoms industry itself with a further 44,000 (44%) working as IT or Telecoms professionals in other industries.

In Scotland, nearly two fifths (38%) of IT & Telecoms professionals work in software roles, and over the last decade the number of software professionals has grown by over a half (56%).

## Why choose Information Technology

Scotland is highly dependent on its IT & Telecoms workforce – it underpins the economy and is integral to information, business and consumer services, health and leisure and modern day social networking. Across all industries in Scotland it is the combination of its highly skilled IT & Telecoms professionals, technology-savvy business leaders and competent IT users that enable their organisations' effective participation in the global digital economy.

Currently the IT & Telecoms industry contributes in excess of £3 billion or 3% of Scotland's total Gross Value Added (GVA). Optimisation of the use of IT & Telecoms by businesses could generate an additional £3.7bn GVA to the Scottish economy over the next 5 to 7 years. It is estimated that this GVA uplift could translate into 39,000 new jobs, across many occupations and sectors, over the next 5 to 7 years.

The IT industry covers a wide range of job roles such as:

- IT Technical Support
- Software Developer (including Apps and Games)
- Web Developer
- Database Administrator
- Information (including Cyber) Security

### What is the Foundation Apprenticeship in Information Technology?

The Foundation Apprenticeship (FA) in Information Technology is for pupils in S5 and S6. It typically takes 2 years to complete.

Pupils complete one of two National Progression Awards (NPA) at SCQF level 6, depending on their chosen pathway. There are two available pathways covering the main clusters of job roles in the IT sector:

- **Pathway 1: Hardware / System Support**  
NPA in Professional Computer Fundamentals
- **Pathway 2: Software Development**  
NPA in Software Development

### Background / rationale

Delivery of this Foundation Apprenticeship supports the commitment to provide relevant work-based vocational education and training as part of the senior phase curriculum. This will prepare young people for direct entry into a career in the IT Sector by equipping them with the necessary skills and knowledge to work effectively from day one of employment. It also highlights meaningful vocational pathways as challenging and valuable alternatives to existing academic subjects.

### Partnership

Foundation Apprenticeships are delivered by partnerships comprised of school, learning provider and employer. The learning provider is responsible for the approvals, delivery, assessment and quality assurance of the component units and qualifications. Where multiple learning providers are involved, arrangements between them will be detailed in an SQA Partnership Agreement.

The learning provider must have the appropriate SQA centre and qualification approvals in place before it can deliver the Foundation Apprenticeship. For further support and guidance on SQA's approval and quality assurance processes, please see:

#### Information for Centres on Foundation Apprenticeships:

- [https://www.sqa.org.uk/sqa/files\\_ccc/InformationForCentresFoundationApprenticeships.pdf](https://www.sqa.org.uk/sqa/files_ccc/InformationForCentresFoundationApprenticeships.pdf)

#### Information for Centres on SQA Partnership Agreements, where multiple learning providers are involved:

- [https://www.sqa.org.uk/files\\_ccc/PartnershipAgreementTemplate.pdf](https://www.sqa.org.uk/files_ccc/PartnershipAgreementTemplate.pdf)

The lead partner, as contracted by SDS (usually the learning provider), is expected to work with employers to ensure an adequate supply of work placement opportunities. In the case of the IT

sector, there will be key contacts that can usefully help to support a better understanding of the scope and availability of these, including professional organisations and employer bodies.

## Pastoral Care

The young people embarking on this Foundation Apprenticeship are school pupils and therefore all those involved in delivering the programme have a duty of care. This includes providing appropriate health and safety training and measures to ensure the safety of the young people. This must be in the context of the specific workplaces of the individual pupils (one of the mandatory units of the Diploma covers health and safety).

In addition, a workplace mentor must be assigned to be a point of contact for the young person when they are not in the school environment.

Care must be taken to ensure that pupils are allocated to suitable work placements taking into account each pupil's personal circumstances. This must include an understanding of any restrictions that might be in place for travelling or for after school or holiday commitments.

## How should the Foundation Apprenticeship in Information Technology be delivered?

The following example provides a possible approach to delivering an FA in Information Technology. It is provided here for guidance and illustration purposes, and is not prescriptive.

