



## Programme Specification

Digital and Technology Solutions (Software Engineer)

{Apprenticeship-UCW} [UCW]

Version: 2023-24, v1.0, 12 Jul 2023

### Contents

<b>Programme Specification</b> .....	<b>1</b>
<b>Section 1: Key Programme Details</b> .....	<b>2</b>
Part A: Programme Information .....	2
<b>Section 2: Programme Overview, Aims and Learning Outcomes</b> .....	<b>3</b>
Part A: Programme Overview, Aims and Learning Outcomes .....	3
Part B: Programme Structure.....	5
Part C: Higher Education Achievement Record (HEAR) Synopsis .....	7
Part D: External Reference Points and Benchmarks .....	8
Part E: Regulations .....	8

## Section 1: Key Programme Details

### Part A: Programme Information

**Programme title:** Digital and Technology Solutions (Software Engineer)

{Apprenticeship-UCW} [UCW]

**Highest award:** BSc (Hons) Digital and Technology Solutions (Software Engineer)

**Interim award:** BSc Digital and Technology Solutions

**Interim award:** DipHE Digital and Technology Solutions

**Interim award:** CertHE Digital and Technology Solutions

**Awarding institution:** UWE Bristol

**Affiliated institutions:** University Centre Weston

**Teaching institutions:** University Centre Weston

**Study abroad:** No

**Year abroad:** No

**Sandwich year:** No

**Credit recognition:** No

**Department responsible for the programme:** FET Dept of Computer Sci & Creative Tech, Faculty of Environment & Technology

**Contributing departments:** Not applicable

**Professional, statutory or regulatory bodies:** Not applicable

**Apprenticeship:** ST0119

**Mode of delivery:** Full-time

**Entry requirements:** UCW recommends three A Levels at grade C or above, preferably in related subjects such as Maths, Science and IT, or a BTEC Extended Diploma at MMM, or a T Level at Pass, or equivalent. Level 2 English and Maths at 4/C or above is desirable.

Please be aware that companies can and do set their own entry requirements for the programme. It is important the advertisement is checked carefully to ensure you meet the entry requirements.

Please visit the website for up-to-date entry requirements.

**For implementation from:** 01 September 2023

**Programme code:** I99G13

## **Section 2: Programme Overview, Aims and Learning Outcomes**

### **Part A: Programme Overview, Aims and Learning Outcomes**

**Overview:** The BSc(Hons) Digital and Technology Solutions Degree Apprenticeship has been developed in partnership with employers, and in accordance with the Digital and Technology Solutions Professional standard (ST0119).

A Digital and Technology Solutions Professional provides technology enabled solutions to internal and/or external customers, in a range of areas including software, business and systems analysis, cyber security, data analysis and network infrastructure. They implement technology solutions that enable businesses to develop new products and services and to increase an organisation's productivity using digital technologies. They are confident, competent and capable independent Technology Solutions Professionals able to operate in a range of related roles.

As part of this programme, the following four key pathways have been designed, ensuring students have access to specialist roles, as identified by employers:

Cyber Security Specialist

Data Analyst

Network Engineer

Software Engineer

Within the Software Engineer specialist pathway you will be expected to design, build and test high-quality software solutions. The software engineer role is broader and with higher levels of responsibility than a software developer as you need to apply engineering principles to all stages of the software development process, from requirements, analysis and design, development and data requirements whilst ensuring security robustness is built in. You will typically be working as part of a larger collaborative team and will have responsibility for significant elements of software projects.

**Educational Aims:** The Digital and Technology Solutions Degree Apprenticeship provides a comprehensive programme of flexible learning to Honours degree level and was created through a collaboration between employers and the participating Universities. The degree apprenticeship is outcomes focused and will be delivered and assessed as a four-year integrated programme. It is centred on an employer defined specification (including the apprenticeship standard), but can be augmented to meet the needs of individual employers. The apprenticeship aims to grow practical technology skills and occupational competence developed in the employer context together with the project, interpersonal and business skills required to operate successfully as a Digital and Technology Solutions Professional.

**Programme Learning Outcomes:**

On successful completion of this programme graduates will achieve the following learning outcomes.

**Programme Learning Outcomes**

- PO1. Critically analyse a business domain to identify opportunities for improvement, information requirements, analysing technical requirements to select and specify appropriate technology solutions, and to model data solutions using conceptual data modelling techniques.
- PO2. Design, build and test high-quality software solutions, applying engineering principles to all stages of the software development process, from requirements, analysis and design, development and data requirements.

