

# LEVEL 3 SOFTWARE DEVELOPMENT TECHNICIAN

## THE APPRENTICE and TRAINING PARTNERSHIP



### **There is nothing standard about the new apprenticeship Standards!**

In 2017 modern apprenticeships underwent a major overhaul. Apprenticeships now represent the very best in vocational Further Education programmes and benefit the widest range of employees and employers for new career starts, upskilling for progression or changes in career direction.

#### **Programme Overview:**

A Software Development Technician typically works as part of a software development team. They build software components for web, mobile and/or desktop applications which are used to form parts of larger software development projects. They will interpret design requirements for discrete components of projects 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 to ensure that components meet the functionality requirements.

#### **Who is it for:**

##### **Typical Job Roles:**

- Software Development Technician
- Junior Developer
- Junior Web Developer
- Junior Application Developer
- Junior Mobile App Developer
- Junior Software Developer
- Junior Application Support Analyst
- Junior Programmer
- Assistant Programmer

#### **Entry Requirements:**

Entry requirements exist for all funded Further Education programmes. These ensure the value, gain and success of the programme. The ATP will conduct the processes with employers and prospective apprentices to determine correct funding eligibility.

##### **Job role eligibility (known as Competency Role Map):**

The job role must contain opportunity for an apprentice to practice the content set out in the apprenticeship Standard to achieve vocational competency. Apprentices must have the opportunity to practice the knowledge taught in training sessions in order to convert new knowledge in to sustainable skills applied in the workplace.

Each apprenticeship requires a portfolio of evidence this will showcase the apprentice's work and will be reviewed by the apprenticeship assessment organisation to determine how well new knowledge has been successfully utilised vocationally. If a job role is close to the eligibility criteria we will consult with employers to see if adjustments can be made to ensure criteria is met.

##### **Initial Assessment of existing knowledge and skills:**

A prospective apprentice must stand to gain significant knowledge and skills from an apprenticeship. If the apprenticeship is too advanced for them or if they already know much of the knowledge and skills the apprenticeship would provide then they may not be eligible for the funding.

The ATP will review existing qualifications, knowledge and skills to determine if the prospective apprentice will benefit from the proposed apprenticeship such that it meets the funding criteria. In most instances this is very straightforward, however in some instances funding can be specially authorised for reduction in order to fund the parts of an apprenticeship that would be relevant. The ATP will provide the assessment for these possibilities.

The Level 3 Software Development Technician apprenticeship is highly technical, so whilst employers can select their own entry criteria, prospective apprentices should have achieved at least 5 GCSEs including English and Mathematics and hold a minimum of 120 UCAS points, or equivalent as a minimum to help ensure success.

In many cases this type of apprenticeship can demand a higher capability of English and maths than is taught at GCSE or A-Level. For example, advanced report writing, budgeting, complex structured explanations and/or advanced formulae and statistics. The ATP will provide both functional and advanced English and maths diagnostics and teaching to ensure each apprentice is fully supported in these areas.

### **Programme Duration:**

This apprenticeship is delivered over 18 months for full-time employees. For part-time employees the term may be extended depending on the contracted hours.

### **Standard Delivery Model:**

Apprenticeship training is delivered through a blend of weekly live web-based classrooms and regular face-to-face mentoring sessions that are held on a one-to-one basis in the workplace.

These live classrooms are held through Microsoft Teams. This software provides the full suite of educational tools including everything you would find in a conventional classroom and more e.g. live open interactions, private breakout rooms, note and question queues and interactive illustration boards. We can also use movie green screen technology for lesson illustrations.

A full timetable for the training, mentoring, exams and assessments is provided at the outset. Progress is reviewed at 12-week intervals in a meeting between the mentor, apprentice and employer (typically the apprentice's line manager).

Employers and apprentices have full visibility of progress in real-time by accessing the e-portfolio system, alternatively regular updates can be provided by other means if preferred.

