Programme specification

(Notes on how to complete this template are provide in Annexe 3)

1. Overview/ factual information

Programme/award title(s)	FD in Digital Innovation
Teaching Institution	Ada, National College for Digital Skills
Awarding Institution	The Open University (OU)
Date of first OU validation	April 2017
Date of latest OU (re)validation	n/a
Next revalidation	February 2023
Credit points for the award	240
UCAS Code	N/A
HECoS Code	N/A
LDCS Code (FE Colleges)	Not used
Programme start date and cycle of starts if appropriate.	October 2023
Underpinning QAA subject benchmark(s)	QAA Characteristics Statement Foundation Degree 2020 https://www.qaa.ac.uk/docs/qaa/quality-code/foundation-degree-characteristics-statement-2020.pdf?sfvrsn=6fc5ca81_10
Other external and internal reference points used to inform programme outcomes. For apprenticeships, the standard or framework against which it will be delivered.	IfA&TE* Level 4 Apprenticeship Standards for Software Developer https://www.instituteforapprenticeships.org/apprenticeship-standards/software-developer/ *Institute for Apprenticeships & Technical Education
Professional/statutory recognition	ESFA (Education & Skills Funding Agency)
For apprenticeships fully or partially integrated Assessment.	n/a

Mode(s) of Study (PT, FT, DL, Mix of DL & Face-to-Face) Apprenticeship	Mix of Face to Face* & Work Integrated (on-the-job) Learning (FT Apprenticeship)
Duration of the programme for each mode of study	Two Years
Dual accreditation (if applicable)	n/a
Date of production/revision of this specification	February 2023

Please note: This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided.

More detailed information on the learning outcomes, content, and teaching, learning and assessment methods of each module can be found in student module guide(s) and the students handbook.

The accuracy of the information contained in this document is reviewed by the University and may be verified by the Quality Assurance Agency for Higher Education.

2.1 Educational aims and objectives

The general educational objectives of the programme are to :

- Provide students with knowledge and understanding of the fundamental principles and technologies that underpin the discipline of computing.
- Provide opportunities, through optional modules and integrated work-based learning, for students to gain additional knowledge of specialised aspects of Computing of relevance to their organisations.
- Develop, in a flexible and progressive structure, students' knowledge and understanding of essential facts and theory, with the ability to use this knowledge to devise, specify, design, implement, test, document and critically evaluate computer-based systems.
- Enhance the employability of graduates by providing them with a range of transferable skills applicable to the work environment.
- Develop students' abilities to apply independent critical thinking, communication skills and self-management skills to identify problems in their organisations and formulate and implement effective solutions.
- Develop appreciation on the part of the student of the professional, moral and ethical issues involved in IT as well as a degree of adaptability in the rapidly-changing environment.

- Provide a basis for progression in career and educational development through additional study for a BSc (Hons.) Degree.
- Equip students to work as professional in the field of software development, particularly in environments where competence in computer hardware, software and distributed information systems is required.
- Provide an in-depth knowledge of the management, organisation and execution of large-scale software design and development activities including reuse and integration, and testing.

2.2 Relationship to other programmes and awards

(Where the award is part of a hierarchy of awards/programmes, this section describes the articulation between them, opportunities for progression upon completion of the programme, and arrangements for bridging modules or induction)

The degree offers students progression from Level 4 through to Level 5 and incorporates the CertHE exit award, and culminates in the Foundation Degree.

Upon the successful completion of the Foundation Degree, students will have the opportunity to top-up for the BSc(Hons.) Degree in Digital and Technology Solutions.

2.3 For Foundation Degrees, please list where the 60 credit work-related learning takes place. For apprenticeships an articulation of how the work based learning and academic content are organised with the award.

Authentic and innovative work-based learning is an integral part of foundation degrees and their design. It enables learners to take on appropriate role(s) within the workplace, giving them the opportunity to learn and apply the skills and knowledge they have acquired as an integrated element of the programme. It involves the development of higher-level learning within both the higher education provider and the workplace. It is a two-way process, where the learning in one environment is applied in the other. Work-based Learning and engagement with employers have been embraced accordingly in this programme through a number of modules but principally in the Level 5 Work- based Project module.

Work-based Project (WBP)

The work-based project (WBP) is a part of the Foundation degree which contributes to the final mark (i.e. classification) of the degree. The details of the assessment are contained in the respective module descriptor as well as the student handbook. The WBP

is a substantial piece of work to be undertaken at level 5, during the second year of the degree.

The project must bring together elements of learning from different parts of the programme and show evidence of accumulated knowledge and understanding of management, and the application of these within their organisation. The project must meet the Standard and demonstrate the approach taken to the planning and completion of the project.

Because of the significance of the project, the employer and college must work together with the apprentice to agree a project that is achievable within the employer's business constraints whilst meeting the needs of the Standard. The project should be conducted as part of the apprentice's normal work. The employer should make allowances, in terms of time and resource, for the project to be undertaken. Any elements which need to be undertaken outside of normal work should be agreed between the employer, apprentice and Provider so that apprentices are not disadvantaged in any way from performing their job and meeting the requirements of the project.

The process starts off by apprentices submitting a proposal. Apprentices are strongly advised to consult with their line managers when preparing the proposal, to discuss /consider issues such as ethics, IP, data protection, confidentiality, etc.

The proposal requires approvals of both the college (academic standards) and the employer (work place standards). This will be finalised through discussion between Ada, the employer and the student. (In some cases, the proposal is returned to the apprentice for minor/major changes based on the College/Employer feedback). Upon the approval of the proposal, apprentices will settle on their project, in conjunction with the employer and the academic team.

The requirements for the delivery of the work-based project are shown below:

Design

- A specification must be developed to show what has to be delivered on completion of the project - this must include the outputs, project plans etc.
- Terms of reference must be developed by the apprentice and agreed by the college and employer early in the project.
- The college must provide clear project assessment criteria including those for the terms of reference, approach to the problem, solution design and implementation, the final report and presentation.
- Apprentices must document their assumptions and highlight the consequences of these assumptions – enabling them to demonstrate their understanding of commercial pressures and the application of their thinking and problem-solving skills.

