

Programme Specification

1. Overview/ factual information

Programme/award title(s)	Foundation Degree Digital Technologies (Cybersecurity)
Teaching Institution	York College
Awarding Institution	The Open University (OU)
Date of first OU validation	
Date of latest OU (re)validation	
Next revalidation	
Credit points for the award	120 at level-4 and 120 at level-5
UCAS Code	D5T7
HECoS Code	
LDCS Code (FE Colleges)	TBC
Programme start date and cycle of starts if appropriate.	September 2021
Underpinning QAA subject benchmark(s)	Computing 2019
Other external and internal reference points used to inform programme outcomes. For apprenticeships, the standard or framework against which it will be delivered.	Frameworks for Higher Education Qualifications Cybersecurity Body of Knowledge BCS cybersecurity apprenticeship specification
Professional/statutory recognition	n/a
For apprenticeships fully or partially integrated Assessment.	n/a
Mode(s) of Study (PT, FT, DL, Mix of DL & Face-to-Face) Apprenticeship	FT only
Duration of the programme for each mode of study	2 Years
Dual accreditation (if applicable)	n/a

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

To provide an overview of computing and information security principles to support business needs using current, industry standard technologies and approaches, with a strong focus on problem solving and the application of digital technologies supported by the underpinning theory to address the needs of the business enterprise in the 21st century.

To develop higher level technical and analytical skills in the vocational area of digital technologies which can be applied to a wide range of career routes including: information security management, systems and network administration, database administration, web development and programming; Along with a range of transferable skills including: personal development, research methods and 'soft skills' such as team working and interpersonal skills.

To integrate academic and vocational learning through assessments based on real-world case studies, developing a range of in-demand technical skills through practical experience with current technologies, appropriate management methods, tools, techniques and standards for the IT and security sectors.

Date of production/revision of this specification

19 May 2021

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)

On completion of the Foundation Degree you will have the opportunity to progress to study BSc Computer Science at York St John University (with cybersecurity options) and similar top-up courses at other HE institutions around the UK.

On achievement of the Foundation Degree Digital Technologies (Cybersecurity) students have a progression route onto the BSc Computer Science (with cybersecurity options) at York St John University and will be given a guaranteed interview.

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.

Work-related learning is embedded into all modules, which make use of realistic and real-world case studies both as learning materials and as the basis for most of the assessment tasks. These have been designed in collaboration with industry partners and advisors from across a wide range of sectors.

Each module will have one or more industry advisors who work with the module tutor to keep the content up to date and relevant as well as advising on case studies, scenarios and assessment tasks. These advisors and other specialists may also contribute directly through on-line presentations, seminars or workshops throughout the course.

All module tutors have extensive industry experience on which they can draw both in terms of the material delivered and the design of assessment tasks, to make them as realistic and relevant as possible.

In the first year "Professionalism in the Digital Sector" module you will be encouraged to engage with the British Computer Society. The primary assessment involves logging and reflecting on a range of professional and personal development activity throughout the year, making use of the BCS personal development portfolio (which is a requirement of chartered professional status with the BCS).

While a work placement is not a mandatory (or assessed) component of the course, you will be well supported by the college's placement team if you wish to take up a two-week placement during the inter-semester break.

2.4 List of all exit awards

Level-4: Certificate of Higher Education Digital Technologies (Cybersecurity)

Level-5: Foundation Degree Digital Technologies (Cybersecurity)

Note: exit awards subject to completion of 120 credits at the appropriate level.

3. Programme structure and learning outcomes

<u>Programme Structure - LEVEL 4</u>					
Compulsory modules	Credit points	Optional modules	Credit points	Is module compensatable?	Semester runs in
Introduction to Programming	20			Yes	1
Computer Hardware Fundamentals	20			Yes	2
Information Security Concepts	20			Yes	1
Database Design Principles	20			Yes	1
Discrete Maths and Cryptography	20			Yes	2
Professionalism in the Digital Sector	20			Yes	2

Intended learning outcomes at Level 4 are listed below:

