Buckinghamshire New University

PROGRAMME SPECIFICATION

1. Key Information

Programme Title:	Digital and Technology Solutions Specialist (Integrated Degree Apprenticeship)
Awarding Institution:	Buckinghamshire New University
Teaching Institution(s):	Buckinghamshire New University
Subject Cluster:	Computing
Award Title (including separate Pathway Award Titles where offered):	MSc Digital and Technology Solutions
Pathways (if applicable)	Option 1: Software engineering specialist Option 2: Cyber security technology specialist
FHEQ level of final award:	Level 7: Master's degree
Other award titles available (exit qualifications):	Postgraduate Certificate Digital and Technology Solutions Postgraduate Diploma Digital and Technology Solutions
Accreditation details:	N/A
Length of programme:	2 years
Mode(s) of Study:	Part-time
Mode of Delivery:	Work-based learning
Language of study:	English
QAA Subject Benchmark(s):	Computing (2022)
Other external reference points (e.g., Apprenticeship Standard):	ST048 Digital and Technology Solutions Specialist (Integrated Degree) (Version 1.0)
Course Code(s):	MSDTSSAP
UCAS Code(s):	N/A
Approval date:	September 2023
Date of last update:	February 2024

2. Programme Summary

The Digital and Technology Solutions Specialist Degree Apprenticeship combines integrated work-based learning with academic study to ensure you will have the skills required to meet organisational needs and industry standards within the digital and technology landscape.

This degree apprenticeship programme has been co-designed with employers to ensure that you are equipped with the knowledge, skills and behaviours required to succeed in digital leadership roles within any sector.

Programme specific occupational pathways:

Software engineering specialist

A software engineering specialist architects, develops and delivers complex software solutions from agreed specifications using contemporary standards and tools, to achieve a well-engineered result. They lead the design and development of bespoke secure and scalable software solutions and services for distributed web, mobile and fixed PC and mainframe platforms throughout the development lifecycle. They work across different platforms and develop software using programming languages appropriate to the applications being developed.

Cyber security technology specialist

A cyber security technical specialist provides advice and guidance on the application and operation of elementary physical, procedural, and technical security controls. They co-ordinate and perform security vulnerability assessments and penetration testing for networked information systems. They deliver objective insights into the existence of vulnerabilities reporting on the effectiveness of defences, countermeasures and mitigating controls and identifying issues to resolve. They conduct threat intelligence analysis to keep up to date with the changing threat landscape. They identify and correlate actionable security events and perform forensic analysis to identify possible breaches and preserve evidence.

This Digital Technology Solutions Specialist Apprenticeship programme develops the higher-level skills and behaviours required to create confident and capable digital and technology specialists suited for leadership roles.

Knowledge and skills are assessed in realistic situations to mirror real world scenarios fostering authentic and inclusive opportunities. The curriculum intent is designed to develop the core knowledge, skills, and behaviours outlined in the apprenticeship standard and the programme modules and Learning Outcomes are mapped to the apprenticeship standard accordingly.

The programme embeds English, mathematics, safeguarding, green skills, enrichment, British values, prevent agenda and career guidance in line with the Education Inspection Framework (EIF) guidelines.

Work-based projects help learners develop mastery in: problem solving and criticality; identifying appropriate digital solutions; the attributes needed to act as influencers and leaders within organisations to deliver business objectives and successful transformation.

Apprentices will receive guidance and support throughout their learning journey from the Apprenticeship Hub through regular reviews and contact.

3. Programme Aims and Learning Outcomes

Programme Aims

This programme aims to:

1. Equip learners with the knowledge and skills relevant to technical leadership roles through work-based learning pedagogy applied to specialist areas such as cyber security and software engineering at a postgraduate level.

2. Provide opportunities for learners to apply acquired technical knowledge and skills in a workplace context as well as through authentic assessments.

3. Build the ability and confidence of learners to motivate and inspire a culture of collaboration in the workplace with professional integrity and ethics, emotional intelligence, flexibility, and resilience.