- Agreement must be made between the apprentice, employer and college on what systems, tools and platforms will be required (if any) to complete the tasks and how these will be made available.

Delivery

- The College will work with the employer and apprentice to agree the project title and support arrangements required to enable the project to be undertaken.
- The project should normally be based on an agreed business problem that forms part of the apprentice's role.
- Suitable time should be set aside by the employer for the apprentice to plan, undertake and write up their project.
- The apprentice must first work out what is required and present terms of reference and an initial plan for agreement with the employer and Provider.
- The project should typically be undertaken at the employer's premises.
- The employer and the College must ensure that the apprentice has access to the tools and systems required to complete the tasks within the project.
- The apprentice must provide a signed statement to confirm the project is their own work.
- The project will be set and completed during the second year of the degree

Project Environment

- A suitable project environment should be provided ensuring access to all required tools and systems. This will be the apprentices' normal place of work.
- Someone responsible for managing the project from the employer perspective must be identified
- The Technical Skills Coach (TSC) from the College must oversee and provide support to the apprentice.
- The work-based project will contribute towards the achievement of the degree.

Threshold Requirements

Ada will take responsibility for the quality of the learning opportunities delivered via work-based project and will ensure individual and collective responsibilities of students, TSC

and work place mentors are clearly defined. The following provides an indicative list of what all parties required to do in work-based activities:

Students are required to:

- Engage fully during planned work-based project in order to achieve the stipulated learning outcomes.
- Inform the TSC of any issue that might prevent progress in, or satisfactory completion of the learning outcomes.
- Conform to the regulations and policies of the workplace organisation and expected standards of ethical behaviour.
- Maintain the confidentiality of any sensitive information concerning the organisation and its business.
- Submit the report within the specified deadline.
- Undertake any assessments which may be required to meet the programme learning outcomes.

The Technical Skills Coaches are required to:

- Visit the students at the workplace regularly for assessment and provision of support.
- Oversee the assessment of students during the programme.
- Provide guidance and support on request and act as the initial college contact for students experiencing difficulties during work-based learning.
- Respond to student queries/concerns related to their work-based learning experience and assessment process.
- Provide feedback to link areas on student evaluations of their experience.
- Where applicable, invite the employer's mentor to attend training activities at the College to ensure the employers are able to manage the assessment of students in line with Ada College policies and procedures.

2.4 List of all exit awards
Level 4 :Cert HE Digital Innovation

3. Programme structure and learning outcomes

(The structure for any part-time delivery should be presented separately in this section.)

Programme Structure - LEVEL 4					
Compulsory modules	**Credit points**	**Optional modules**	**Credit points**	**Is the module compensatable ?**	**Semester runs in**
System Development Life Cycle (SDLC) DLC & Project Management Computer Programming Database Systems Cloud Computing	30 30 30 30	None		No	Please see below table

Mode of Study		When	How long (No. days)	What (Module)
Ada Attendance	Launchpad	Weeks 1	5	SDLC (Part I)
		Weeks 2, 3, and 4	15	Computer Programming
		Week 5	5	SDLC (Part II)
Six weeks of Work placement		0.5 a day a week *	3	Self-Study
Ada Attendance		Week 6	5	Database Systems
Six weeks of Work placement		0.5 a day a week *	3	Self-Study
Ada Attendance		Week 7	5	Database Systems
Six weeks of Work placement		0.5 a day a week *	3	Self-Study

Ada Attendance	Week 8	5	Cloud Computing
Six weeks of Work placement	0.5 a day a week *	3	Self-Study
Ada Attendance	Week 9	5	Cloud Computing
Six weeks of Work placement	0.5 a day a week *	3	Self-Study
Ada Attendance	Week 10	5	Reflective Statements of work-based learning
Six weeks of Work placement	0.5 a day a week *	3	Self-Study
	Total	68	

* Learners have pre-work and assignments to complete during their time at work which equates to 0.5 days a week.

Intended learning outcomes at Level 4

On successful completion of Level 4, the students should be able to:

Learning Outcomes – LEVEL 4	
3A. Knowledge and understanding	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
A1 Demonstrate a good knowledge of the system development life cycle, the role of project management and team-working in developing computing and information systems solutions to problems faced by organisations and individual users.	Knowledge and understanding are developed through a combination of methods, including: lectures, and self-directed study using resources and virtual learning environment (VLE). Learning will be applied to the organisational context and apprentices will be supported by a workplace mentor, in addition to regular formative feedback module tutors.

Learning Outcomes – LEVEL 4	
3A. Knowledge and understanding	
A2 Command knowledge of contemporary techniques for design, development, testing, correcting, deploying and documenting software systems from specifications, using agreed standards and tools. **A3** Explain a current set of techniques and tools for the specification of requirements, analysis, design, implementation and testing of software systems. **A4** Explain the fundamental concepts of the cloud infrastructure and demonstrate knowledge of security issues in cloud environments	The assessment strategy for each module is detailed in the module specification and indicates the nature of the assessment. Apprentices will receive additional information and support from assessment briefs given by tutors. All module outcomes are assessed. A range of appropriate assessment methods are utilised throughout, with a significant focus placed upon appropriateness to the sector within which the apprenticeship is located.

3B. Cognitive skills	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
B1 Apply programming principles and constructs to implement solutions to small scale problems. **B2** Analyse, design, build and test a software solution and identify security issues that affect the solutions.	Cognitive skills will also draw on a range of learning and teaching methods appropriate to the demands of the module. These include: Lectures, formative peer-to-peer and tutor feedback and reflective practice relating to the Project Management project. The intellectual and cognitive skills will be acquired through directed reading, supported by focused questioning and critical discussion, project and assignment work relating theory to practise. Tutorial support and

3B. Cognitive skills	
B3 Identify, simple problem-solving and modelling skills appropriate to developing small scale technology solutions for business. **B4** Effectively and securely manage, store, analyse and distribute data.	formative assessment provide the opportunity for guidance in the development of these skills. Skills will be assessed through written and oral evaluations of work. Learning will be applied to the organisational context and apprentices will be supported by a workplace mentor, in addition to regular review of work-based learning and assessment by their College tutor.