### **End Point Assessment (EPA):**

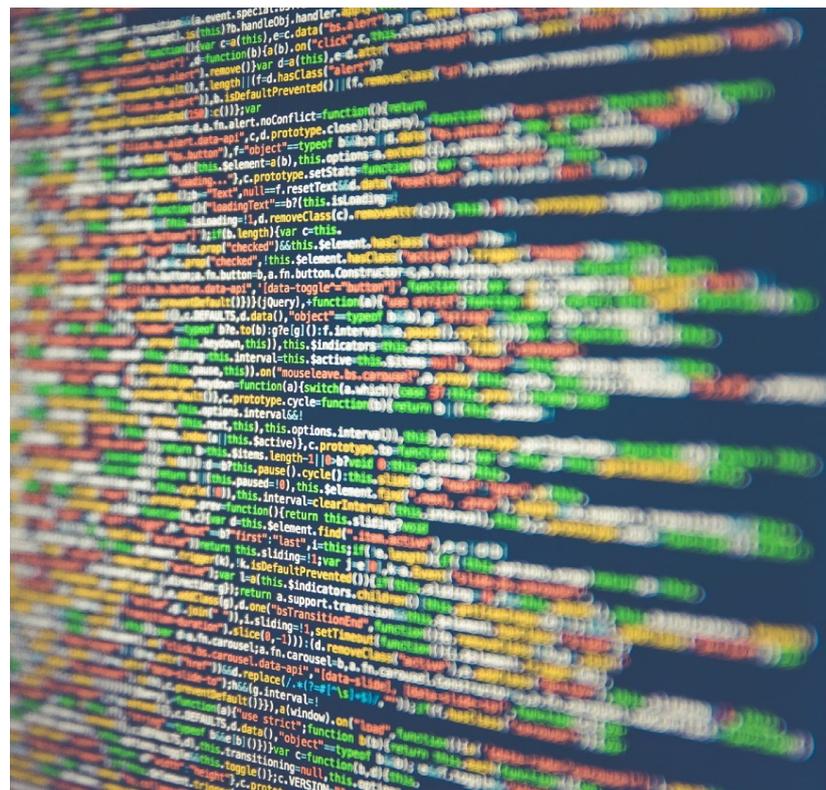
Aside from qualifications that can be obtained by doing an apprenticeship, the most important and valuable goal is what has been achieved during the programme.

Successful apprentices will obtain a Pass, Merit or Distinction in their apprenticeship. The way a Pass, Merit or Distinction is determined is at a stage called End Point Assessment which takes place once all the learning has been completed. Like all examinations, a mock will take place before the final assessment.

Once all components of the apprenticeship have been achieved including the mock, a final review is conducted to ensure everything has been covered, this is called gateway. Then the apprentice will undergo their End Point Assessment.

#### **The EPA for this programme consists of:**

1. Portfolio of Evidence demonstrating work on 6-8 projects covering all the standard criteria
2. Employer Reference built over the course of the apprenticeship during the 12 week reviews, covering all the standard criteria
3. Synoptic Project, a business project completed in the final stages of the apprenticeship (this can sometimes include a virtual lab where appropriate), taking between 10-40 hours over a maximum of 2 weeks
4. A structured interview with the assessors exploring the project, portfolio of evidence and employer reference