4. Foster appreciation of the societal and environmental impact of contemporary and emerging digital technologies.

5. Give learners a strong foundation for on-going professional development, future research, lifelong learning, impactful leadership, and the ability to positively impact society.

Programme Learning Outcomes

Knowledge and Understanding (K)

On successful completion of the programme, you will be able to:

ID	Learning Outcome
K1	Describe the strategic importance and impact on an organisation's competitiveness of technology-enabled business processes, investments, and market trend monitoring.
K2	Articulate business transformation principles and the integration of management functions in the context of technological change.
K3	Recognise the role of leadership as an enabler of change and the personal qualities required to establish and maintain an organisation's technical reputation.
K4	Explain an organisation's objectives, market position, and how it delivers value to clients through digital products and services.
K5	Expand upon the digital and technology specialism areas of technical knowledge and understanding documented in the apprenticeship standard in relation to the workplace context.

Analysis and Criticality (C)

On successful completion of the programme, you will be able to:

ID	Learning Outcome
C1	Investigate and recommend strategic technological solutions appropriate to an organisation's goals, strategies, and practices.
C2	Analyse the relevance and potential impact of emerging digital technologies and paradigms within a workplace context and wider society.
C3	Scrutinise the environmental, legal, and ethical aspects of digital technology in contemporary society and business.
C4	Assess the suitability of competing digital and technology solutions in relation to both internal and external organisational contexts.
C5	Evaluate the significance of human factors to leadership in the effective implementation and management of technology-enabled processes and initiatives.

Application and Practice (P)

On successful completion of the programme, you will be able to:

ID	Learning Outcome
P1	Apply a systematic approach to identify, document, review, and design complex IT-enabled business processes for the purpose of achieving organisational goals.
P2	Develop technology roadmaps, implementation strategies, and transformation plans focused on digital technologies to enhance productivity and end-user experience within a specific area of technology specialisation.
P3	Implement creative and innovative technology-driven change programs through collaboration with others to achieve workplace transformation.
P4	Negotiate and agree technology budgets from decision-makers through critical judgement, effectively employing closing techniques in interactions with stakeholders.
P5	Apply the range of digital and technology specialism skills documented in the apprenticeship standard within the workplace context.

Transferable skills and other attributes (T)

On successful completion of the programme, you will be able to:

ID	Learning Outcome
T1	Communicate data, ideas, plans, and solutions that resonate with both technical and business audiences by using appropriate presentation and reporting techniques.
T2	Take responsibility for the planning, managing, and recording of your continuing learning and professional development, while developing your own leadership style and professional values.
T3	Contribute to a safe and supportive working environment by promoting a culture of cooperation and collaboration between individuals and teams.
T4	Conduct yourself in a professional and confident manner when interacting with others, promoting high standards of mutual respect and tolerance through inspirational leadership.
T5	Work independently with originality in solving problems, and act autonomously in planning and implementing tasks and research at a professional level.

Graduate Attributes

The BNU Graduate Attributes of // Knowledge and its application // Creativity // Social and ethical awareness and responsibility // Leadership and self-development // focus on the development of innovative leaders in professional and creative capacities, who are equipped to operate in the 21st Century labour market and make a positive impact as global citizens.

On this programme, attributes are developed through equipping learners with the knowledge (**K1-5**), skills (**P1-5**), understanding, insight, and perspectives necessary to perform the role of a Digital and Technology Solutions specialist within small, medium, or large organisations in any industry. Creativity is developed through scrutiny of various theories and case studies paired with opportunities for learners to apply their creativity to work-based problems (**P1-3**)

and explore wider topics to develop their interests and talents. Social and ethical awareness and responsibility is tackled from various angles including environmental sustainability and the societal impact of technology (**C2**). The relevance of Safeguarding, Prevent, and British Values is linked to collaborative working and leadership in the modern workplace (**T3, T4**). As well as helping learners develop their Maths skills and critical thinking (**C1-5**), the programme helps learners develop transferable skills which equip them with leadership capabilities, the ability for autonomous self-development, as well as strong verbal and written English communication skills (**T1-5**).

