

# apprenticeship FRAMEWORK

## IT 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?

Please use this link to see if this is the latest issued version of this framework:

[afo.sscalliance.org/frameworkslibrary/index.cfm?id=FR04269](http://afo.sscalliance.org/frameworkslibrary/index.cfm?id=FR04269)

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# CHANGES TO REQUIREMENTS FOR APPRENTICESHIP STARTS FROM 14TH 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 2016. Apprenticeship starts before this date must continue to meet the 2013 SASW requirements for Essential Skills and Employer Rights and Responsibilities.

## Alternatives for Essential Skill qualifications

**Foundation apprenticeships (Level 2):** Where Essential Skills qualifications are specified in a foundation apprenticeship framework (Level 2), the apprenticeship framework must specify as a Welsh certificate requirement, the acceptance of one of the following recognised proxy qualifications.

For Communication:

- a. GCSE or iGCSE qualification in English language or literature to at least grade G (Level 1 equivalent); or
- b. O Level qualification in English language or literature to at least grade E; or
- c. A/AS Level qualification in English language or literature to at least grade E; or
- d. SCQF Level 4 – Communication Core Skills (Oral communication and written communication); or
- e. SQA National 4 English; or
- f. Functional Skills or Key Skills literacy qualifications in English provided the proxy qualification(s) attained are at Level 1 or above.

For Application of Number:

- a. GCSE or iGCSE qualification in Mathematics to at least grade G (Level 1 equivalent); or
- b. O Level qualification in Mathematics to at least grade E; or
- c. A/AS Level qualification in Mathematics to at least grade E; or
- d. SCQF Level 4 – Numeracy Core Skill (Graphical Information and using number); or
- e. SQA National 4 Mathematics ; or
- f. Functional Skills or Key Skills numeracy qualifications in Mathematics provided the proxy qualification(s) attained are at Level 1 or above.

**Apprenticeships (Level 3):** Where Essential Skills qualifications are specified in an apprenticeship framework (Level 3), the apprenticeship framework must specify as a Welsh certificate requirement, the acceptance of one of the following recognised proxy qualifications.

For Communication:

- a. GCSE or iGCSE qualification in English language or literature to at least grade C (Level 2 equivalent); or
- b. O Level Qualification in English language or literature to at least grade C; or
- c. A/AS Level qualification in English or literature to at least grade E; or
- d. SCQF Level 5 – Communication Core Skills (Oral communication and written communication); or
- e. SQA National 5 English; or
- f. Functional Skills or Key Skills literacy qualifications in English provided the proxy qualification(s) attained is at Level 2 or above.

For Application of Number:

- a. GCSE or iGCSE qualification in Mathematics to at least grade C (Level 2 equivalent); or
- b. O Level Qualification in Mathematics to at least grade C; or
- c. A/AS Level qualification in Mathematics to at least grade E; or
- d. SCQF Level 5 – Numeracy Core Skill (Graphical information and using number); or
- e. SQA National 5 Mathematics; or
- f. Functional Skills or Key Skills numeracy qualifications in Mathematics provided the proxy qualification(s) attained are at Level 2 or above.

**Higher Apprenticeships (Levels 4-7):** Essential Skills requirements are as for an apprenticeship frameworks at Level 3.

# CHANGES TO REQUIREMENTS FOR APPRENTICESHIP STARTS FROM 14TH OCTOBER 2016

## Employer Rights and Responsibilities (ERR)

The final modification to SASW is to Employer Rights and Responsibilities (ERR) which is no longer compulsory in frameworks. Please refer to the Employer Rights and Responsibilities section within the framework document to confirm specific requirements.

## Additional Information

It should be noted that SASW has also been modified to reflect existing improvements to Essential Skills Wales Qualifications. These improvements to ESW qualifications were signalled by the revised names:

- Essential Skills Wales Communication is now Essential Communication Skills (still 6 credits in size)
- Essential Skills Wales Application of Number Skills is now Essential Application of Number Skills (still 6 credits in size)
- Essential Skills Wales Information Communication Technology Skills is now Essential Digital Literacy Skills (still 6 credits in size)

Whilst there have been some amendments to the content of ESW qualifications, the most significant change has been to the assessment methodology for these qualifications.

From 1 January 2016, all new starts have had to follow the revised Essential Skill qualifications.

The updated version of SASW, and guidance documents, can be accessed here:

<http://gov.wales/topics/educationandskills/skillsandtraining/apprenticeships/providers/?lang=en&dgd>

Over the coming months, the Essential Skills section within AFO will be amended to reflect the SASW modifications and all current frameworks will be updated and reissued to incorporate these changes. In the meantime, if you are in any doubt as to the requirements of any framework then please contact the relevant Issuing Authority.

# IT Solutions Development & Support (Wales)

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# Framework summary

## IT Solutions Development & Support

### Level 3 IT Solutions Development & Support

#### Pathways for this framework at level 3 include:

##### Pathway 1: All roles

**Competence qualifications available to this pathway:**

N/A

**Knowledge qualifications available to this pathway:**

N/A

**Combined qualifications available to this pathway:**

B1 - Diploma in IT Solution Development Level 3

**This pathway also contains information on:**

- Employee rights and responsibilities
- Essential skills

## IT Solutions Development & Support

### IT Solutions Development & Support

#### Pathways for this framework at level 4 include:

##### Pathway 1: All roles

**Competence qualifications available to this pathway:**

N/A

**Knowledge qualifications available to this pathway:**

N/A

**Combined qualifications available to this pathway:**

B1 - Diploma in IT Solution Development Level 4

**This pathway also contains information on:**

- Employee rights and responsibilities
- Essential skills

# Framework information

## Information on the Publishing Authority for this framework:

### The Tech Partnership

The Apprenticeship sector for occupations in business and Information Technology.