3C. Practical and professional skills	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
C1 Apply sound programming principles to the construction and maintenance of software using appropriate programming paradigms and languages. **C2** Identify organisational information requirements and model, then manage data solutions, including industry-standard database management systems; being cognisant of the key concepts of data quality and data security. **C3** Critically analyse a business domain/organisation in order to identify the role of information systems, highlight issues and identify business opportunities/requirements for improvement.	Practical and professional skills will be developed through workshops, lectures, presentations, formative feedback during tutorials and work integrated projects. Apprentices will also study independently, including critical evaluation of current practice. Close links will be made to the workplace context of each apprentice, with input from workplace contacts supporting tripartite contextualization of specific tasks identified within individual modules. It is anticipated that apprentices off the job and work integrated learning will also play a significant role in the development of practical and professional skills. Assessment methods will be appropriate to the particular module but include tutor assessment of observed activities and written work. All

3C. Practical and professional skills	
C4 Evaluate a range of options in order to design and develop the appropriate digital technology solution to meet the needs of users and the business through IT Project Management.	practical work is linked to a method for evaluating the work and demonstrating understanding of the underlying theories.

3D. Key/transferable skills	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
D1 Communicate effectively to different audiences and using different formats. **D2** Manage the time and resources and appreciate the role of teamwork within the IT discipline. **D3** Give and receive feedback constructively and incorporate it into their own development and life-long learning. **D4** Reflect systematically on their solution and their own performance to further develop learning.	Key/transferable skills will be developed throughout the modules as content is related to the real-world context of each apprentice. Apprentices are also encouraged to take ideas back into their work environment from the course and implement them through their practice. Key/transferable skills are developed in the core modules which extend and enhance previously developed written skills, time management, reading, communication across a range of contexts, information retrieval and research skills. Specific models of practice used within individual workplaces will also be integrated into the working methods considered. The teaching methods include: lectures, workshops, formative feedback on written work and presentations. Apprentices are able to access, on demand or through referral, additional learning support for communication skills with the academic skills support available.

[Cert HE Digital Innovation**]**

Programme Structure - LEVEL 5					
Compulsory modules	**Credit points**	**Optional modules** *Students are required to take one module from the offered elective modules*	**Credit points**	**Is the module compensatable?**	**Semester runs in**
Advanced Programming & Algorithmic Design	30	Web Design & Authoring	30	No	
Work-based Project	30	Distributed Systems	30		
Mobile app. Development	30	Applied Artificial Intelligence	30		

Level 5			
Mode of Study	When	How long (No. days)	What (Module)
Ada Attendance	Weeks 1	5	Advanced Programming & Algorithmic Design
Six weeks of Work placement	0.5 a day a week *	3	Self-Study
Ada Attendance	Week 2	5	Advanced Programming & Algorithmic Design
Six weeks of Work placement	0.5 a day a week *	3	Self-Study
Ada Attendance	Week 3	5	Mobile app. Development
Six weeks of Work placement	0.5 a day a week *	3	Self-Study
Ada Attendance	Week 4	5	Mobile app. Development

Six weeks of Work placement	0.5 a day a week *	3	Self-Study
Ada Attendance	Week 5	5	Elective Module
Six weeks of Work placement	0.5 a day a week *	3	Self-Study
Ada Attendance	Week 6	5	Elective Module
Six weeks of Work placement	0.5 a day a week *	3	Self-Study
Ada Attendance	Week 7	5	Work-based Project
Six weeks of Work placement	0.5 a day a week *	3	Self-Study
Ada Attendance	Week 8	5	Work-based Project
Six weeks of Work placement	0.5 a day a week *	3	Self-Study
Ada Attendance	Week 9	5	Work-based Project
Six weeks of Work placement	0.5 a day a week *	3	Self-Study
Ada Attendance	Week 10	5	Preparation for EPA Level 4 Software Developer Apprenticeship
Six weeks of Work placement	0.5 a day a week *	3	Self-Study
	TOTAL	80	

Intended learning outcomes at Level 5 are listed below:

Learning Outcomes – LEVEL 5	
3A. Knowledge and understanding	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
A5. Demonstrate competency in object-oriented design and algorithmic and mathematical approaches to solve medium scale problems. **A6.** Demonstrate the knowledge of the main methods of enquiry in computer science, and ability to evaluate critically the appropriateness of different approaches to tackling computer science issues. **A7.** Understand the principles and application of the concepts involved in user centred design of interactive products, the use of interactive media in information systems and Human Computer Interaction. **A8.** Demonstrate knowledge and understanding of the range of uses of computing systems in creative contexts and discuss	Knowledge and understanding will be developed through a combination of methods, including: lectures, and self-directed study using resources and the virtual learning environment. Learning will be applied to the organisational context and apprentices will be supported by a workplace mentor, in addition to regular formative feedback and summative review of work-integrated learning and assessment by their course and module tutors. The assessment strategy for each module is detailed in the module specification and indicates the nature of both formative and summative assessment. Apprentices will receive additional information and support from assessment briefs given by tutors. All module outcomes are assessed. A range of appropriate assessment methods will be utilised throughout with a significant focus placed upon appropriateness to the sector within which the apprenticeship is located.

Learning Outcomes – LEVEL 5	
3A. Knowledge and understanding	
methods of evaluating a system's effectiveness in a given context	

3B. Cognitive skills	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
B5. Select, apply and critically evaluate appropriate techniques for the analysis, design, development and testing of computer solutions to meet given user requirements. **B6.** Generate an innovative design to solve a problem containing a range of commercial and industrial constraints **B7.** Select and deploy appropriate theory, practices and tools for the specification, design, implementation and evaluation of application software and computer-based systems (including, distributed systems and web-based systems) to meet given requirements under practical constraints	Cognitive skills will also draw on a range of learning and teaching methods appropriate to the demands of the module. These include: Lectures, formative peer-to-peer and tutor feedback and reflective practice relating to different tasks. The intellectual and cognitive skills will be acquired through directed reading, supported by focused questioning and critical discussion, project and assignment work relating theory to practise. Tutorial support and formative assessment provide the opportunity for guidance in the development of these skills. Skills will be assessed through written and oral evaluations of work. Learning will be applied to the organisational context and apprentices will

3B. Cognitive skills	
B8. Demonstrate the skills necessary to plan, conduct, critically evaluate and report and present a substantial project in commercial setting.	be supported by a workplace mentor, in addition to regular review of work-based learning and assessment by their College tutor.