4. Entry Requirements

The University's general entry requirements will apply to admission to this programme with the following additions / exceptions:

Apprentices will typically work at least 30 hours per week (FT) and complete 6 hrs per week off the job training. However, some may work less than 30 hours per week (PT) and would still be eligible for an apprenticeship, but a PT programme's duration would be extended in line with UK Government apprenticeship funding rules.

Apprentices must have the right to live and work in the UK (applies only in England) and cannot be self-employed. The employer must enter into an Apprenticeship Agreement with the learner.

All candidates must be employed in a role related to the subject matter of the Degree Apprenticeship and be sponsored by their employer. Applications can only be made through the sponsoring employer. The University will consider all such applications and will have the final decision whether to accept the candidate for entry to the programme.

The recommended minimum entry requirements for entry to the programme are:

- An academic qualification equivalent to a BSc (Hons) Degree in a relevant subject area, 2:2 classification or better.
- English and Maths at Level 2.

Relevant or prior experience will be taken into account when considering a candidate's suitability for the programme. Where an applicant does not have the GCSE qualification, the University will provide mechanisms to enable the apprentice to obtain Maths and English Level 2 qualifications.

All learners take an online initial assessment - Basic Key Skills Builder (BKSB) to assess and develop skills in English and maths to support functional skills requirements which all apprentices must achieve before taking their End Point Assessment (EPA).

Previous study, professional and / or vocational experiences may be recognised as the equivalent learning experience and permit exemption from studying certain modules in accordance with our accreditation of prior learning (APL) process.

5. Programme Structure

Software Engineering Specialist Pathway

Level	Modules (Code, Title, and Credits)	Exit Awards
Level 7	- COM7100 Digital Innovation and Leadership (20 credits) - COM7101 Digital Technology Management (20 credits) - COM7102 Advanced Professional Practice (20 credits) - COM7103 Distributed Systems Development (20 credits) - COM7104 Software Testing and Security (20 credits) - COM7105 Software Delivery and Operations (20 credits) - COM7106 Final Project (60 credits) - COM7107 End Point Assessment (0 credits)	**Postgraduate Certificate**, awarded on achievement of 60 credits (not including the Final Project). **Postgraduate Diploma**, awarded on achievement of 120 credits (not including the Final Project).

Cyber Security Technology Specialist Pathway

Level	Modules (Code, Title, and Credits)	Exit Awards
Level 7	- COM7100 Digital Innovation and Leadership (20 credits) - COM7101 Digital Technology Management (20 credits) - COM7102 Advanced Professional Practice (20 credits) - COM7108 Cyber Resilience (20 credits) - COM7109 Cyber Threat Intelligence and Mitigation (20 credits) - COM7110 Security Testing Strategies and Forensics (20 credits) - COM7106 Final Project (60 credits) - COM7107 End Point Assessment (0 credits)	**Postgraduate Certificate**, awarded on achievement of 60 credits (not including the Final Project). **Postgraduate Diploma**, awarded on achievement of 120 credits (not including the Final Project).

6. Learning, Teaching and Assessment

Learning and teaching

The programme will promote inclusion by adopting a learner-centred approach, providing opportunities for learners to collaborate and learn from peers, exchange experience and perspectives, providing a supportive and inclusive learning environment. Learners will be encouraged to actively engage in their learning process, taking ownership of their learning, and setting personal learning goals.

The programme has been designed for online-first delivery which means it can be delivered fully online for fully remote learners. Some modules have face-to-face learning days embedded in their delivery schedule where collaborative learning can be enhanced by on campus activities. All face-to-face learning is nonetheless delivered as hybrid learning so that remote learners can be virtually present for activities happening on campus.

The inclusive approach to online-first delivery is supported by a diverse set of accessible learning experiences and materials:

- **Live Lectures** – accompanied by lecture slides and guidance notes.

- **Pre-recorded Lecture Videos** – provided with captions and adjustable playback speed for accessibility.

- **Curated Video Content** – third-party video materials which support knowledge acquisition.