<u>Learning Outcomes – LEVEL 4</u>	
4A. Knowledge and understanding	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>A1 Demonstrate a broad range of knowledge of the underlying concepts and principles of information security and cybersecurity.</p> <p>A2 Apply the principles of information security with reference to security architectures, legal requirements and industry standards.</p> <p>A3 Apply the principles of software development to a range of programming and database problems.</p> <p>A4 Demonstrate knowledge of the fundamental concepts of encryption.</p> <p>A5 Demonstrate knowledge of the laws relating to cybersecurity.</p>	<p>Independent study: Students will have set tasks to provide the fundamental knowledge, which will be assessed using flipped-learning techniques.</p> <p>Open workshop: These will be provided on a weekly basis to support students in completing independent and group study tasks.</p> <p>Group discussions and seminars: Some modules will make use of the seminar format to assess students' subject knowledge and their communication skills. These will also involve an element of peer assessment.</p> <p>Lectures and presentations: Each module will be structured around regular lectures/presentation where previous material will be consolidated, new material delivered and practical work / group discussion tasks will be set. All presentation materials will be available via the College's VLE at the end of each lesson.</p> <p>On-line learning: Every module will be fully supported through the College's VLE, following a standard format (structured as a scheme of learning) which will include presentations, examples, in-class tasks,</p>

<u>Learning Outcomes – LEVEL 4</u>	
4A. Knowledge and understanding	
	tests, links to useful web resources, videos and collaborative tools such as a class wiki.
4B. Cognitive skills	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>B1 Analyse and justify the suitability of computer hardware, software and systems for use within a secure networked environment.</p> <p>B2 Apply discrete mathematics techniques in a range of theoretical and practical problem solving applications.</p> <p>B3 Analyse real-world scenarios using standard data modelling techniques.</p> <p>B4 Justify the use of specific programming techniques.</p> <p>B5 Identify primary and secondary source material which support subject knowledge.</p>	<p>Independent in-class activity: Set tasks will stretch and challenge students, developing their analytical and critical thinking skills. This will be supervised by the tutor and the outcomes will often feed into group discussions.</p> <p>Group discussions and seminars: Group discussions will also form a core element of each module encouraging students to collaborative analyse scenarios, problem solve and carry out research activities.</p> <p>On-line learning: Every module will be fully supported through the College's VLE, following a standard format (structured as a scheme of learning) which will include presentations, examples, in-class tasks, tests, links to useful web resources, videos and collaborative tools such as a class wiki.</p>

4C. Practical and professional skills	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>C1 Create software solutions using industry standard design techniques, programming languages, development environments and testing strategies.</p> <p>C2 Reflect on engagement with industry including seminars, presentations and membership of a professional body and subject specialist groups.</p> <p>C3 Create professional documentation for software, hardware and organisational solutions to address security problems.</p> <p>C4 Create high-quality technical documentation for software and database system solutions.</p>	<p>Lectures and presentations: The practical techniques will initially be demonstrated by the tutor in a lecture format, with students following along. This will lead into independent supervised activities to develop the skills.</p> <p>Practical labs: Modules that involve development work (e.g. programming, database) there will be a large element of hands-on development work using industry standard environments. Activities will be a mixture of independent and paired tasks, supervised by the module tutor. Some of the assessment evidence will be drawn from the individual practical tasks and developed into a portfolio.</p> <p>Presentations: for some practical assessments students will be required to present their work in the format of a professional walk-through (e.g. database, programming). This provides both an immediacy in the feedback and a more realistic (work-related) experience.</p> <p>On-line learning: Every module will be fully supported through the College's VLE, following a standard format (structured as a scheme of learning) which will include presentations, examples, in-class tasks, tests, links to useful web resources, videos and collaborative tools such as a class wiki. All assignment submissions will be made through Turnitin.</p>

4C. Practical and professional skills	
	<p>Work Related: Most assignments will be based on the same, real-world scenario which will be developed in collaboration with colleagues from other curriculum areas and/or industry contacts. Module tutors have a industry contacts who will deliver a range of subject specific presentations in person/on-line. Students will be registered as student members of the British Computer Society and encouraged to attend webinars/seminars as part of the professionalism in the digital sector module. This also provides the opportunity for students to build their professional network and engage with specialist groups such as the information security experts group.</p>

