

apprenticeship FRAMEWORK

Information Technology Solutions Development & Support (Wales)

IMPORTANT NOTIFICATION FOR ALL APPRENTICESHIP STARTS FROM 14 OCTOBER 2016

Modifications to SASW came into effect on 14 October 2016. These changes relate to the **Essential Skills and Employer Rights and Responsibilities** requirements of a framework and they **ONLY** apply to new Apprenticeship starts on, or after, 14th October. Apprenticeship starts before this date must continue to meet the 2013 SASW requirements for Essential Skills and Employer Rights and Responsibilities.

For more details of the changes and how they will affect new apprenticeship starts, please read the following preface page to the framework document. NB: Please check the "Revising a Framework" section for information on any additional changes that may have been made to this framework.

Latest framework version?

For any previous versions of this framework: www.acwcerts.co.uk/framework_library

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Framework information

Information on the Issuing Authority for this framework:

Instructus

The Apprenticeship sector for occupations in air conditioning, building services engineering, business and administration, cleaning, customer service, digital/information technology, electro technical, electrical and electronic servicing, enterprise and business support, facilities management, heating and ventilating, housing, human resources and recruitment, industrial relations, leadership and management, marketing and sales (also includes contact centres and third sector), plumbing, property and refrigeration.

Issue number: 1	This framework includes:
Framework ID: FR04019	Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4-7 <input checked="" type="checkbox"/>
Date this framework is to be reviewed by: 29/03/2019	This framework is for use in: Wales

Short description

This Apprenticeship Framework at Level 5 provides the skills and knowledge required to operate as a professional in the field of IT solution development.

Typical job roles include:

- computer programmer
- Instsoftware
- developer systems
- analyst; software
- engineer web designer
- mobile application support

Contact information

Proposer of this framework

Instructus, the Welsh Government and the Software Alliance Wales.

Developer of this framework

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Revising a framework

Why this framework is being revised

|N/A|

Summary of changes made to this framework

|N/A|

Qualifications removed

|N/A|

Qualifications added

|N/A|

Qualifications that have been extended

|N/A|

Purpose of this framework

Summary of the purpose of the framework

ICT is a key sector for Wales as the application of ICT drives productivity and competitiveness across the whole economy. The ICT sector in Wales spans electronics, software development and new technologies with a mix of large multinationals and indigenous businesses.

Wales has approximately 25,000 people directly involved in the ICT industry. There are nearly 3,000 operations in Wales – among them Fujitsu Services, BT, Mitel, Logica, Cassidian, General Dynamics UK, SAIC, Sony UK, Logica and IBM, contributing around £1 billion to the Welsh economy annually. Welsh higher and further education institutions produce more than 3,500 graduates every year in ICT-related disciplines.

This framework will contribute towards meeting the following skills priorities for Wales:

Skills for Jobs: The National Strategic Skills Audit for Wales; June 2011

- The Minister's response to the WESB report on Skills for Jobs Priorities
- Growth and Sustainable Jobs
- Digital Wales

Aims and objectives of this framework (Wales)

Research has indicated a continuing need for new entrants into IT & Telecoms professional occupations. Solutions Development and Support is a particularly important area.

Apprenticeship programmes provide a vital route to bring new entrants into this growing area.

The sector required new entrants both from full-time education, but also from roles in other sectors and 1 other sources (such as returners to work and unemployed), which could also be well suited to apprenticeship training.

How is an apprenticeship delivered?

An Apprenticeship programme is fundamentally designed to be a work-based programme, whereby instructor-led learning can be immediately applied by apprentices in a real work context.

The qualifications contained in the framework reflect the overall design of an apprenticeship. Some units from the competence qualification must be assessed in the workplace, and wherever possible, it is recommended that optional units should also be assessed in this context.

The knowledge component will generally be taught in an off-the-job setting, and assessed using assignments or tests, in order to ensure the apprentice has gained the underpinning theory and principles required for the role.

Entry conditions for this framework

There are no specific entry criteria for this framework.

However in general, learners should possess qualifications (or equivalent experience) at the levels immediately below the level of the award. For example, candidates may have a qualification at CQFW level 3 or 4. In particular qualifications at these levels in Mathematics would be an advantage.

Alternatively candidate may have successfully completed an Apprenticeship at CQFW Level 3.

There is no absolute requirement that learners possess Computing or IT qualifications prior to undertaking this framework, however given the cognitive demands of the underpinning qualification, it is unlikely that candidates will successfully complete without some knowledge and experience of computers and/or demonstrable intellectual skills at an appropriate level.

Level 5

Title for this framework at level 5

Solutions Development & Support

Pathways for the framework at level 5:

Pathway 1: All roles

Level 5, Pathway 1: All roles

Description of this pathway

This pathway covers all roles in solution development and support.

A minimum of 168 credits is required.

Entry requirements for this pathway in addition to the framework entry requirements

There are no additional requirements other than the general entry conditions.