- **Collaborative activities** – both *asynchronous* and *synchronous* (live) activities such as whiteboarding, discussion threads, or gathering research using collaborative digital tools.

- **Discussions** – *synchronous* (live) flipped classroom discussions based on pre-released questions or topics.

- **Demonstrations** – both live and pre-recorded demonstrations of technical aspects of the curriculum.

- **Knowledge Checks** – in the form of live in-class quizzes or formative tests taken at learner's own pace.

- **Practical workshops** – structured workshops for both individual and team-based work to support the development of skills required for practical assessments.

- **Tutorials** – one-to-one support provided via Instant Messaging, Audio/Video call, or face-to-face by module tutors, personal tutors, and Apprenticeship Partner Manager (APM).

- **Instant Messaging support** – provided on a one-to-one basis, as well as team-based and class-based group chat channels.

- **Guest speakers** – from within BNU as well as from industry.

The programme learning strategy for inclusive learning fosters an atmosphere where all participants should feel comfortable enough to get engaged, add to the discussion, voice their own thoughts and ideas, and feel comfortable to ask a variety of questions in support of their learning.

The use of practical scenarios and the learning pathway will provide a suitable framework for learning and allow learners to demonstrate the application of theory to practice and vice

versa. Formative assessment will provide learners with development advice and feedback to enable them to prepare for their summative work. It is essential to ensure that learners receive appropriate support throughout the learning process.

The programme will incorporate formative assessments that will be used to monitor the progress of learners at regular intervals. A range of formative assessment techniques will be used, including questioning and feedback to ensure that learners are making progress towards meeting the objectives of each session.

To ensure that learning is taking place for all learners, adaptive learning support will be provided that meets the individual educational needs or SpLDs of each learner. We will use a variety of methods to differentiate and adapt instruction, including one-to-one tutoring, personalised learning plans, and differentiated learning materials.

Curriculum Structure

The curriculum is based around the University's Work-Based Learning Framework, utilising a combination of:

- Specialist subject modules, designed to develop **specialist knowledge** and **skills** relevant to the named apprenticeship standard pathway (60 credits across the programme).
- Professional development modules, created as vehicles to develop the **core knowledge, skills, and behaviours** from the apprenticeship standard through completion of work-based investigations and projects (60 credits across the programme).
- **Capstone project** (60 credits) prior to End Point Assessment.

There is an expectation that an apprentice will spend a minimum of 6 hours of their working week undertaking off-the-job training. This is broadly equivalent to one day per week ("day release") for the duration of the course.

The format and schedule to support the delivery and supervision of all modules has then been established with this principle in mind. All modules are appropriately designated as being work-based learning modules although there will be some justified variation in the relative proportions of SLTA (Scheduled Learning and Teaching Activities), GIS (Guided Independent Study) and WBL (work-based learning) that aggregate to afford the 'notional learning hours' for a particular module. Some key features are summarised below:

- In addition to the WBL, SLTA and GIS, apprentices will be further supported by inclusive online materials as well as synchronous and asynchronous interactions with their tutors for the duration of the course.
- Learners will be expected to relate concepts, skills and other content covered in the modules to learning and development in their workplace context and to undertake Guided Independent Study (GIS); there will be opportunities for using workplace scenarios, problems and case studies to complete activities and assignments.
- Within the Capstone Project, the apprentice will undertake a significant work-based project under the guidance of an academic supervisor and a workplace mentor.

The apprenticeship programme, as well as its Programme Learning Outcomes, is based upon the requirements of the relevant apprenticeship standard for Digital and Technology Solutions Specialist, which specifies the Knowledge, Skills, and Behaviours (KSBs) that the apprentice should acquire across the Degree programme, including the associated learning, development, and application in the workplace. The apprentice's learning journey is then

supported and progressed by an appropriately designed curriculum and a complementary assessment approach across the programme.

Of the KSBs outlined in the apprenticeship standard, aspects of knowledge are weighted at approximately 40% while skills and behaviours are weighted at 60%. There is, therefore, a strong focus on application and practice, which is reflected in the programme curriculum.