### Activities in S5

- NPA in College (18 credits)
- Option to sit vendor exams (e.g. Microsoft MTA)
- Knowledge outcomes from Diploma units
- Site visits to employers (minimum 3 contrasting companies)
- Work placement
- Business leader videos/webcasts
- Student event (live)

### Activities in S6

- Extended work placement of 1 day per week (16-20 weeks)
- Real work projects
- Team-working
- Interview / career planning support
- Final assessment of Diploma units
- Mock assessment centre

## Structure of the Foundation Apprenticeship in Information Technology: Software Development

GL54 46 Foundation Apprenticeship in Information Technology: Software Development				
Group Award Title	Unit Title	SCQF level	SCQF Credit points	
GL4W 46 NPA in Software Development	H6S9 46 Computing: Applications Development	6	6	
	F3T2 12 Computing: Authoring a Website	6	6	
	H223 76 Software Design and Development	6	9	
GL2R 46 Diploma for IT & Telecommunications Professionals (part of)	H3C4 04 Personal Effectiveness 2	6	9	
	H3C5 04 Health and Safety in IT & Telecom	4	1	
	H3AH 04 Investigating and Defining Customer Requirements for IT & Telecoms Systems 2	6	12	
	H3BA 04 Data Modelling 1	5	4	
	<b>one from</b>			
	H3A4 04 Event Driven Computer Programming 2	6	<b>12</b>	
	H3AE 04 Procedural Programming 2	6		
	H3AB 04 Object Oriented Computer Programming 2	6		
SQA Certification Unit	HE6E 04 Foundation Apprenticeship Certification	-	<b>0</b>	
<b>TOTAL SCQF CREDIT POINTS</b>			<b>59</b>	

The Foundation Apprenticeship in Information Technology: Software Development has a validation period from 01<sup>st</sup> August 2016

## Structure of the Foundation Apprenticeship in Information Technology: Hardware/System Support

GL55 46 Foundation Apprenticeship in Information Technology: Hardware/System Support			
Group Award Title	Unit Title	SCQF level	SCQF Credit points
GG0F 46 NPA in Professional Computer Fundamentals	H2N5 12 Security Fundamentals	6	6
	H2N6 12 Network Fundamentals	6	6
	H2N7 12 Server Administration Fundamentals	6	6
GL2R 46 Diploma in IT & Telecommunications Professionals (part of)	H3C4 04 Personal Effectiveness 2	6	9
	H3C5 04 Health and Safety in IT & Telecom	4	1
	H39S 04 IT & Telecom System Operation 2	6	12
	H3AV 04 Testing IT & Telecom Systems 2	6	12
	H3B5 04 Working With IT & Telecoms Hardware and Equipment 1	5	7
Foundation Apprenticeship Certification Unit	HE6E 04 Foundation Apprenticeship Certification	-	<b>0</b>
<b>TOTAL SCQF CREDIT POINTS</b>			<b>59</b>

The Foundation Apprenticeship Diploma in Information Technology: Hardware/System Support has a validation period from 01<sup>st</sup> August 2016.

## Certification

SQA will issue the commemorative certificate for the Foundation Apprenticeship.

Learning providers must ensure that they have appropriate SQA approvals in place for the Foundation Apprenticeship and all mandatory components. Candidates must be entered and resulted for all relevant units for verification and certification purposes.

Once all contributing results are entered on SQA systems, the candidate's commemorative certificate will be produced.

SQA Awarding Body quality assurance requirements apply to the delivery of the SQA component units and group awards. Centres are required to sign up to the relevant Assessment Strategy for the Diploma for IT and Telecommunications Professionals and comply with all its requirements.

## Information Technology placements for the Foundation Apprenticeship

Placements for pupils undertaking a Foundation Apprenticeship in Information Technology should provide the opportunity either to:

- Have significant input to a long-term project involving requirements gathering, design, development and implementation phases such as the development of a software application or web site;  
*or*
- Contribute to the systematic investigation of reported faults or incidents, and determination of solutions involving a range of IT systems.

## Selection of pupils and entry requirements for the Foundation Apprenticeship in Information Technology Commencing S5

The Foundation Apprenticeship in Information Technology is aimed at pupils commencing S5. Pupils will have the ability to work towards the SCQF level 6 qualification components (the same level as Higher). They need to have a good level of English and Mathematics and having taken a science subject would be an advantage.