3C. Practical and professional skills	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
C5. Successfully plan and execute a medium-scale software project with appropriate software engineering principles. **C6.** Apply underlying concepts and principles outside the context in which they were first studied, including, where appropriate, the application of those principles in an employment context. **C7.** Use a range of established techniques to initiate and undertake critical analysis of information, and to propose solutions to problems arising from that analysis. **C8.** Effectively communicate information, arguments, and analysis, in a variety of forms, to specialist and non-specialist audiences, and deploy key techniques of the discipline effectively.	Practical and professional skills will be developed through workshops, lectures, presentations, formative feedback during tutorials and work integrated projects. Apprentices will also study independently, including critical evaluation of current practice. Close links will be made to the workplace context of each apprentice, with input from workplace contacts supporting tripartite contextualization of specific projects identified within individual modules. It is anticipated that apprentices off the job and work integrated learning will also play a significant role in the development of practical and professional skills. Assessment methods will be appropriate to the particular module but include tutor assessment of observed activities and written work. All practical work is linked to a method for evaluating the work and demonstrating understanding of the underlying theories.

3C. Practical and professional skills	
C9. Employ the research skills needed to investigate a defined topic under supervision, through an extended individual project.	

3D. Key/transferable skills	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
D5. Work as an effective member of a project team, managing the interface between computing, the organisation and the end-users, recognising the different roles within a team and different ways of organising teams. **D6.** Develop self-management skills to manage one's own time, meet deadlines and work with others. **D7.** Manage one's own learning, exercise initiative, demonstrate an understanding of the context of legal, moral and ethical issues, gain personal responsibility and development in preparation for professional employment or further study.	Key/transferable skills will be developed throughout the modules as content is related to the real-world context of each apprentice. Apprentices are also encouraged to take ideas back into their work environment from the course and implement them through their practice. Key/transferable skills are developed in the core modules which extend and enhance previously developed written skills, time management, reading, communication across a range of contexts, information retrieval and research skills. Specific models of practice used within individual workplaces will also be integrated into the working methods considered. The teaching methods include: lectures, workshops, formative feedback on written work and presentations. Apprentices are able to access, on demand or through referral, additional learning support for communication skills with the academic skills support available.

3D. Key/transferable skills	
D8. Autonomously manages a project with respect to time and task management; and makes decisions independently with respect to the needs and limitations of a project.	

4. Distinctive features of the programme structure

- **Where applicable, this section provides details on distinctive features such as:**
  - where in the structure above a professional/placement year fits in and how it may affect progression
  - any restrictions regarding the availability of elective modules
  - where in the programme structure students must make a choice of pathway/route
- **Additional considerations for apprenticeships:**
  - how the delivery of the academic award fits in with the wider apprenticeship
  - the integration of the 'on the job' and 'off the job' training
  - how the academic award fits within the assessment of the apprenticeship

The programme combines traditional academic learning with work- based learning, making it easier to apply new knowledge and skills into the workplace environment.

The programme is designed for employers and their employees (the students) providing the opportunity to combine academic study with professional practice in the digital technology sector. This combination of academic learning at degree level with on the job practical training provides a holistic programme of education enabling students to become confident, competent and capable Software Developer.

The Programme Learning Outcomes, are based upon the requirements of the relevant Standard for Level 4 Software Developer, which specifies the skills, knowledge and behaviours that the apprentice should acquire across the Degree programme, including the associated learning, development and application in the workplace.

Academic content and work integrated learning are fused throughout the degree, and modules will contribute to the assessment of requisite knowledge, skills and behaviours for the award of Level 4 Software Developer Apprenticeship.

The programme has two levels (level 4 and level 5), each equivalent to a normal academic year. It is equivalent to the first two years of a BSc (Honours) degree programme, and in fact will lead to the possibility of direct entry onto the third year of the BSc Programme.

There is an expectation that an apprentice will spend 20% of their time undertaking off-the-job training. This is broadly equivalent to ten weeks per year for the duration of the programme (36 calendar months). The format and schedule to support the delivery and supervision of all modules has then been established with this principle in mind.

This pattern of study is designed to fit within a full-time apprenticeship and uses a blended learning approach, which mixes work-based study and attendance at college study weeks. This approach allows students to be both productive employees, learning

relevant skills on the job, and participants in a learning community of students who are broadening and deepening their professional knowledge together.

A key distinctive feature of the programme is that in level 5 , apprentices will complete a work-based project, which is a substantial piece of work combining knowledge and understanding alongside work-based development and practice. Apprentices will be required to design and undertake individual research and implement recommendations within their workplace.

Another key distinctive feature of the programme is the provision of elective modules at Level 5. At this level, apprentices have the opportunity to choose elective modules, allowing them to focus specifically on the unique characteristics of their role having built a broader foundation of knowledge throughout the level 4 modules. This gives apprentices and employers ample opportunity to consider the apprentices strengths and interests alongside the business needs before choosing the elective modules.

The curriculum is based around the apprenticeship work-based learning framework, utilising a combination of: core subject modules, designed to give a platform for the development of technical and generic skills (seven core modules) and one elective module. .

All modules are appropriately designated with variation in the relative proportions of SLTA (Scheduled Learning and Teaching Activities), GIS (Guided Independent Study) and, of course, WBL (work-based learning) that aggregate to afford the 'notional learning hours' for a particular module. In addition to the WBL, SLTA and GIS, apprentices will be further supported by online materials and interactions with their skills coaches for the duration of the programme.