4D. Key/transferable skills	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>D1 Demonstrate the ability to work effectively as part of a team.</p> <p>D2 Evidence the use of self-reflection techniques to plan and monitor professional development.</p> <p>D3 Communicate effectively with a range of audience types written or orally.</p> <p>D4 Demonstrate the ability to solve a wide range of real-world problems using computational thinking skills.</p>	<p>Group discussions and seminars: Some modules will make use of the seminar format to assess students' subject knowledge and their communication skills. These will also involve an element of peer assessment. Group discussions will also form a core element of each module encouraging students to collaborative analyse scenarios, problem solve and carry out research activities.</p> <p>On-line learning: Every module will be fully supported through the College's VLE, following a standard format (structured as a scheme of learning) which will include presentations, examples, in-class tasks, tests, links to useful web resources, videos and collaborative tools such as a class wiki. All assignment submissions will be made through Turnitin. Students will also be encouraged to make use of collaborative</p>

4D. Key/transferable skills	
	<p>tools such as Microsoft Teams which will develop their communication skills and provide access resources outside of the college environment.</p> <p>Tutorials: A combination of group tutorials and 1:1 progress reviews will form the basis of the pastoral support. This will link closely with the professionalism in the digital sector module in supporting the students' professional development.</p> <p>Work Related: Module tutors have industry contacts who will deliver a range of subject specific presentations in person/on-line. Students will be registered as student members of the British Computer Society and encouraged to attend webinars/seminars as part of the professionalism in the digital sector module. This also provides the opportunity for students to build their professional network and engage with specialist groups such as the information security experts group. The college also has strong links with local employers, in particular boxxe (a cybersecurity solution provider) who have developed the (virtual) cybersecurity lab based on industry standard software and will also deliver presentation, training sessions and visits (to their SOC in York).</p>

Certificate of Higher Education Digital Technologies (Cybersecurity)

<u>Programme Structure - LEVEL 5</u>					
Compulsory modules	Credit points	Optional modules	Credit points	Is module compensatable?	Semester runs in
Information Security in Practice	20			Yes	1&2
Individual Research Proposal	20			Yes	1&2
Building a Secure Database	20			Yes	1
Website Security Technologies	20			Yes	1
Secure Networking Practices	20			Yes	2
Developing Secure Applications	20			Yes	2

Intended learning outcomes at Level 5 are listed below:

<u>Learning Outcomes – LEVEL 5</u>	
5A. Knowledge and understanding	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>A1 Demonstrate critical understanding of the underlying concepts and principles of information security and cybersecurity.</p> <p>A2 Apply the principles of information security to unfamiliar contexts and real-world scenarios.</p>	<p>Independent study: Students will have set tasks to provide the fundamental knowledge, which will be assessed using flipped-learning techniques.</p> <p>Open workshop: These will be provided on a weekly basis to support students in completing independent and group study tasks. There will be a mixture of physical and on-line workshop sessions.</p> <p>Group discussions and seminars: Discussions will become increasingly important to encourage students to direct their own learning.</p>

<u>Learning Outcomes – LEVEL 5</u>	
5A. Knowledge and understanding	
	<p>Professional seminars delivered by industry speakers will also supplement the knowledge content delivered by tutors.</p> <p>Lectures and presentations: Each module will be structured around regular lectures/presentation where previous material will be consolidated, new material delivered and practical work / group discussion tasks will be set. All presentation materials will be available via the College's VLE at the end of each lesson.</p> <p>On-line learning: Every module will be fully supported through the College's VLE, following a standard format (structured as a scheme of learning) which will include presentations, examples, in-class tasks, tests, links to useful web resources, videos and collaborative tools.</p>
5B. Cognitive skills	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>B1 Justify and evaluate the selection of security architectures for real-world applications which take into account current technologies, legal requirements and the contemporary threat landscape.</p> <p>B2 Succinctly present rational and reasoned arguments that address a given problem and demonstrate independent decision making skills.</p>	<p>Independent in-class activity: Set tasks will stretch and challenge students, developing their analytical and critical thinking skills. This will be supervised by the tutor and the outcomes will often feed into group discussions.</p> <p>Group discussions and seminars: Group discussions/debates will also form a core element of each module encouraging students to</p>