Issue number: 1	<b>This framework includes:</b>
Framework ID: FR04269	Level 3 Level 4
Date this framework is to be reviewed by: 31/03/2021	<b>This framework is for use in: Wales</b>

## Short description

This Apprenticeship framework provides the skills, knowledge and competence required to become an IT Solutions Development & Support Professional in a wide range of job roles such as:

- Software Developer
- Web Developer
- Software Tester
- IT Software Support
- Database Administrator

The Apprenticeship programme combines skills and knowledge with employment in an IT Solutions Development & Support role, meaning that apprentices are paid throughout the programme. Apprentices can apply and improve their skills in the workplace to complement the instructor-led learning.

# Contact information

## Proposer of this framework

This Apprenticeship programme is designed for new entrants to a role in IT Solutions Development & Support, and to provide progression and re-skilling routes for existing IT Professionals. Apprentices can work in areas such as:

- Software Development
- Web Development
- Software Testing
- Software Support
- Software Project Management

What is included in this Apprenticeship?

The apprenticeship is made up of qualifications and learning that will provide apprentices with the skills and knowledge required to become competent in their chosen job role.

The framework includes a balance of content in technical, business and interpersonal areas, designed to ensure apprentices have an appropriate set of skills to operate in today's IT Solution Development & Support job roles.

The technical content includes units for Software Development, Web Development, Software Testing, Software Support and Databases. In addition to generic units, the apprenticeship contains 'vendor' and industry recognised content from Microsoft, Cisco, Oracle, VM Ware and CompTIA.

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# Purpose of this framework

## Summary of the purpose of the framework

IT is a key sector for Wales as the application of IT drives productivity and competitiveness across the whole economy. The IT 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 IT 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. In addition major government agencies such as the ONS and DVLA are major users and developers of IT systems. Welsh higher and further education institutions produce more than 3,500 graduates every year in IT-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 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 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 combined qualification must be assessed in the workplace, and wherever possible, it is recommended that all other units should also be assessed in this context.

Knowledge 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 at or 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 3

Title for this framework at level 3

# Level 3 IT Solutions Development & Support

### Pathways for this framework at level 3

Pathway 1: All roles

## Level 3, Pathway 1: All roles

### Description of this pathway

This pathway covers all roles in solution development and support.

A minimum of 114 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	Assisting with the analysis of user requirements; researching, designing and writing components of new software programs to meet customer needs
Software Engineer	Contributing to the resolution of operational problems encountered with computer programs and applications
Application Developer	Translating software requirements into workable programming code elements and maintaining programs for business or personal use.
Mobile Application Developer	Contributing to creating code and maintaining and developing programs for mobile platforms.
Web Developer	Designing, developing and maintaining web pages 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 in IT Solution Development Level 3					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
B1a	C00/1233/2	Agored Cymru	96	300	n/a

## Relationship between competence and knowledge qualifications

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

# Transferable skills (Wales)

## Essential skills (Wales)

	Minimum level	Credit value
Communication	3	6
Application of numbers	3	6
IT	3	6

## Progression routes into and from this pathway

Entry into this apprenticeship programme may be:

- directly from school or college with the relevant level of academic qualifications
- directly from university with an IT or other degree
- as a career transition from a general IT role or business role.

The Level 3 Apprenticeship programme offers successful apprentices the opportunity to further progress in their studies and go on to undertake a related degree programme. They could select from Bachelors degrees, Foundation degrees, Higher Nationals or another higher level qualification. Apprentices may also elect to continue within their job role and pursue their learning by undertaking additional technical, business or managerial level training and qualifications.

Apprentices who have completed a Level 3 apprenticeship programme have often progressed within their career to take on team leader or senior level positions, utilising their expanding technical expertise – and guiding and training others within the organisation.

**UCAS points for this pathway: n/a**

# Employee rights and responsibilities

N/A

## Level 4

Title for this framework at level 4

# IT Solutions Development & Support

### Pathways for this framework at level 4

Pathway 1: All roles

## Level 4, 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

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

<b>Job title(s)</b>	<b>Job role(s)</b>
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 programs for mobile platforms. Web Developer
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 in IT Solution Development Level 4					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
B1a	C00/1233/8	Agored Cymru	150	1000	n/a

## Relationship between competence and knowledge qualifications

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

# Transferable skills (Wales)

## Essential skills (Wales)

	Minimum level	Credit value
Communication	3	6
Application of numbers	3	6
IT	3	6

## 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)

The Tech Partnership 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.

**UCAS points for this pathway: N/A**

# Employee rights and responsibilities

N/A

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

## How equality and diversity will be met

The Tech Partnership 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.

The Tech Partnership expects employers and training providers to comply with current Equality legislation 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 workforce demographics. (Data refers to the UK as a whole and to the whole of the IT sector of which Solutions Development and Support is a part)

### GENDER EQUALITY

Gender imbalance remains a significant issue for the IT sector. This under-representation of women 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

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

### ETHNICITY AND DISABILITY

The Information and communication technologies industry is one of the most ethnically diverse industries in the UK. There is significant provision for individuals with disabilities throughout the IT 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 (Wales)

## 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 apprentice's 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 (Wales)

## Improving own learning and performance

The Wider Key Skill for 'Improving own learning and performance' is not included as an additional requirement in the framework, as the content is embedded in the mandatory unit titled 'Professionalism in an IT Context'.

## Working with others

The Wider Key Skill for 'Working with others' is not included as an additional requirement in the framework, as the content is embedded across many of the work-based units assessing competency.

## Problem solving

The Wider Key Skill for 'Problem Solving' is not included as an additional requirement in the framework, as the content is embedded across all of the work-based units assessing competency.

# Additional employer requirements

There are no additional employer requirements.

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