- PO3. Apply organisational theory and follow a systematic methodology for initiating, planning, executing, controlling, and closing technology solutions projects using industry standard processes, methods, techniques and tools to execute and manage project, communicating effectively with a range of stakeholders.
- PO4. Plan, design and manage computer networks with an overall focus on the services and capabilities that network infrastructure solutions enable in an organisational context, analysing and assessing network security risks and their resolution, providing recommendations.
- PO5. Conduct, analyse and present effective research using engaging, well-structured approaches, to select and specify appropriate technology solutions, including the analyse of ethical and legal implications, and resulting recommendations.
- PO6. Devise and engage in continuous professional development, evaluating opportunities to further develop knowledge and skills as a Digital and Technology Solutions Professional.
- PO7. Manage the undertaking, completion and analysis of software engineering business issues, creating an over-arching software solution design.
- PO8. Manage the build, implementation and testing of software solutions.
- PO9. Work closely with key stakeholders to ensure the software solution is understood and correctly used.

## Part B: Programme Structure

### Year 1

The student must take 105 credits from the modules in Year 1.

### Year 1 Compulsory Modules

The student must take 105 credits from the modules in Compulsory modules.

Module Code	Module Title	Credit
UFCFSM-15-1	Business Security 2023-24	15
UFCE4N-15-1	Computer Networks and Protocols 2023-24	15
UFC4EP-15-1	Database Development 2023-24	15

UFCFQM-30-1	Fundamentals of Software Development 2023-24	30
UFC4EQ-30-1	Professional Practice I 2023-24	30

**Year 2**

The student must take 105 credits from the modules in Year 2.

**Year 2 Compulsory Modules**

The student must take 105 credits from the modules in Compulsory modules.

<b>Module Code</b>	<b>Module Title</b>	<b>Credit</b>
UFC4ER-15-1	Fundamentals of Project Management 2024-25	15
UFCFME-30-2	Object Oriented Software Design and Development 2024-25	30
UFC4ES-30-2	Professional Practice II 2024-25	30
UFCF8R-30-2	Webapp Development 2024-25	30

**Year 3**

The student must take 90 credits from the modules in Year 3.

**Year 3 Compulsory Modules**

The student must take 60 credits from the modules in Compulsory Modules.

<b>Module Code</b>	<b>Module Title</b>	<b>Credit</b>
UFCFEN-15-3	Cloud Computing Platforms 2025-26	15
UFCE4T-15-2	Internet of Things 2025-26	15
UFCE4U-15-3	Professional Practice III 2025-26	15
UMMDVX-15-2	Project Change Control and Quality Management 2025-26	15

**Year 3 Optional Modules**

The student must take 30 credits of optional modules.

<b>Module Code</b>	<b>Module Title</b>	<b>Credit</b>
UFCFSC-30-3	Advanced Web Development and Platforms 2025-26	30
UFCE57-30-3	Artificial Intelligence 2025-26	30
UFCE56-30-3	Coding for Machine Learning and Data Science 2025-26	30

#### **Year 4**

Note – Prior to enrolling on UFCFHN-30-3 Digital and Technology Solutions End-Point Assessment apprentices must achieve 330 credits, including all compulsory modules and all optional modules for their chosen specialism.

#### **Year 4 Compulsory Modules**

The student must take 60 credits from the modules in Compulsory Modules.

<b>Module Code</b>	<b>Module Title</b>	<b>Credit</b>
UFCFCR-30-3	Collaborative Software Development Project 2026-27	30
UFCFHN-30-3	Digital and Technology Solutions End-Point Assessment 2026-27	30

### **Part C: Higher Education Achievement Record (HEAR) Synopsis**

Designed in partnership with employers, this integrated Degree Apprenticeship programme provides graduates with the skills and capabilities required by UK business for the specification, design, delivery and operation of ICT systems, services and solutions in a range of business contexts and application domains.

It develops technically competent individuals who think and communicate effectively and who can conduct inquiry, solve problems, undertake critical analysis and deliver effective software systems solutions in a constantly changing business context.

It provides a solid foundation for lifelong learning, emphasising the development of

knowledge, skills and professional values essential to the practice of systems development.

## **Part D: External Reference Points and Benchmarks**

## **Part E: Regulations**

Approved variants to University Academic Regulations and Procedures:

The following are relevant to the End-Point Assessment module - UFCFHN-30-3 Digital and Technology Solutions End-Point Assessment:

Regulations D5 (Module types) and D6 (Requirements to pass a module):

- This module has two assessment tasks, each with a mark expressed as a grade (Distinction/Pass/Fail), not as a percentage.
- The overall module outcome will be graded as Distinction/Merit/Pass/Fail in line with the Digital and Technology Solutions Professional assessment plan.

Regulations D7 (Failure of a Module) and D8 (Retaking a Module):

- IfATE regulations state that the apprentice's employer will need to agree that a resit or retake is an appropriate course of action. UWE's regulations need to align with this.
- A resit or retake will be capped at Merit, unless the university determines there are personal or exceptional circumstances outside the control of the apprentice and/or employer which mean an uncapped resit or retake is warranted.

Regulation D12 (Requirements for the Award of an Undergraduate Degree):

- The End-Point Assessment module grade will count towards the overall degree classification.