

# Software Developer (Level 4)



## Phase 1

Induction & Initial Assessment



## Phase 2

Training Modules & contact from Skills Development Coach



Software  
Development  
Methodologies

Software  
Language

Develop Software  
Using SQL



## Phase 3

Assessment Gateway



## Phase 4

End Point Assessment



## Apprenticeship Standard Software Developer (Level 4)

## Blended Learning breakdown

		Training Centre	Remote
<b>Phase 1</b>	Induction & Initial Assessment	1 day	Training Centre only
<b>Phase 2</b>	Software Development Methodologies - Part 1	1 week	20 hours self-study 4 hours remote training
	Software Development Methodologies - Part 2	1 week	20 hours self-study 4 hours remote training
	Software Language - Part 1 (70 - 483 Programming in C#, MCSA Universal Windows Platform Pathway)	1 week	20 hours self-study 4 hours remote training
	Software Language - Part 2 (70 - 483 Programming in C#, MCSA Universal Windows Platform Pathway)	1 week	20 hours self-study 4 hours remote training
	Develop Software Using SQL	1 week	Training Centre only
<b>Phase 3</b>	Assessment Gateway	Up to 1 week*	Training Centre only
<b>Phase 4</b>	End Point Assessment	3 - 5 days	Training Centre only

\*To be arranged by your Skills Development Coach

# Course Details



## Induction/Initial Assessment

1 day in the training centre

## Functional Skills

**If required, learners will sit a Maths and/or 3 English exams.**  
Allow 1 - 2 days per exam.

## Software Development Methodologies (Part 1)

- Explain the role and function of the system development lifecycle
- Relate the seven generic stages of the software development lifecycle
- Illustrate the main activities in each stage of the software development lifecycle
- Demonstrate the high-level deliverables from each stage of the software development lifecycle
- Describe the primary differences between the waterfall and agile software development methods
- Explain the respective strengths and weaknesses of each of the waterfall and agile software development methods

## Software Development Methodologies (Part 2)

- Demonstrate the selection criteria for using either the waterfall or agile software development method
- Relate the roles and responsibilities within software development and implementation
- Illustrate the structure of a software development team within an organisation
- Describe the responsibilities of project managers in software development and the difference between project life cycles and software development life cycles
- Demonstrate what team working aspects are needed to ensure effective delivery of software projects



## Developing Software Using SQL

- Know how to query and display data from a single table
- Query and display data from multiple tables
- Manipulate data in tables
- Create and manage tables, views and indexes



## Software Language (Part 1)

- Implement multithreading and asynchronous processing
- Manage multithreading
- Implement program flow
- Create and implement events and callbacks
- Implement exception handling
- Create and consume types
- Enforce encapsulation
- Create and implement a class hierarchy
- Find, execute and create types at runtime by using reflection
- Manage the object lifecycle
- Manipulate strings

## Software Language (Part 2)

- Validate application input
- Perform symmetric and asymmetric encryption
- Manage assemblies
- Debug an application
- Implement diagnostics in an application
- Perform I/O operations
- Consume data
- Query and manipulate data and objects by using LINQ
- Serialise and de-serialise data
- Store data in and retrieve data from collections



## Assessment Gateway, Assessment Preparation & Administration Week

**(Up to 1 week in the training centre)**  
Preparation week to understand the four elements of the assessment gateway.

## Assessment Phase

Summative Portfolio

Synoptic Project

Technical Interview with SME

Employer Reference

## Achievement of Apprenticeship

**BCS Software Developer (Level 4)**