

# Software Developer (Level 4)



## Phase 1

Induction & Initial Assessment



## Phase 2

Training modules and contact from Skills Development Coach



System Development Essentials (4 Parts)

Software Language (3 Parts)

Develop Software using SQL (2 Parts)

Software Development Fundamentals C# (3 Parts)



## 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		Skills Coach visit
<b>Phase 2</b>	Systems Development Essentials Parts 1 - 3	3 days per part	20 hours self-study 9 remote training sessions
	Systems Development Essentials Part 4	2 days	Training Centre only
	Software Language Parts 1 - 3 (BCS exam)	3 days per part	20 hours self-study 9 remote training sessions
	Develop Software using SQL Parts 1 - 2	2 days per part	Training Centre only
	Software Development Fundamentals C# Parts 1 - 2	3 days per part	Training Centre only
	Software Development Fundamentals C# Part 3 (MTA Software Development Fundamentals)	2 days	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

Skills Development Coach will conduct the induction in their first visit

## Functional Skills

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

## Software Development Fundamentals C#

- Computer storage and data types
- Computer decision structures
- How to identify the appropriate method for handling repetition
- Error handling
- Algorithms and data structures
- The fundamentals of classes
- Inheritance
- Polymorphism
- Encapsulation
- Application Life Cycle management
- How to interpret application specifications
- Web page development
- Microsoft ASP.NET web application development
- Web hosting
- Web services
- Windows apps
- Console-based applications
- Windows Services
- Relational database management systems
- Database query methods
- Database connection methods



## System Development Essentials

- System Development roles and responsibilities
- Architecture
- Systems Development Lifecycles
- Development Practices
- System Development roles and responsibilities
- Architecture
- Systems Development Lifecycles
- Development Practices
- Quality Assurance
- CASE, CAST, Application Lifecycle Management tools



## 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

- Purpose of software design
- Use of software design approaches and software patterns in the software design process
- Functional and Non Functional Requirements
- How software designs can be documented and how this supports implementation
- The need for secure development and how this can be included in the software development process
- The need for software maintainability and how software can be implemented to enable re-use and maintainability.
- Computational Theory and Mathematics:
  - Key techniques of maths required for software development.
  - How algorithms are used to create a logical solution to a computable problem.
  - Primary elements of programming logic.



## Assessment Gateway, Assessment Preparation & Administration Week

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

## Assessment Phase

- Summative Portfolio
- Synoptic Project
- Technical Interview with SME
- Employer Reference

## Achievement of Apprenticeship

**BCS**  
**Software Developer**  
**(Level 4)**