## Programme Structure:

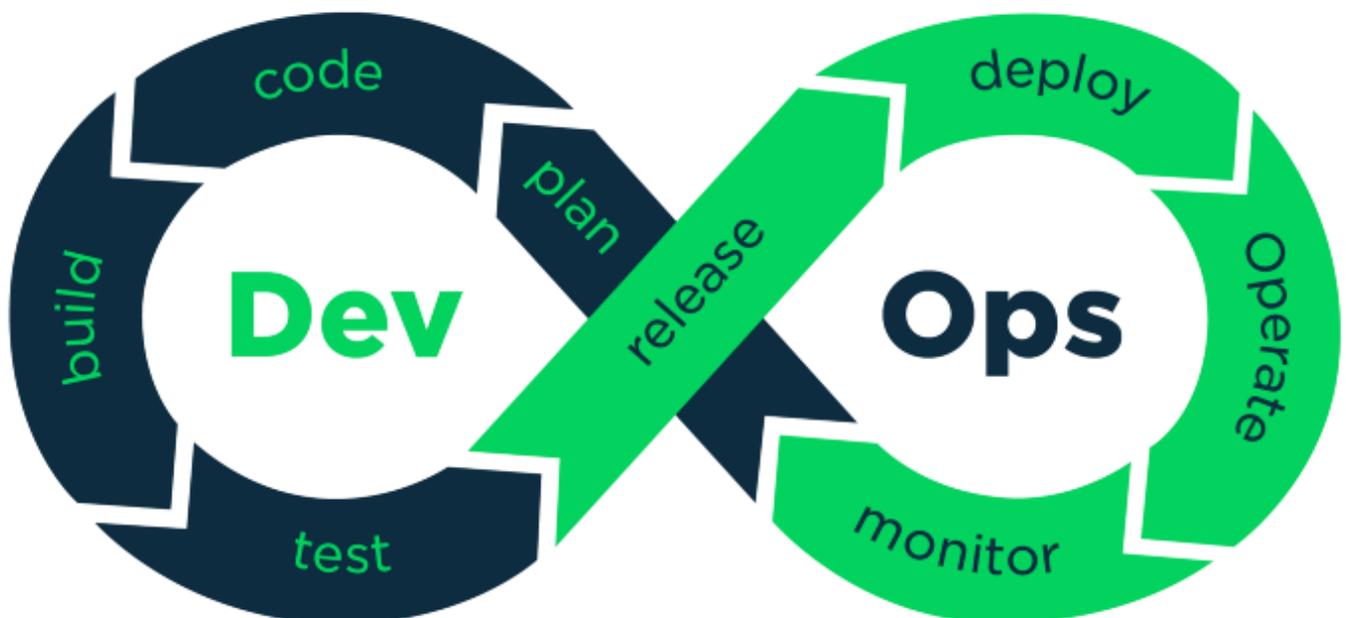
### Technical Competencies:

- **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 throughout 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
- **Test:** Performs functional tests to determine if deliverables for components have been met
- **Analysis:** Follows 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 and commenting)
- **Problem solving:** Solves logical problems, seeking assistance when required (including appropriate mathematical application). Responds to the business environment and business issues related to software development
- **Communication:** Clearly articulates the role and function of software components to a variety of stakeholders (including end users, supervisors). Operates appropriately in own business, with customers and other industry environments

- **User Interface:** Develops user interfaces as appropriate to the organisation's development standards and the type of component being developed
- **DevOps:** Understands methodology and can operate within a DevOps environment. Understands continuous integration, automation and how to develop in containers

### Technical Knowledge and Understanding:

- Understands business context and market environment for software development
- Understands the structure of software applications
- Understands all stages of the software development lifecycle
- Understands configuration management and version control systems and how to apply them
- Understands how to test code
- Recognises different methodologies that can be used for software development
- Understands the context for each development platform (whether web, mobile, or desktop applications)
- Understands the roles within a software development team
- Understands how to logically implement code
- Understands how code integrates into a 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 code to specified data sources



### **Underpinning Skills, Attitudes and Behaviours:**

- Logical and creative thinking
- Problem solving
- Personal responsibility and independent working
- Personal initiative
- A thorough and organised approach
- Ability to work with colleagues and clients
- Communicate effectively in a variety of situations
- Maintain a productive, professional and secure working environment

### **Qualifications:**

Apprentices must achieve each of the Ofqual-regulated Knowledge Modules, as summarised below.

#### **Knowledge Module 1:**

Software Development Context and Methodologies (for level 3 Software Development Technician)

#### **Knowledge Module 2:**

Programming (for level 3 Software Development Technician)

### **Progression:**

This apprenticeship is recognised for entry onto the Register of IT Technicians upon confirming an appropriate SFIA level 3 professional competence and those completing the apprenticeship would then be eligible to apply for registration.

### **Next steps:**

To configure an ideal apprenticeship we will meet with you, discuss your needs, present the options and collaborate to determine the best apprenticeships to meet your needs. We will provide ongoing support including:

- Recruitment of candidates
- Quality assured information advice and guidance
- Updates and information on legislation and funding
- Support and guidance for apprentice and employer throughout the apprenticeship
- Access to a comprehensive suite of resources and support material via OneFile
- Industry specialist qualified trainers and mentors