The level and person development associated with a module is additionally benchmarked against the SFIA (Skills Framework for the Information Age), a model for describing competency and responsibility levels of ICT and digital professionals. Thus, Level 7 modules enable the learner to engage with and demonstrate the domains "SET STRATEGY", "INSPIRE", and "MOBILISE" in terms of SFIA competencies.

By completing the programme of study, learners will have been able to develop and apply a range of strategic management and leadership skills within a digital technology context. The curriculum will also afford opportunities for learners to demonstrate their ability to communicate persuasively and convincingly to audiences at all levels.

There is a general approach adopted for the delivery of those strongly technical modules that have a relatively high reliance on SLTA. Core material about topics will tend to be delivered by a lecture or presentation, some of which may be pre-recorded. Group discussions aid in the deepening of knowledge and criticality through collaborative learning. Demonstrations are often used as an introduction to some practical activity or problem-solving exercise, which encourages 'learning by doing' where learners can review and reinforce their understanding of topics, working either individually, in pairs, or as part of a group. The tutor will monitor and supervise learners, providing guidance, assistance and encouragement as and when required. Tutor feedback to learners about their progress, learning and development is not confined to formal pieces of summative assessment, where marks, grades and comments are provided; it is rather seen as a fundamental part of an ongoing dialogue between the tutor and the learners, where regular reviews and discussions focus on areas of relative strength and weakness, leading into suggestions about how improvements can be achieved. Within this context, learners get to appreciate the importance of taking responsibility for their own learning and development and making use of feedback.

Regular live (synchronous) sessions will be further supported by additional virtual content and online digital materials. A virtual learning environment (VLE) will support and guide the learning and development of the learner when they are away from the classroom. The tutor will make use of the VLE to provide tuition and supervision to the learners and maintain good interaction and communication with and between the learners throughout the module.

Learners will be encouraged to keep a logbook or notebook that documents their work and provides a record of what they have done and learned. Keeping a good set of notes, developed with supporting reading and research, is viewed as an important element of the learning process and does provide reference material that can be used to complete tasks, projects and other coursework, including preparation for review meetings and tests. Learners are expected to participate and engage fully with the modules, with guided learning and independent learning being necessary extensions to the face-to-face and online tuition provided.

Modules should not be viewed as isolated units of learning but rather as a collection of inter-related modules that work together to support the holistic development of the apprentice, in and out of their workplace.

Work-Based Learning

Work-based learning (WBL) allows the apprentice to apply and extend upon the knowledge and skills covered in Scheduled Learning and Teaching Activities (SLTA) when undertaking activities and projects in their place of work. WBL also provides a vehicle for the apprentice to take responsibility for planning, achieving, and recording their personal and professional development.

The principles for WBL are:

- Emphasis on learning that takes place in the workplace rather than in educational institutions.
- It is intrinsically different from mainstream higher education and for some is more demanding than more traditional didactic learning.
- The nature of learning at work moves the focus of responsibility firmly into the hands of the learner.
- Individual learners are required not only to take responsibility for identifying their learning needs and aspirations but also for managing the learning process.

WBL has the following characteristics:

- Management through a three-way partnership between the HEI, employee, and employer.
- Programmes and curricula derived from the needs of the workplace and the learner, as well as the subject itself as outlined in the standard.
- Delivery in part in the workplace.
- Assessment by both workplace assessors and HEI.

Education Inspection Framework Embedded Personal Development

1. Continuous development of English and Mathematics		
English and mathematics are embedded throughout the programme with several key areas related to the instruction, support and assessment related to these elements.		
Module Code	**Module Title**	**Evidence**
COM7102	Advanced Professional Practice	Learning and applying Research Methods contribute to the development of **Maths** skills.
COM7106	Final Project	Applying Research Methods contribute to the development of **Maths** skills.
COM7101	Digital Technology Management	Development of a technology budget (as part of portfolio output for this module) contributes to the development of **Maths** skills.
COM7108	Cyber Resilience	Verbal presentation skills developed as part of assessment, contributing to the development of **English** skills.