Each module is a self-contained block of learning with defined aims, learning outcomes and assessment. A standard module is worth 30 credits. It equates to the learning activity expected from one fourth of a full-time year. The first five weeks of the programme at level 4 is delivered as a "Launchpad" at the college. The Launchpad will provide an opportunity for students to consolidate their learning, receive academic tutorial support, allow revision time and introduce the next module in the schedule.

At level 5, the apprentice will undertake a significant work-based project under the guidance of an academic supervisor from Ada. Because of the significance of the project the employer and the college should work together with the apprentice to agree on a project that is achievable within the employer's business constraints and that meets the requirements of the standard.

The project should be conducted as part of the apprentice's normal work. Employers should make suitable allowance for the project to be undertaken, both in terms of time and resources. However, there are some elements such as the writing of the report, particularly in its reflective aspects that may be undertaken outside of normal work. This should be agreed between the apprentice, employer and the College such that apprentices are not disadvantaged in any way from performing their job and meeting the requirements of the project. Any issues with confidentiality and/or security will also be

addressed between the college, employer and apprentice allowing for projects of business value to be undertaken using real data.

5. Support for students and their learning.
(For apprenticeships this should include details of how student learning is supported in the work place)

Students will benefit from considerable support from the College and their employer. Personalised apprentice support , with opportunities for apprentice-staff contact, is recognised as a key factor in apprentice motivation, involvement and achievement. Given the non-traditional nature of degree apprenticeships, a focused induction programme is planned in order to ensure that apprentices understand the importance of accessing support, are aware of what is available and how to access it.

The student support and guidance are evaluated through:

I. Virtual Learning Environment (VLE)

The programme provides a Virtual Learning Environment (VLE) to support teaching and learning. Google Classroom is the name of the VLE that has been adopted by the College. Google Classroom was launched by Google for Education in August 2014 as an alternative to other VLE's, such as Blackboard and Moodle, and is a platform which allows teaching staff to create and upload online learning resources, and set, collect and grade student assignments. Teaching staff also utilise existing Google applications, such as Gmail and Google Drive to facilitate the creation of documents and communication with students. They will also be able to provide links for students directly from Google Classroom to other College resources.

II. Technical Skills Coaches (TSC)

Ada will appoint a Technical Skills Coach (TSC) for each apprentice who will support them throughout their study and meet regularly with their employer. The skills coaching system provides every student with a dedicated TSC who assists them with their progress on each aspect of the programme and who is concerned for their general welfare. At the beginning of the programme, each student will be allocated a skills coach to act as their adviser throughout their studies; the skills coach is responsible for facilitating a student's overall development. All learners will meet at least every twelve weeks with the student and employer to evaluate and support progress and to further encourage their academic and professional development. If the learner is struggling in any facet of the programme or is a welfare concern the skills coach will meet them more frequently, such as weekly, until they are back on track. Meetings may be face-to-face or remote and the skills coach will keep a record of what is discussed using the OneFile ePortfolio system.

On one hand, the pastoral side of the role can often be simply a friendly conversation at the start of each meeting. On the other hand, the academic/developmental aspect of the role offers the chance for students to discuss their development towards EPA and beyond their formal studies. These meetings can be used by students to sound out their thoughts, ideas and concerns with an experienced professional, who can guide them in the right direction personally, professionally and academically.

The intention behind the Skills Coaching Strategy is that all students:

- are given the opportunity to reflect on their learning and academic progress and to discuss and formulate appropriate strategies to fulfil their potential during their studies at the College;
- are equipped with a lifelong approach to learning enabling continuing personal and intellectual growth;
- are provided with pastoral support which is tailored to their needs, enabling them to take full advantage of their time at the college to develop and maintain a healthy and happy outlook on life;
- develop an awareness of the need for professional and career development and receive guidance on the planning and recording of skills development throughout their studies in order to realise their career aspirations;
- experience the benefits of working with peers and academic tutors within a supportive atmosphere

<u>Technical Skills Coach Activities :</u>

a) Quarterly Reviews and One-to-One Support Meetings

Skills Coaches lead a formal review of the apprentice's progress with both the apprentice and the employer on a 12-weekly basis. Progress on each aspect of the apprentice's programme is considered with a particular focus on the Knowledge, Skills and Behaviours (KSB) of the DTSP standard. Targets are negotiated to encourage the development of the KSBs both at work and while engaging in their academic activity. Employers are encouraged to support this fully and match potential work projects with the needs of the apprentice to help develop them and their work-based portfolios.

During the review, the Skills Coach also addresses Well-being and Learner Support where a range of referrals can be discussed if needed including to the Ada counsellor if required. Safeguarding concerns are reported to the Safeguarding Lead via the college CPOMS portal and/or directly according to severity. This is the same process for PREVENT, British Values and EDI discussions and concerns. The TSC team has been provided with Mental Health Awareness training to help them to identify potential well-being issues.

One-to-one support meetings are facilitated on the basis of need. An interim check in is arranged between each review but the frequency of this can change to monthly,

fortnightly, weekly or daily if circumstances require this. General notes regarding the check ins are stored on OneFile and shared as appropriate. Student concerns which require confidentiality are uploaded on to CPOMS as it is not accessible by employers and you can limit access to it. Additional tuition on specific subjects can be facilitated with the relevant lecturer if needed.

b) Work-based Portfolio Development

The TSC supports the development of the apprentices' Work-based Portfolio by helping them plan, collect and present evidence over the course of their practical period. Apprentices present their evidence in a series of reflective statements that are reviewed by the TSCs who provide developmental feedback and help reference the evidence against the standard in their ePortfolio on OneFile. This iterative approach to portfolio development gives the apprentice the opportunity to present their best evidence in the most effective way. The work-based portfolio is not a requirement of the Foundation Degree. However, it is a significant component of the Level 4 Software Developer Apprenticeship that will be assessed by an external body.

c) Maintain Visible Progress Records on OneFIle

The OneFile ePortfolio platform is a live record of the apprentices' progress on the programme that is visible to the TSC, the apprentice and the employer as well as centre managers. The employer has multiple separate logins with different access levels so they can view their learners' progress as appropriate. Records are maintained by the apprentice and the TSC to include the Work-based Portfolio, module progress, targets and documented reviews, check-ins and communication regarding the apprentice. CPOMS is the system for potentially sensitive information such as protected characteristics if they do not wish to disclose to their employer.