In general apprenticeship roles within the IT and Telecoms sector require:

- Individuals to be proactive, fast learners; able to work both in a team and sometimes alone
- The ability to focus on assisting customers and colleagues find solutions to problems
- The ability to work logically and methodically, often under pressure to set deadlines
- Good attention to detail and the ability to deliver what is required, when it is required
- Individuals to be open to change and focus on the requirements of the business at all times

Roles in Software Development would suit individuals who:

- Have an interest in design and creativity, with good attention to detail
- Have a mathematical or analytical mind
- Have good logical reasoning and problem-solving skills

Roles in Hardware / System Support would suit individuals who:

- Are able to analyse and solve problems
- Have an interest in both hardware and software
- Enjoy working to deadlines and under pressure

## Equalities

We expect those involved in the development, recruitment and delivery of Foundation Apprenticeships to be pro-active in ensuring that no-one should be denied opportunities because of their age, disability, gender reassignment, marriage and civil partnership, religion or belief, sex or sexual orientation or pregnancy and that any barriers (real or perceived) are addressed to support all pupils. These are the protected characteristics of the Equality Act 2010 and training providers and employers must comply with this Act to ensure that applicants are not discriminated against in terms of entry to and promotion within the industry.

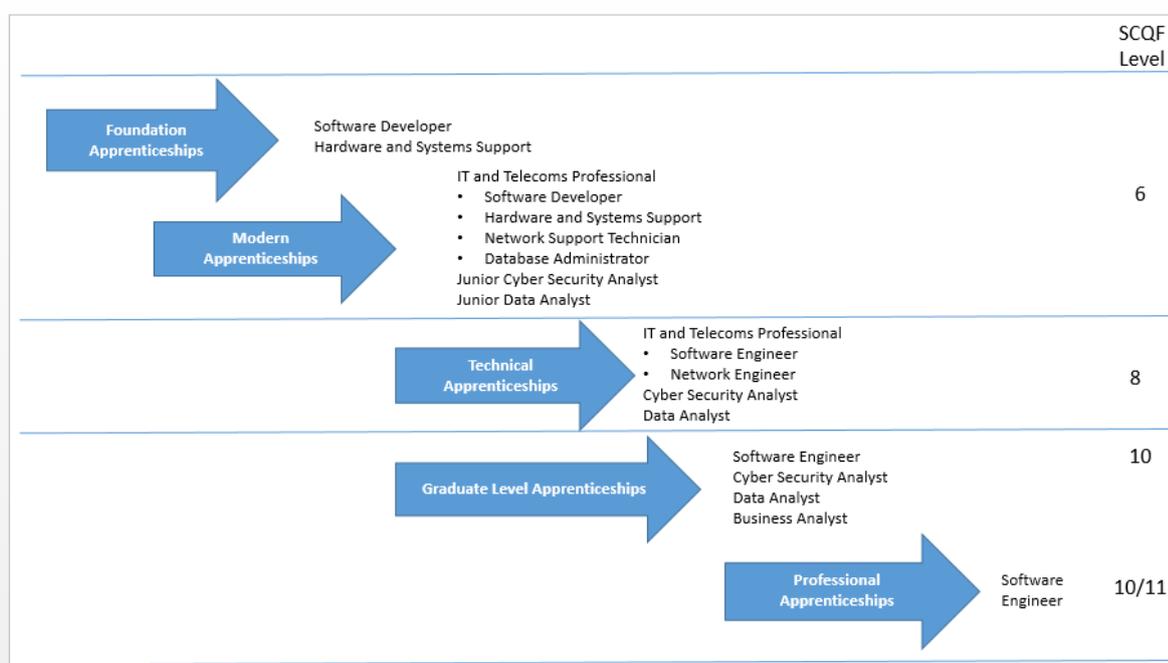
Our emphasis throughout is upon equality and diversity both for new entrants to the sector and opportunities for progression for the existing workforce.

The Tech Partnership recognises the need to encourage more women into IT roles to address the gender imbalance that exists at all levels. Foundation Apprenticeships provide the opportunity for girls to earn vital tech skills through applied programmes of study, and gain experience in the workplace. This will help to promote tech careers and tackle the tech skills gender gap, fostering a new generation of female tech professionals.

## Enhancement

Pupils should be offered the opportunity to achieve vendor or industry certifications related to their selected pathway.

## Pathways into the workplace and into post secondary education



## Further information

Further information on the tech sector and working in digital technology related roles can be found at: [www.thetechpartnership.com](http://www.thetechpartnership.com)

## Annex 1



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23<sup>rd</sup> December 2015

### **Information Technology Foundation Apprenticeship Framework Endorsement**

The Tech Partnership is pleased to endorse and support the Information Technology Foundation Apprenticeship Framework for the following pathways:

- Software Development at SCQF Level 6.
- Hardware and System Support at SCQF Level 6.

A young person who successfully completes the award will achieve the core units of the Modern Apprenticeship in IT and Telecoms (SCQF level 6). They will be certificated to show their achievements.

On completion of the Foundation Apprenticeship they will be able to progress to complete the full IT and Telecoms modern apprenticeship in IT and Telecoms (SCQF level 6).



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