COM7110	Security Testing Strategies and Forensics	Report writing skills developed as part of "Security Policy Enhancement Recommendations" assessment and through formative feedback, contributing to the development of **English** skills.
COM7104	Software Testing and Security	Report writing skills and verbal presentation skills developed as part of assessment and through formative feedback, contributing to the development of **English** skills.
COM7102	Advanced Professional Practice	Assessment includes the Professional presentation on a work-based topic, contributing to the development of advanced **English** skills.
COM7100	Digital Innovation and Leadership	Assessment includes the writing of a strategic proposal for a professional audience, contributing to the development of advanced **English** skills.
COM7106	Final Project	Preparation of a well-presented and clear portfolio contributes to the development of **English** and written communication skills.

2. Embedding of Safeguarding

The embedding of safeguarding is seen throughout the programme and are supported within both the academic and workplace setting.

Module Code	Module Title	Evidence
COM7100	Digital Innovation and Leadership	Safeguarding and Prevent are analysed in relation to Leadership in the workplace.
COM7104	Software Testing and Security	Covers personal data security and online safety.
COM7108	Cyber Resilience	Covers personal data security and online safety.
COM7102	Advanced Professional Practice	Covers the "Legal and ethical factors of digital technology in contemporary society", linking to the social impact and potential dangers of digital technology.

3. Embedding of Prevent

Prevent is delivered as part of the mandatory training and reviewed within the Tripartite progress review meetings which are held throughout the programme.

Module Code	Module Title	Evidence
COM7100	Digital Innovation and Leadership	Safeguarding, wellbeing, and Prevent are analysed in relation to Leadership in the workplace.

4. Understanding of British Values

British Values is delivered as part of the mandatory training and reviewed within the Tripartite progress review meetings which are held throughout the programme

Module Code	Module Title	Evidence
COM7100	Digital Innovation and Leadership	British Values are linked to the "Human factors to leadership… and values" covered in this module.
COM7102	Advanced Professional Practice	Module covers the "Legal and ethical factors of digital technology in contemporary society", directly relating to "Rule of Law".
COM7104	Software Testing and Security	Personal data security covered, relating to "Individual Liberty".
COM7108	Cyber Resilience	Personal data security covered, relating to "Individual Liberty".

5. Inclusion and Diversity		
Both Inclusion and Diversity are embedded throughout the programme and are supported within both the academic and workplace setting.		

Module Code	Module Title	Evidence
COM7108	Cyber Resilience	Equality, Diversity, and Inclusion (EDI) are linked to "Human factors in cyber security" covered in this module
COM7105	Software Delivery and Operations	Equality, Diversity, and Inclusion (EDI) are covered in the context of how to deliver successful software in a collaborative, team-based environment.
COM7100	Digital Innovation and Leadership	Equality, Diversity, and Inclusion (EDI) are considered within the context of theoretical frameworks such as leadership styles and organisational culture.
COM7102	Advanced Professional Practice	Covers the "Legal and ethical factors of digital technology in contemporary society", with links to EDI.

Assessment Strategies

A range of assessments are used on the programme, including different written assignments, practical activities, presentations, and projects. The apprentice and workplace mentor can provide organisational contexts for the completion of many assignments, so the apprentice can apply knowledge and practice skills from the curriculum to work-related problems and projects.

Across all modules written feedback and feedforward comments are intended to direct learners towards achieving results at summative stages which have been successfully evolved and resolved.

Feedforward comments focus on what is required to develop learners' work further or to achieve higher grades.

Formative feedback is delivered prior to assessment deadlines to help learners gauge their progress and make improvements within a module/project before their summative assessment.

Learners also contribute to the formative feedback process where informal peer-to-peer feedback can be given during group tutorials, discussing each other's work constructively as they would be expected to do in the workplace.

Throughout the programme, opportunities for authentic assessment and work-based projects are embedded.

Tutors thoroughly assess submitted work and produce written **summative feedback** and percentage grades. Feedback comments focus on the successes and strengths achieved within the submission as well as opportunities to improve in future assessments.

