

# Digital Technology Solutions Professional.

## Level 6 Degree Apprenticeship

As part of the programme, you will be expected to meet the Knowledge, Skills and Behaviours outcomes detailed below.

Your line manager will need to demonstrate how you will meet these outcomes during your programme, by completing a form during the application process.

### You must know and understand:

How business exploits technology solutions for competitive advantage.

The value of technology investments and how to formulate a business case for a new technology solution, including estimation of both costs and benefits.

Contemporary techniques for design, developing, testing, correcting, deploying and documenting software systems from specifications, using agreed standards and tools.

How teams work effectively to produce technology solutions.

The role of data management systems in managing organisational data and information.

Common vulnerabilities in computer networks including unsecure coding and unprotected networks.

The various roles, functions and activities related to technology solutions within an organisation.

How strategic decisions are made concerning acquiring technology solutions resources and capabilities including the ability to evaluate the different sourcing options.

How to deliver a technology solutions project accurately consistent with business needs.

The issues of quality, cost and time for projects, including contractual obligations and resource constraints.

Skills	Learning Outcomes
<b>Information systems</b>	Be able to critically analyse a business domain in order to identify the role of information systems, highlight issues and identify opportunities for improvement through evaluating information systems in relation to their intended purpose and effectiveness.
<b>Systems development</b>	Can analyse business and technical requirements to select and specify appropriate technology solutions. Design, implement, test, and debug software to meet requirements using contemporary methods including agile development. Manage the development and assurance of software artefacts applying secure development practises to ensure system resilience. Configure and deploy solutions to end users.
<b>Data</b>	Be able to identify organisational information requirements and model data solutions using conceptual data modelling techniques. Be able to implement a database solution using an industry standard database management system (DBMS). Perform database administration tasks and be cognisant of the key concepts of data quality and data security. Be able to manage data effectively and undertake data analysis.
<b>Cyber security</b>	Can undertake a security risk assessment for a simple IT system and propose resolution advice. Can identify, analyse and evaluate security threats and hazards to planned and installed information systems or services (e.g. Cloud services).
<b>Business organisation</b>	Can apply organisational theory, change management, marketing, strategic practice, human resource management and IT service management to technology solutions development. Develop well-reasoned investment proposals and provides business insights.
<b>IT project management</b>	Be able to follow a systematic methodology for initiating, planning, executing, controlling, and closing technology solutions projects. Apply industry standard processes, methods, techniques and tools to execute projects. Be able to manage a project (typically less than six months, no inter-dependency with other projects and no strategic impact) including identifying and resolving deviations and the management of problems and escalation processes.
<b>Computer network infrastructure</b>	Can plan, design and manage computer networks with an overall focus on the services and capabilities that network infrastructure solutions enable in an organisational context. Identify network security risks and their resolution.

## Professional, interpersonal and business skills:

Fluent in written communications and able to articulate complex issues.

Make concise, engaging and well-structured verbal presentations, arguments and explanations.

Be able to deal with different, competing interests within and outside the organisation with excellent negotiation skills.

Be able to identify the preferences, motivations, strengths and limitations of other people and apply these insights to work more effectively with and to motivate others.

Competent in active listening and in leading, influencing and persuading others.

Be able to give and receive feedback constructively and incorporate it into your own development and life-long learning.

Apply analytical and critical thinking skills to Technology Solutions development and to systematically analyse and apply structured problem solving techniques to complex systems and situations.

Be able to put forward, demonstrate value and gain commitment to a moderately complex technology-oriented solution, demonstrating understanding of business need, using open questions and summarising skills and basic negotiating skills.

Be able to conduct effective research, using literature and other media, into IT and business related topics.

## Attributes and behaviours:

Have demonstrated that you have mastered basic business disciplines, ethics and courtesies, demonstrating timeliness and focus when faced with distractions and the ability to complete tasks to a deadline with high quality.

Flexible attitude.

Ability to perform under pressure.

A thorough approach to work.

Logical thinking and creative approach to problem solving.

There are a number of specialisms available for this programme depending upon your job role: Software Engineer, IT Consultant, Business Analyst, Cyber Security Specialist, Data Analyst, and Network Engineer. You will have to demonstrate that you can meet all of the above learning outcomes, but there are also an additional number of learning outcomes specific to your role. Details of the individual specialism learning outcomes can be found on the **Apprenticeship Standard**.