SOFTWARE DEVELOPMENT TECHNICIAN

A Software Development Technician typically works as part of a software development team, to build simple software components (whether web, mobile or desktop applications) to be used by other members of the team as part of larger software development projects. They will interpret simple design requirements for discrete components of the project under supervision. The approach will typically include implementing code, which other team members have developed, to produce the required component. The Software Development Technician will also be engaged in testing that the specific component meets its intended functionality.

Level 3

18 Months

£15,000

Entry requirements

Individual employers will set the selection criteria, but this is likely to include 5 GCSEs (especially English, mathematics and a science or technology subject); other relevant qualifications and experience; or an aptitude test with a focus on IT skills.

Qualifications

Apprentices must achieve each of the Ofqual-regulated Knowledge Modules, as summarised below. Further details are available in the occupational brief available from the Tech Partnership.

Knowledge Module 1: Software Development Context and Methodologies (for level 3 Software Development Technician)

Knowledge Module 2: Programming (for level 3 Software Development Technician)

Delivery method

Various delivery models available to suit your needs. For any enquiries, or to book an appointment with our training consultants, please contact us at solutions@howcollege.ac.uk.

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What apprentices will learn

Technical Competencies

Logic	Writes simple code for discrete software components following an appropriate logical approach to agreed standards (whether for web, mobile or desktop applications).
Security	Applies appropriate secure development principles to specific software components all stages of development.
Development support	Applies industry standard approaches for configuration management and version control to manage code during build and release.
Data	Makes simple connections between code and defined data sources as specified tests.
Analysis	Follows basic analysis models such as use cases and process maps.
Development lifecycle	Supports the Software Developers at the build and test stages of the software development lifecycle.
Quality	Follows organisational and industry good coding practices (including those for naming, commenting etc.).
Problem solving	Solves logical problems, seeking assistance when required (including appropriate mathematical application).
Communication	Clearly articulates the role and function of software components to a variety of stakeholders (including end users, supervisors etc.).
User Interface	develops user interfaces as appropriate to the organisations development standards and the type of component being developed.

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What apprentices will learn

Knowledge

- Understands the business context and market environment for software development.
- Understands the structure of software applications.
- Understands all stages of the software development lifecycle.
- Understands the role of configuration management and version control systems and how to apply them.
- Understands how to test their code (e.g. unit testing).
- Recognises that there are different methodologies that can be used for software development.
- Understands the particular context for the development platform (whether web, mobile, or desktop applications).
- Understands their role within their software development team.
- Understands how to implement code following a logical approach.
- Understands how their code integrates into the wider project.
- Understands how to follow a set of functional and non-functional requirements.
- Understands the end user context for the software development activity.
- Understands how to connect their code to specified data sources.
- Understands database normalisation.
- Understands why there is a need to follow good coding practices.
- Understands the principles of good interface design.
- Understands the importance of building in security to software at the development stage.

Skills, Attitudes and Behaviours

- Logical and creative thinking skills.
- Problem solving skills.
- Ability to work independently and to take responsibility.
- Can use own initiative.
- A thorough and organised approach.
- Ability to work with a range of internal and external people.
- Ability to communicate effectively in a variety of situations.
- Maintains productive, professional and secure working environment.

End point assessment

The End Point Assessment (EPA) can only be triggered after 12 months of starting the apprenticeship and is dependent on when the employer and training provider decide the apprentice is ready. EPA is typically expected to conclude within 3 months. The employer has the final decision to progress the apprentice to EPA. The apprentice and training provider should feel confident the learning outcomes have been achieved.

The EPA consists of three elements, all of which may be completed online. All assessment methods need to be passed. Each assessment method should directly assess the knowledge, skills and behaviours of the Standard. The assessor has the final decision.

Knowledge Test

The apprentice undertakes a multi-choice test to last a maximum of 60 minutes and include 50 equally weighted multi-choice questions with four possible answers each. The assessment should typically be passed before the apprentice progresses to the interview and presentation. The test is to be completed online and requires invigilating.

Portfolio-based Interview

The interview is for 30-45 minutes and scored out of 100 by the Independent Endpoint Assessment Organisation. The interview assesses:

- Understanding of the portfolio to validate competence shown.
- Self-reflection of performance, demonstrating knowledge and how appropriate skills and behaviours have been applied.
- Judgement and understanding to explain appropriate examples.

Project Presentation:

The apprentice delivers a presentation to the EPAO on a project they have completed or a process they have improved. The presentation lasts 10-15 minutes, with a further 10-15 minutes for a Q&A session. The presentation is out of 100. The project is completed from month 9 of the apprenticeship and should be completed prior to EPA being triggered. The project is submitted to the EPAO and they provide a question to answer in the presentation, for example:

- How have you improved a process or operating practice?
- What were the steps you took to implement the project?
- What worked well and how would you improve the results in future?

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