Job title(s)	Job role(s)
Analyst Programmer	Analysing user requirements; researching, designing and writing new software programs to meet customer needs
Software Engineer	Resolving operational problems encountered with computer programs and applications
Application Developer	Translating software requirements into workable programming code and maintaining and developing programs for business or personal use.
Mobile Application Developer	Programming code and maintaining and developing programme for mobile platforms
Web Developer	Designing, developing and maintaining websites for business or personal use.

Qualifications

Competence qualifications available to this pathway

N/A

Knowledge qualifications available to this pathway

N/A

Combined qualifications available to this pathway

B1 – Diploma for Information Technology & Telecommunications Professionals at SCQF Level 8

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
B1a	GL2T 48	Scottish Qualifications Authority	150	1000	N/A

Relationship between competence and knowledge qualifications

Level 8 of the Scottish Credit and Qualifications Framework (SCQF) is equivalent to Level 5 of the Credit and Qualifications For Wales (CQFW). Please refer [here](#) for further information

The qualification structure of the combined qualification requires the achievement of a minimum of 47 credits from units assessed in the workplace (competence element). This exceeds the minimum required by the SASW.

Specific knowledge unit requirement

In order to meet the SASW minimum requirement for knowledge content candidates **must include** in the Diploma one of the following units at SCQF Level 8:

- Principles of Information Governance and Assurance
- Principles of Information Security Testing
- Principles of Data Management Infrastructure

These units are part of the overall Diploma qualification structure and the credit associated with them counts towards the overall qualification.

Essential Skills

An apprenticeship framework must specify as a Welsh certificate requirement the expected achievement levels of Essential Skills in Communication and the Application of Number, and Digital Literacy (where required).

ESSENTIAL SKILLS WALES

Communication	Min.Level 3
Application of Number	Min.Level 3
IT/Digital Literacy	Min.Level 3

For the current list of acceptable proxy qualifications and appropriate minimum grade/level requirements, please refer to the most recent version of SASW on the gov.wales website. Additional guidance materials can be found on the Knowledge Base section of the ACW website.

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Progression routes into and from this pathway

Candidates wishing to enter a Higher Apprenticeship will need to have achieved or demonstrated one of the following:

- A Levels, or equivalent educational attainment, including the Level 3 IT Diploma, Welsh or International Baccalaureate or other relevant Level 3 or 4 qualifications
- An Apprenticeship (Level 3)
- Employment within the technology/telecommunications industry for a number of years and demonstrated to their employer that they have a reasonable expectation of achieving the required outcomes of the Higher Apprenticeship. This can be supported by the demonstration or evidence of prior achievement or performance in the role prior to starting the Higher Apprenticeship.

Potential apprentices should bear in mind that a Higher Apprenticeship combines the challenges of higher-level education with full-time employment, and should be prepared for the greater volume and level of study than in the Apprenticeship or another Level 3 qualification.

Following the completion of the Level 4 Higher Apprenticeship framework, successful apprentices will be able to follow up on their knowledge studies and continue on to complete full Honours degree programmes.

Or other industry recognised, role-specific qualifications:

- Project Management training and accreditation (PRINCE2, MSP, PMI, APM and Agile)
- Service Management training and accreditation (ITIL, SDI and ISO/IEC 2000 training)
- Management and Personal Development Training

A wide range of vendor and core technology training – leading to industry recognised qualifications are also available.

Some qualifications entitle membership of a professional organisation, offering networking and career advancement opportunities. For example, becoming a member of a professional organisation:

- The British Computer Society (BCS)
- The Institute of Engineering and Technology (IET)

UCAS points for this pathway:

N/A

Employee rights and responsibilities

Please note that for Apprenticeship starts from 14/10/2016 onwards ERR is no longer a **mandatory** requirement in all frameworks.

However, it may still be included in some frameworks and where it is not explicitly stated that ERR is not a requirement then confirmation of an Apprentice's ERR achievement will still remain a requirement for Apprenticeship certification purposes.

Is ERR a requirement for this framework? **YES** ☐ **NO** ☒

Delivery and assessment

[N/A]

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The remaining sections apply to all levels and pathways within this framework.

How equality and diversity will be met

Instructus Solutions Development & Support Framework offers no barriers to entry and is intended to accommodate all learners regardless of gender, age, disability or ethnic origin.

The learning content required for the off-the-job learning can be delivered in a number of different learning styles to accommodate learner requirements.

Instructus expects employers and training providers to comply with the Equality Act 2010 to ensure that applicants are not discriminated against in terms of entry to, and progression within the sector, using the protected characteristics.

The following sections are included to identify current workforce demographics. (Data refers to the UK as a whole and to the whole of the IT & Telecoms sector of which Solutions Development and Support is a part)

GENDER EQUALITY

Gender imbalance remains a significant issue for the IT & Telecoms sector. Considering IT & Telecoms professional job roles across all sectors, there has been a drop of female representation from 22% in 2001 to 18% in 2011. This compares to the overall UK workforce being 48% female.

As is the case in industry, gender imbalance is prevalent across IT-related courses, and this is worsening over time throughout the education system. 15% of applicants to Computing degree courses are female and the proportion of females who sat the 2013 Computing A-Level is 6.5%, 1.3 percentage points lower than in 2012.