5B. Cognitive skills	
<p>B3 Critically evaluate technical solutions to real-world problems, making reference to professional, technical and legal standards by way of justification.</p> <p>B4 Make appropriate use of primary and secondary source material which enhances subject knowledge.</p>	<p>collaborative analyse scenarios, problem solve and carry out research activities.</p> <p>On-line learning: Every module will be fully supported through the College's VLE, following a standard format (structured as a scheme of learning) which will include presentations, examples, in-class tasks, tests, links to useful web resources, videos and collaborative tools.</p> <p>Independent Research: The core component of the individual research project is for the students to carry out their own research into their chosen topic with their project supervisor acting more as a mentor.</p> <p>Tutorials: To support the research project each student will be allocated a supervisor who will have an interest in their chosen topic and will meet with the student on a 1:1 basis to monitor their progress and discuss their work.</p>
5C. Practical and professional skills	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>C1 Select and apply appropriate technologies to configure network security, intrusion detection, auditing and penetration testing.</p> <p>C2 Select and apply industry standard languages, development environments, test frameworks, database and web hosting platforms to develop secure systems and stand-alone applications.</p>	<p>Practical labs: Modules that involve development work (e.g. website security, networking) there will be a large element of hands-on development work using industry standard environments. Activities will be primarily independent tasks, supervised by the module tutor.</p>

5C. Practical and professional skills	
<p>C3 Create professional quality technical documentation and design work.</p> <p>C4 Practically apply knowledge of cybersecurity technology and the threat landscape through the development of a project proposal.</p>	<p>Presentations: for some practical assessments students will be required to present their work in the format of a professional walk-through (e.g. database, programming). This provides both an immediacy in the feedback and a more realistic (work-related) experience.</p> <p>On-line learning: Every module will be fully supported through the College's VLE, following a standard format (structured as a scheme of learning) which will include presentations, examples, in-class tasks, tests, links to useful web resources, videos and collaborative tools such as a class wiki. All assignment submissions will be made through Turnitin.</p> <p>Work Related: Most assignments will be based on the same, real-world scenario which will be developed in collaboration with colleagues from other curriculum areas and/or industry contacts. Module tutors have a industry contacts who will deliver a range of subject specific presentations in person/on-line. Supporting documentation for practical assessments will carry the expectation of a professional standard of presentation, adhering to industry standards and using appropriate style, tone and technical terminology.</p>

5D. Key/transferable skills	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>D1 Select and apply recognised research methodologies to develop independent project proposals in academic and industry contexts.</p> <p>D2 Communicate professionally with a range of audience types written or orally.</p> <p>D3 Plan and manage work schedules independently, observing professional behaviours throughout the process.</p>	<p>Group discussions and seminars: Group discussions will also form a core element of each module encouraging students to collaborative analyse scenarios, problem solve and carry out research activities. The individual research project will include a literature review seminar as part of the assessment.</p> <p>On-line learning: Every module will be fully supported through the College's VLE. All assignment submissions will be made through Turnitin which is also accessed via the VLE. Students will also be encouraged to make use of collaborative tools such as Microsoft Teams Chat which will develop their communication skills and provide access resources outside of the college environment.</p> <p>Tutorials: A combination of group tutorials and 1:1 progress reviews will form the basis of the pastoral support. This will also provide support for the individual research project with regular meetings to review the project work.</p> <p>Work Related: Module tutors have a industry contacts who will deliver a range of subject specific presentations in person/on-line. Students will be encouraged to maintain their professional network and engage with specialist groups / forums via LinkedIn for example.</p> <p>Personal Development: Students will be encouraged to apply the soft skills developed in year one to support their progress through year two.</p>

Foundation Degree Digital Technologies (Cybersecurity)

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

You will be enrolled as a full-time student at York College, which has recently been awarded Institute of Technology status. This has enabled the College to develop a custom cybersecurity lab and a brand new University Centre with exclusive access for higher education (HE) students.

This course aims to enable you to develop a successful career in digital technologies engaging professionally with common challenges such as the specification, design, deployment and management of complex IT systems with a focus on good security practice and an understanding of the fundamental principles and technologies behind effective cybersecurity countermeasures.

It will provide you with the fundamental skills and knowledge to work in a secure computing for a commercial environment. The focus on skills developed is based on discussion with local employers and security specialist to ensure that the course also meets the needs of the wider business community. With professional development and research modules in the course you will develop the skills that employers value so highly.