III. Individual Learning Plan (ILP)

Apprentices will be supported in the development of an individual Learning Plan, demonstrating application of the programme knowledge and understanding, skills and behaviours in the work environment. Learning and support needs will be easily identified through the Individual Learning Plan (ILP) that apprentices and skills coaches maintain and review at least quarterly or more frequently if required. The prime forum for this support will be the work-integrated learning activity at levels 4, 5 and 6 and support and review meetings between the apprentice, employer and skills coach.

IV. College- employer collaboration

The employer will appoint a workplace mentor, who will work closely with the TSC to oversee delivery and evidencing of relevant training delivered in the workplace, in agreement with the College.

The employer and College will work collaboratively to ensure the apprentice is able to meet the requirements of both the degree and the Apprenticeship Certificate: Digital & Technology Solutions, notably through workplace support, work-integrated training and

College module completion. One example of this collaborative support is the final year (Level 6) project, which requires the apprentices to agree a project to be carried out within the workplace and as part of the apprentice's usual work, with appropriate employer allowance and College academic support. This project must fit the constraints of the business, but also enable the apprentice to meet degree and Apprenticeship Certificate: Digital & Technology Solutions Standard criteria.

V. Personal Development

During the course of study, students will be provided with a number of opportunities to reflect on their progress and to think about what they want to improve and develop. Co-curricular activities have been included such as the followings:

- workshops and resources designed to support the transition to HE-Level study;
- workshops and resources focussing on particular academic skills areas (for example, essay-writing, and presentation skills,);
- reflective individual and group learning activities, including reflective statements;
- the opportunity to meet with skills coaches to discuss their progress and development starting during the Launchpad.

Commitment statement

The apprentice shall

- Attend training sessions, either on- or off-the-job, as and when required;
- Liaise with the skills coach and the employer, as applicable, in relation to any reviews, monitoring, or audits required for the apprenticeship, including providing information for, and access to, all documentation relevant to the apprenticeship on request;

The employer shall

- Provide a safe and supportive environment for the work-based elements of the apprenticeship;
- Provide a workplace mentor to supervise their progress through the programme both from an academic and pastoral perspective;
- Ensure that the apprentice's roles at work allow him/her to gain the wider employment experience required by the programme and the apprenticeship framework;
- Ensure that the apprentice is given sufficient time to enable him/her to complete all elements of the work-based learning elements of the programme within his/her contracted working hours (this is part of the 20% off-the-job learning commitment);

- Allow the apprentice to attend all agreed off-the-job learning and shall continue to pay the apprentice during such time, where it falls within normal working hours (this is part of the 20% off-the-job learning commitment);

The College shall

- Deliver the academic learning elements of the programme and establish and/or deliver on- and off-the-job learning to meet the needs of the apprenticeship, the apprentice and the employer;
- Monitor the apprentice's progress in liaison with the employer, and the skills coach shall keep the employer informed of the apprentice's progress, including any disciplinary issues;
- Monitor the quality of learning delivery to ensure that it meets the required standards, including liaising with both the employer and the apprentice.

6. Criteria for admission
(For apprenticeships this should include details of how the criteria will be used with employers who will be recruiting apprentices.)

All students must be interviewed, assessed and offered a position by an employer before being admitted to the degree. Although the College may receive direct applications and filter these applications before passing them to prospective employers some apprentices may apply directly to an employer. Either way, after acceptance by an employer, the College will require a formal application, which will be assessed according to the following criteria.

Applicants must have one of the following:

- At least three A-Level Qualifications at grade C or above, preferably from STEM subjects.
- AND/OR Level 3 (QCF) BTEC National Diploma in Information Technology, or computing related courses– MMM / MM
- Level 2 Professional qualification in a suitable computing related area. (students can possess a combination of these qualifications if relevant)
- Or other equivalents including apprenticeship pathways at level 3.

- Additionally, students are normally required to have a grade 5 or above in GCSE Maths and English Language or to have demonstrated ability in Maths and English in further studies.

- Admissions for entry up to commencement of Level 6, demonstrating Accreditation of Prior Learning (APL), or Accrediting Prior Experiential Learning (APEL) will also be considered on a case-by-case basis.

- In exceptional cases, the College may admit students who do not satisfy the above requirements, if they are able to demonstrate that by virtue of other studies and/or experience, they are capable of managing their studies and benefiting from the route. For example, Ada can support learners during their course of study to gain their GCSE Maths and English Language qualifications through one to one support and a learning software solution.

- In addition to College selection criteria and process, the employer may have additional pre-College filtering processes in place, which should be shared with the College.

7. Language of study
English

8. Information about non-OU standard assessment regulations (including PSRB requirements)
N/A

9. For apprenticeships in England End Point Assessment (EPA).
(Summary of the approved assessment plan and how the academic award fits within this and the EPA)

The End-Point Assessment (EPA) is the final assessment of the apprenticeship element of the programme that each apprentice is required to take in order to complete their apprenticeship. It occurs at the end of their apprenticeship, after the completion of the formal degree. It is important to note that the EPA is assessed separately and independently from the degree, although the production of some elements of the EPA are integrated into the degree programme, to reduce the workload on the apprentice as much as possible.

The British Computing Society (BCS), The Chartered Institute for IT carries out the EPA for Level 4 Software Developer Apprenticeship. The End Point Assessment is a holistic assessment of occupational competency against the Knowledge, Skills and Behaviours (KSB) that are listed in the standard. Various assessment methods (e.g. portfolio, project report, interview and presentation) are utilised in order to ensure a holistic evaluation of whether the apprentice has developed these KSBs whilst on programme.