This under-representation of women across the whole IT & Telecoms sector has a number of causes including:

- a lack of awareness (by both individuals and career advisors) of the broad range of career opportunities available
- confusion in school teaching of ICT between IT User and IT professional roles

Instructus has initiated or participated in a number of programmes to address this gender gap and encourage girls to consider a career in IT.

AGE OF WORKFORCE

Analysis of the period 2001-2011 shows a changing trend in the age profile of IT & Telecoms professionals. The proportion of people aged 16-29 has dropped from 33% in 2001 to 19% in 2011.

The average age of IT & Telecoms professionals working in the UK is estimated to be 39 years old, compared with 41 years old for workers more generally. Just under one half (47%) of IT & Telecoms professionals are aged 40 or above and less than one in five (19%) are in the 16-29 age bracket.

A key contributory factor to this changing dynamic in IT & Telecoms is the effect of globalisation. The maintenance of strong apprenticeship programmes in the sector will be vital to ensure that this trend can be halted or reversed in the coming years, thereby ensuring that the sector has the pipeline of skilled professionals that it requires to move into higher level job roles in 5-10 years' time.

ETHNICITY AND DISABILITY

The Information and communication technologies industry is one of the most ethnically diverse industries in the UK, with 13 per cent of the workforce (an increase from 8% of the workforce in 2002) coming from Black, Asian and Minority Ethnic backgrounds compared to nine per cent across the whole economy.

There is significant provision for individuals with disabilities throughout the IT and Telecoms sector with many, varied opportunities for rewarding careers at all levels. This in turn means that apprenticeships are available in a wide range of areas for those with differing levels of disability. |

On and off the job training

Summary of on- and off-the-job training

The total number of training hours which each apprentice must receive are 1180 (1000 for the combined qualification and 180 for Essential Skill Wales where required)

Recognition of prior learning (RPL) is encouraged e.g. relevant content from the Welsh Baccalaureate.

Training hours are delivered during contracted working hours under an Apprenticeship Agreement, or must have been completed no more than three years prior to commencing the apprenticeship.

On and off the job training hours:

- must be planned, reviewed and evaluated jointly between the apprentice and tutor, teacher, mentor or manager;
- must allow training support via a tutor, teacher, mentor or manager;
- may be delivered through one or more of the following methods: individual and group teaching, e-learning, distance learning, coaching, mentoring; feedback and assessment; collaborative/networked learning

Off-the-job training

Off-the-job training are those learning activities undertaken away from normal work duties.

The **minimum** required is 480 hours.

This is made up of:

- Qualification units: 300 hours
- Essential Skills Wales (for apprentices without the required levels): 180 hours

NB The actual number of hours required will be determined by the actual knowledge and competence units selected

How this requirement will be met

Off-the-job learning will be required for the Apprentice to achieve the designated knowledge units of the combined Diploma qualification. This may involve a combination of day release, block release, web based learning, mentoring and coaching.

Achievement of the designated knowledge units and Essential Skills (if required) will be evidence of completion of the required number of off the job GLH.

On-the-job training

An apprentice must receive a **minimum** of 500 hours on the job training.

NB The actual number of hours required will be determined by the actual competence and knowledge units selected.

How this requirement will be met

An Apprenticeship programme is fundamentally designed to be a work-based programme, whereby instructor-led learning can be immediately applied by apprentices in a real work context.

The qualification contained in the framework reflects the overall design of an apprenticeship, containing some units which are designed to be delivered off-the-job and competence based units which are designed to be delivered on-the-job.

Wherever possible, the competences should be assessed holistically in the workplace, ensuring that any knowledge elements in the units are learned in the work and organisational context.

This can be recorded by any suitable means including, for example, portfolios of work, performance reviews and work logs/diaries.

The discrete knowledge units must be taught 'off-the-job' and assessed using assignments or tests in order to ensure the apprentice has gained an appreciation of the wider impact in business and society and understands the underpinning theory and principles required for their role.

An Apprentice can plan and review their use of predefined or commonly used tools and techniques for complex and non-routine activities. As a result of reviewing their work, they will be able to devise solutions in the use of these in order to improve productivity for themselves and others.

Through coaching on-the-job, they will develop transferable skills and techniques for self-help and in turn be prepared to offer support and advice to others.

Evidence of guided learning hours undertaken should be recorded in the apprentices' Individual Learning Plan, and updated at 12 week reviews throughout the programme. On completion of the Apprenticeship, the total number of guided learning hours can be evidenced through submission of the Combined Qualification, Essential Skills Wales and Employee Rights and Responsibilities. |

Wider key skills assessment and recognition

While Wider Key Skills are not a **mandatory** part of the framework, training providers are encouraged to provide apprentices the opportunity to achieve them.

For this framework, there are natural opportunities for Wider Key Skills to be embedded within the mandatory units of the following qualifications:

Enter Qualification Names

Improving own learning and performance

N/A

Working with others

N/A

Problem solving

N/A

apprenticeship FRAMEWORK

For more information visit-
www.acwcerts.co.uk/framework_library