The learning material draws upon the Cybersecurity Body of Knowledge (CyBoK version 1.0) subject areas and a range of curricula from industry qualifications (please be aware there are no formal accreditations and only aspects of the curricula are included as appropriate to the modules), providing a good opportunity for you to undertake independent study outside of this course.

On completion of this course graduates may wish to consider progressing to study for a related industry qualification which could include: CompTIA Network+ and Security+, BCS Certificate in Information Security Management Principles (CISMP) or GIAC Certified Penetration Tester (GPEN) certification. While the curriculum of this programme does not cover all of the content of these qualifications it provides an excellent foundation.

The course aims to develop your independent study skills and introduce you to the requirements of working within the profession, with a strong focus on professional development activity throughout your course of study starting with the Professionalism in the Digital Sector module in the first year. These skills will be utilised throughout your second year, especially in the Individual Research Proposal module.

This course is split between general computing elements such as programming, discrete maths and hardware to provide a broad base of underpinning computing principles and specialist information security modules.

You will have the opportunity to learn about the industry from course Tutors who all have extensive industry experience and qualifications in addition to their academic qualifications; and guest speakers who currently work in the computing and cybersecurity sectors.

In addition to this, the academic year is structured to enable you to undertake a two-week work placement between semester 1 and semester 2 (late January / early February) in year 1 and/or year 2 of the course. The College's work placements team can assist with the arrangements and may also offer placement opportunities as and when they are available.

You will be working in an excellent environment for teaching and learning, with access to up-to-date technology, a range of the latest text books, relevant industry publications and quiet study areas which are open in the evenings to support your independent study. The course base room will be a custom designed Cybersecurity lab, situated in the College's "Institute of Technology" wing.

The York College University Centre facility (opened December 2019) is for the exclusive benefit the College's Higher Education students. It is a key part of the College's ongoing development of teaching and learning facilities, providing a modern, distinctive space, located on the third floor of the Learning Resource Centre, boasts dedicated learning zones and social spaces to enhance your learning experiences. York College received approval from the Department for Education to use the term of 'York College University Centre'.

5. Support for students and their learning.

(For apprenticeships this should include details of how student learning is supported in the work place)

The modules have been designed with an emphasis on an adult learning environment, enabling you to make the most of resources available and to take responsibility for your own learning. The inclusion of a professionalism module in year 1 supports this approach and this emphasis on a more professionally focussed style of learning based on the Framework for Higher Education Quality benchmarks for level-4 and level-5. The approach is very much aimed at helping you to make informed decisions about how you learn best and to reflect on your own learning. This will support the other modules

throughout the programme, it will run throughout the first year although the formal assessment will not take place until semester 2, so that you have a well-balanced 60 credits of assessment per semester.

Another aspect is to make learning active and participative, which is reflected in the highly practical nature of the module delivery and the high proportion of coursework.

New material will be introduced through classroom-based lectures, workshops, seminars and practical lab sessions. All learning materials will be available via the College's virtual learning environment as a means of additional support for self-directed study.

As work-based learning is a key feature of vocational degrees, all of the assignments will use realistic case study scenarios, developed in conjunction with professionals from the Cybersecurity industry, which are reviewed and updated each year. This will equip you with skills you will need both in higher levels of academia and in the workplace.

Throughout the course of study there will be a strong focus on case study and problem-solving activities, often with students working in small groups. This provides a more realistic experience of a typical working environment. You will be supported in the development of these skills in the professionalism modules and through the on-going pastoral support, delivered as a college wide Higher Education (HE) tutorial programme.

Extensive use will be made of industry standard software applications, tools, security standards and frameworks to familiarise you with the subject skills necessary to support the learning and practical skill development in a commercial environment.

You will gain practical experience of analysis, design, implementation and testing various IT based systems, working with a range of current software, database, web development technologies. You will also gain a wide range experience of information security and cybersecurity practice, both in terms of technical solutions and organisational approaches (policies, procedures, legislation, industry standards and professional bodies).

You will be closely supported and monitored by module tutors and a personal tutor to ensure that the required academic and practical skills are fully developed. Further support will be provided through the use of open workshop sessions, learning forums and additional materials via the College's virtual learning environment, subject specific and HE essentials. Peer support is also encouraged. The weekly open workshop sessions will also provide access to specialist software (including the virtual cybersecurity lab) and additional tutor guidance.