The college and the employer work together to support the apprentice and to carry out the EPA. In addition to the academic work that leads to the award of the Foundation degree in Digital Innovation, the apprentice will create a portfolio of evidence which will demonstrate how learning has been applied, their achievements and capabilities. It is a collection of evidence which demonstrates evidence of the skills, knowledge and behaviours an apprentice has acquired against the standard.

10. Methods for evaluating and improving the quality and standards of teaching and learning.

A range of methods are used for evaluating and improving the quality and standards of teaching and learning. These include:

Annual Programme Review

- An annual Programme Report and associated action plan is informed by the annual modules' review, external examiner reports, programme team responses through Teaching, Learning & Assessment Committee (TLA) and apprentice feedback through each module's evaluation and Staff-Student Liaison Committee (SSLC).

- The procedures for the annual programme review provide a framework for the Head of Degree Programmes to reflect upon the outcomes of the module review process, consider feedback from external examiner(s) and students, as well as data on student achievement and the qualifications awarded.

- The Head of Degree Programmes has responsibility for monitoring the programmes of study as specified in the Calendar. They are asked to comment on the curriculum and assessment methods across the programme, the learning resources that support it, the implementation of changes proposed in earlier monitoring reports and any future developments.

- The Head of Degree Programmes submits the Annual Programme Review report to the Academic Board and the Open University. Annual Programme Review reports are considered at the Learning, Teaching and Assessment Committee. Any relevant points are reported to the Staff-Student Liaison Committee.

Teaching, Learning and Assessment Committee

- The committee will ensure the quality of teaching, learning and assessment in Ada's HE provision is of a consistently high standard.

- It will make evidence-based recommendations for improvement in HE teaching, learning and assessment across the College's HE programmes.

- It will incorporate recommendations and suggestions from the academic team, employers and also the OU academic Reviewer.

- The committee will also ensure integration across 16-19 and 19+ provision in line with Ada's overarching approach to industry-led teaching and learning that sits at the heart of the College's mission statement and role as a Government National College.

- On a regular basis a review will be undertaken of teaching and learning across the HE programmes. This will incorporate a review of the variety of assessment methods of student progress and learning outcomes. This will achieve three outcomes:

i. An on-going enhancement of pedagogical practices and student learning at Ada through on-going incremental improvements in practice that will be added to by peer-to-peer support and development as well as continuous professional development for staff and the use of self-evaluation tools for students through our VLE.

ii. Implementation of evidence-based changes to assessment practice and processes.

iii. The reliability of recommendations to the Board of Examiners for the awards of qualification are an accurate reflection of each HE students' progress on their programme of study and the development of the knowledge and skills against the QAA Quality Code Qualification Descriptors and Subject Specific Statement.

Apprentice Feedback

Apprentice feedback is collected in a variety of ways including module evaluations and SSLC. The feedback loop is typically closed quickly through the apprentice representatives and/ or module leader. Where matters cannot be resolved immediately apprentices are appraised by the programme leader, who will also flag issues at Academic Board level as appropriate. This highlights the strength and influence of the apprentice voice.

Staff and Student Liaison Committee

- The Staff and Student Liaison Committee (SSLC) is made up of student representatives and members of academic staff and provides a link between staff and students enabling discussion on matters to do with teaching and learning that don't fit the stricter remit of the Academic Board nor Teaching, Learning and Assessment committee.

- The SSLC deals with student feedback and input and is the main conduit for ensuring student voice within the HE programmes. Student representation on the committee ensures that the SSLC is well-informed of developments across the HE programmes in the College and can usefully inform future strategy, policy development and programme growth and evolution.

- The SSLC should be consulted on any major changes to course structures or content and must not consider matters relating to named members of staff or students, nor is the SSLC the place for students to air their personal grievances.

In addition to above, the following methods are also used for evaluating and improving the quality and standards of teaching and learning:

- Staff development events aimed at improved teaching and learning, attended by academic staff.

- Professional currency of staff, including awareness of developments in external reference points, such as subject and professional standards and benchmarks.

- Lesson observations, undertaken as part of the College's quality assurance framework. These include short walk-through, observations and a minimum of one longer lesson observation during each academic year. Where areas for improvement are identified, the Head of Faculty is assigned to support development of practice. Re-observations are then scheduled to monitor impact.

10. Changes made to the programme since last (re)validation

Major changes have been made to the programme in two ways :

i. Restructuring the programme at each level
ii. Inclusion of a new pathway

Programme's Restructuring

Major restructuring of the programme has been accomplished through the delivery of four modules at each level. The restructured programme is made up of four thirty-credit modules at each level.

Within the programme , there will be core modules, which all students within the programme must take to qualify for the FD award, as well elective modules. The restructured programme will offer four core modules at level 4, and an equal combination of core and specialised modules at level 5.

The components of the revised module descriptors (the learning outcomes, the indicative content, the assessment strategy and the resources), as well as new modules as result of merging some existing modules reflect the enrichment of the modules that will in turn account for the increase of the module's credit.

The four more substantial (30 credit) modules replacing the six 20 credit modules provides a more streamlined programme that consolidates and dives deeper into content that was at risk of repeating at a shallow level across the current module suite.

Annexe 1 - Curriculum map

This table indicates which study units assume responsibility for delivering (shaded) and assessing (x) particular programme learning outcomes.

Level 4	Study module/unit	Programme outcomes															
		A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4
Core	SDLC & Project Management	x		x				x				x	x	x	x	x	x
	Computer Programming	x	x	x		x	x			x							x
	Database Systems		x						x		x					x	
	Introduction to Cloud Computing				x			x				x			x		x

Level 5	Study module/unit	Programme outcomes																
		A5	A6	A7	A8	B5	B6	B7	B8	C5	C6	C7	C8	C9	D5	D6	D7	D8
Core	Advanced Programming & Algorithmic Design	x				x		x		x					x	X		
	Work-based Project			x	x				x	x	x			x	x	x	x	x
	Mobile App. Development			x			x	x			x							x
Elective	Applied Artificial Intelligence		x				X				X					X	X	
	Web Design & Authoring			x			x	x					x		x			x
	Distributed Systems		x					x				x			x			