Where appropriate, learners are offered individual tutorials to discuss their feedback and grades to ensure they understand the marks awarded and how best to progress.

A variety of assessment types designed to enhance the learning experience are used throughout the programme, as appropriate to specific modules:

- Reports (individual and group)
- Laboratory exercises
- Set Exercises (to be completed as required usually in the learner's own time)
- Written Assignments
- Presentations (such as poster and oral, individual and group, pre-recorded and live)
- Project Outputs (often technical in nature)
- Video Demonstrations (often of project outputs)
- Proposals
- EPA: Dissertation and Professional discussion

Both formative and summative approaches will be used throughout the assessment process. Formative assessments will be used in the early stages of each module and as the learner progresses the summative approach will be used. Assessments will often be a work-based activity and assignments drawn from the apprentice's workplace.

End Point Assessment

Once the practical training period has been achieved, apprentices are prepared for their End Point Assessment (EPA).

EPAs are a synoptic assessment of the knowledge, skills and behaviours that have been learnt throughout the apprenticeship. The purpose of the EPA is to make sure the apprentice meets the standard set by employers and is fully competent in the occupation.

The detail of the EPA is described in the EPA Plan associated with the standard.

Prior to being eligible for the EPA, the apprentice will need to successfully meet the 'Gateway' requirements as determined by the standard. The employer and training provider will review their apprentice's knowledge, skills and behaviours to see if they have met the minimum requirements of the apprenticeship set out in the apprenticeship standard and are ready to take the final assessment.

To meet the minimum requirements set out in the apprenticeship standard an apprentice needs to:

- Display occupational competency.
- Have evidence of Level 2 English and Maths or pass functional skills.
- Complete mandatory training.

- Meet the minimum duration for their apprenticeship training.

Only apprentices who complete Gateway successfully can start the EPA.

The EPA process will involve an independent end point assessor (IEPA) who is working in - or has sufficient knowledge of - the occupation, in order to comply with Institute for Apprenticeships & Technical Education (IfATE) guidelines.

Contact Hours

Protected learning time (PLT) is typically provided through a day release model by employers during worktime throughout the programme (minimum of 6 hours per week for off-the-job training).

7. Programme Regulations

This programme will be subject to the following assessment regulations:

- *Regulations for Taught Degree Programmes (2023)*

8. Support for Learners

The following systems are in place to support you to be successful with your studies:

- The appointment of a Personal Tutor to support you through your programme.
- Allocation of an Apprenticeship Partner Manager (APM) or the Apprenticeship Reviewer (AR) who will carry out tripartite reviews with you and your employer to support your journey and progression. The APM/AR will work as a mentor/coach to develop your knowledge, skills and behaviours that will be evidenced in your online reflective journal (Aptem)
- Information, Advice and Guidance (IAG) will be provided through a Programme Handbook; Induction; access to Library resources, including access to books, journals, and databases - many of which are available in electronic format – and support from trained library staff to support your apprenticeship throughout your course.
- IAG will also be provided for career progression purposes.
- Access to Blackboard, our Virtual Learning Environment (VLE), which is accessible via PC, laptop, tablet, or mobile device.
- Access to the MyBNU portal where you can access all University systems, information and news, record your attendance at sessions, and access your personalised timetable.
- Academic Registry staff providing general guidance on University regulations, exams, and other aspects of students and course administration
- Central student services, including teams supporting academic skills development, career success, student finance, accommodation, chaplaincy, disability and counselling.
- Support from the Bucks Students' Union, including the Students' Union Advice Centre which offers free and confidential advice on University processes.

9. Programme Monitoring and Review

BNU has a number of ways for monitoring and reviewing the quality of learning and teaching on your programme. You will be able to comment on the content of their programme via the following feedback mechanisms:

- Formal feedback questionnaires and anonymous module 'check-ins'
- Participation in external surveys

- Programme Committees, via appointed student representatives
- Informal feedback to your programme leader

Quality and standards on each programme are assured via the following mechanisms:

- An initial event to approve the programme for delivery
- An annual report submitted by the External Examiner following a process of external moderation of student work submitted for assessment
- The Annual Monitoring process, which is overseen by the University's Education Committee
- Review by the relevant PSRB(s)
- Periodic Subject Review events held every five years
- Other sector compliance and review mechanisms

10. Internal and External Reference Points

Design and development of this programme has been informed by the following internal and external reference points:

- The Framework for Higher Education Qualifications (FHEQ)
- The QAA Subject Benchmark Statement – see detailed mapping below
- The QAA Higher Education in Apprenticeships Characteristics Statement
- The Apprenticeship Standard – see detailed mapping (external document)
- The BNU Qualifications and Credit Framework
- The BNU Grading Descriptors
- The University Strategy

Mapping of Subject Benchmark Statement to Programme Learning Outcomes

Subject Benchmark Statement / Apprenticeship Standard:	Knowledge and understanding (K)					Analysis and Criticality (C)					Application and Practice (P)					Transferable skills and other attributes (T)				
Benchmark / Standard requirement	K1	K2	K3	K4	K5	C1	C2	C3	C4	C5	P1	P2	P3	P4	P5	T1	T2	T3	T4	T5
Subject knowledge understanding and skills/ Demonstrate an exceptional understanding of the main body of knowledge for their subject and be able to exercise insightful and critical judgement in the use of that knowledge. Be creative and innovative in the application of the principles covered in the curriculum, and be able to go beyond what has been taught in classes	X	X	X	X	X								X	X						
Intellectual skills/ Critically analyse and apply a wide range of concepts, principles and practices of the subject in the context of open scenarios, showing refined judgement and adaptability in the selection and use of tools and techniques						X	X	X	X	X	X				X					
Computational problem-solving/ Be able to											X			X						X

demonstrate sophisticated judgement, critical thinking, research design, and well-developed problem- solving skills with a high degree of autonomy, and to create highly effective computational artefacts across complex and unpredictable circumstances																						
Practical skills across the computing lifecycle/ Demonstrate the ability to undertake problem identification and analysis to appropriately design, develop, test, integrate or deploy a highly complex computing system and any associated artefacts; deeply understand the relationship between stages and be able to demonstrate related sophisticated problem-solving and evidence-informed evaluative skills												X	X	X	X	X						
Interpersonal and team working Skills/ Demonstrate the ability to work in a highly proactive and accomplished manner, including as a leading member of a team, making excellent use of tools and techniques to proficiently communicate, manage tasks and plan																	X	X	X	X	X	

projects with minimum guidance																			
Professional practice covering Equality, diversity and inclusion, Sustainability and Entrepreneurship and enterprise education/ Identify best-of-kind practices and effect highly principled solutions within a professional, legal and ethical framework to consistently address a wide breadth of relevant considerations – including data management and use, security, equality, diversity and inclusion (EDI) and sustainability – in the work that they undertake						X				X					X	X	

Mapping of Apprenticeship Standard to Programme Learning Outcomes

Please refer to the separate Tech Industry Gold (TIG) apprenticeship mapping spreadsheet for this programme.

Mapping of Programme Learning Outcomes to Modules

Programme Learning Outcome	Knowledge and understanding (K)					Analysis and Criticality (C)					Application and Practice (P)					Transferable skills and other attributes (T)				
Module Code (Core)	K1	K2	K3	K4	K5	C1	C2	C3	C4	C5	P1	P2	P3	P4	P5	T1	T2	T3	T4	T5
Level 7																				
Digital Innovation and Leadership	X	X	X					X		X			X							
Digital Technology Management				X		X	X		X		X	X		X						
Advanced Professional Practice																X	X	X	X	X
Distributed Systems Development					X						X				X					
Software Testing and Security					X			X			X				X	X				
Software Delivery and Operations					X						X				X					
Cyber Resilience					X						X				X	X				
Cyber Threat Intelligence and Mitigation					X						X				X					
Security Testing Strategies and Forensics					X			X			X				X					
Final Project					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X