Annexe 2 - Curriculum mapping against the apprenticeship standard

Level 4 Software Developer Apprenticeship Standard

Knowledge

K1: all stages of the software development life-cycle (what each stage contains, including the inputs and outputs)
K2: roles and responsibilities within the software development lifecycle (who is responsible for what)
K3: the roles and responsibilities of the project life-cycle within your organisation, and your role
K4: how best to communicate using the different communication methods and how to adapt appropriately to different audiences
K5: the similarities and differences between different software development methodologies, such as agile and waterfall.
K6: how teams work effectively to produce software and how to contribute appropriately
K7: software design approaches and patterns, to identify reusable solutions to commonly occurring problems
K8: organisational policies and procedures relating to the tasks being undertaken, and when to follow them. For example the storage and treatment of GDPR sensitive data.
K9: algorithms, logic and data structures relevant to software development for example:- arrays- stacks- queues- linked lists- trees- graphs- hash tables- sorting algorithms- searching algorithms- critical sections and race conditions
K10: principles and uses of relational and non-relational databases
K11: software designs and functional or technical specifications
K12: software testing frameworks and methodologies

Skills

S1: create logical and maintainable code
S2: develop effective user interfaces
S3: link code to data sets
S4: test code and analyse results to correct errors found using unit testing
S5: conduct a range of test types, such as Integration, System, User Acceptance, Non-Functional, Performance and Security testing.
S6: identify and create test scenarios

S7: apply structured techniques to problem solving, debug code and understand the structure of programmes in order to identify and resolve issues
S8: create simple software designs to effectively communicate understanding of the program
S9: create analysis artefacts, such as use cases and/or user stories
S10: build, manage and deploy code into the relevant environment
S11: apply an appropriate software development approach according to the relevant paradigm (for example object oriented, event driven or procedural)
S12: follow software designs and functional or technical specifications
S13: follow testing frameworks and methodologies
S14: follow company, team or client approaches to continuous integration, version and source control
S15: communicate software solutions and ideas to technical and non-technical stakeholders
S16: apply algorithms, logic and data structures
S17: interpret and implement a given design whist remaining compliant with security and maintainability requirements

Behaviours

B1: Works independently and takes responsibility. For example, has a disciplined and responsible approach to risk and stays motivated and committed when facing challenges
B2: Applies logical thinking. For example, uses clear and valid reasoning when making decisions related to undertaking work instructions
B3: Maintains a productive, professional and secure working environment
B4: Works collaboratively with a wide range of people in different roles, internally and externally, with a positive attitude to inclusion & diversity
B5: Acts with integrity with respect to ethical, legal and regulatory ensuring the protection of personal data, safety and security.
B6: Shows initiative and takes responsibility for solving problems within their own remit, being resourceful when faced with a problem to solve.
B7: Communicates effectively in a variety of situations to both a technical and non-technical audience.
B8: Shows curiosity to the business context in which the solution will be used, displaying an inquisitive approach to solving the problem. This includes the curiosity to explore new opportunities, techniques and the tenacity to improve methods and maximise performance of the solution and creativity in their approach to solutions.
B9: Committed to continued professional development.

This table indicates which study units assume responsibility for delivering (shaded) and assessing (x) particular knowledge, skills and behaviours.

KNOWLEDGE													
Level	Modules	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12
4 Core	SDLC & Project Management	X	X	X	X	X	X						
	Computer Programming							X				X	X
	Database Systems								X		X		
	Introduction to Cloud Computing						X		X				
5 Core	Advanced Programming & Algorithmic Design									X		X	X
	Work-based Project				X				X			X	
	Mobile app. Development											X	X
5 Elective	Applied Artificial Intelligence											X	X
	Web Design & Authoring											X	X
	Distributed Systems						x					x	

SKILL																		
Level	Modules	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17
4 Core	SDLC & Project Management									X				X		X		
	Computer Programming	X			X	X	X		X									
	Database Systems			X														
	Introduction to Cloud Computing					X												X
5 Core	Advanced Programming & Algorithmic Design	X			X	X	X		X		X	X	X				X	
	Work-based Project					X			X	X			X		X			
	Mobile app. Development		X							X	X	X						
5 Elective	Applied Artificial Intelligence							X	X						X			
	Web Design & Authoring		X								X	X						
	Distributed Systems							X	X						X			

BEHAVIOUR										
Level	Modules	B1	B2	B3	B4	B5	B6	B7	B8	B9
4 Core	SDLC & Project Management				X			X		
	Computer Programming						X			
	Database Systems								X	
	Introduction to Cloud Computing	X				X				
5 Core	Advanced Programming & Algorithmic Design		X				X			
	Work-based Project	X	X	X	X	X	X	X	X	X
	Mobile app. Development					X				
5 Elective	Applied Artificial Intelligence				X					X
	Web Design & Authoring					X				
	Distributed Systems							X		X

Annexe 3: Notes on completing programme specification templates

1 **-** This programme specification should be mapped against the learning outcomes detailed in module specifications.

2 – The expectations regarding student achievement and attributes described by the learning outcome in section 3 must be appropriate to the level of the award within the **QAA frameworks for HE qualifications**: http://www.qaa.ac.uk/AssuringStandardsAndQuality/Pages/default.aspx

3 – Learning outcomes must also reflect the detailed statements of graduate attributes set out in **QAA subject benchmark statements** that are relevant to the programme/award: http://www.qaa.ac.uk/AssuringStandardsAndQuality/subject-guidance/Pages/Subject-benchmark-statements.aspx

4 – In section 3, the learning and teaching methods deployed should enable the achievement of the full range of intended learning outcomes. Similarly, the choice of assessment methods in section 3 should enable students to demonstrate the achievement of related learning outcomes. Overall, assessment should cover the full range of learning outcomes.

5 - Where the programme contains validated **exit awards** (e.g. CertHE, DipHE, PGDip), learning outcomes must be clearly specified for each award.

6 - For programmes with distinctive study **routes or pathways** the specific rationale and learning outcomes for each route must be provided.

7 – Validated programmes delivered in **languages other then English** must have programme specifications both in English and the language of delivery.