Students with additional support needs should apply for "Disabled Students' Allowance. Disabled Students' Allowance" (DSA) which can provide financial support to cover the study-related costs you have because of a mental health problem, long term illness or any other disability. This could enable you to access additional support from the college's highly experienced learning support team or it could finance specialist equipment such as a high spec laptop to support your studies.

The course may include many opportunities to engage with industry during the course, with guest speakers from a range of our partners including the Yorkshire and Humberside Cybercrime Unit as well as ex-students who now work in a cybersecurity role. York College has introduced a two week inter semester break for any HE students who wishes to participate in voluntary work placement/enhancement opportunities.

You will demonstrate knowledge and understanding through a combination of coursework, practical activity and formal examinations. A wide range of assessment styles are employed, such as: walkthroughs, practical work, portfolios of evidence, formal reports, seminars and presentations. The research proposal module brings together a full range of skills and knowledge.

There are a number of “written work” assessments which have been carefully designed to reflect real-world tasks. Most assignments will be based on a single, realistic case study for which you will produce professionally styled reports, proposal documents, policy documents, technical briefs and specifications. These are all designed to provide an accurate experience of the industry wherever possible.

Graded exercises, weekly tasks, problem solving activities, flipped classroom activities and on-line revision tests/quizzes will be used as formative assessment tools to monitor your learning.

A full assignment schedule will be published at the beginning of the year to ensure that the workload is well balanced throughout the year and so that you know exactly what to expect in terms of demands on your time.

Feedback on assessments will be given on a regular basis throughout the course and detailed summative feedback will be provided after each piece of coursework is marked. It will highlight the strengths so that you can develop these further as well as offering suggestions for improvement in future work. You will be expected to use feedback as part of your reflective practice to develop knowledge and skills. The use of regular progress checks with a Personal Tutor are important to ensure difficulties are identified early and that you stay on track to achieve your target grade.

6. Criteria for admission

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

You must meet the College’s general entry criteria for study. In addition, you must have:

- 32 UCAS Points
- Maths GCSE Grade C/5 or above

If your first language is not English, you need to take an IELTS test or an equivalent qualification accepted by the College minimum of 5.5 in each subject overall 6.0

If you do not have traditional qualifications, you may be eligible for entry on the basis of Accredited Prior (Experiential) Learning (APL/APEL/RPL). We also consider applications for entry with advanced standing and entry directly onto level-5 (year 2) where appropriate experience or equivalent qualifications can be evidenced.

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)

n/a

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

There are many ways in which our students are actively involved in dialogue to shape the delivery of their programme, resulting in consistently high levels of satisfaction with internal survey questions about being able to express views about the course. The different methods include:

- HE induction Survey to ensure that you get the most supportive experience.
- Student Representatives forum: Regular meeting are encouraged through the Head of HE and the Programme Leaders to obtain module feedback and possible requirements towards module development or teaching practices.
- End of Module Surveys to evaluate the student experience.

- Twice yearly development and enhancement meetings involving the delivery team, the colleges quality improvement team, course (student) representatives and the head of Higher Education.
- Cross College student focus groups (from all subject areas).
- Standing agenda item at the college wide HE Academic Board meetings.
- College wide student experience surveys.
- The National Student Survey (NSS) in your final year of study.

Other methods employed to evaluate and improve the quality and standards of teaching and learning are as follows:

- Annual Monitoring Reports (AMR): completed by the delivery team annually to reflect and evaluate on retention/achievement, programme strengths and weaknesses, actions and solutions to progress and strengthen the programme and the response to the external examiners report.
- Peer observation and reviews: These are carried out annually with any required actions detailed including the sharing of good practice.
- Tutor module reviews occur at the end of the teaching semester, the need for progression or standardisation is discussed and action taken where required.
- Continual Professional Development: Recorded in the colleges annual monitoring Reports, required training needs for the development of teaching staff are then actioned through either internal training or further training through external providers.
- HE Bi-annual Standardisation meetings: This is a cross college forum where all HE teaching staff are given the opportunity to collaborate and work together to develop programmes and to share good practice within the college training weeks.
- All new staff go through an intense and thorough induction programme, each new member is allocated a mentor to help oversee and advise on standardisation processes and other teaching requirements.

In the development of this programme past students have been consulted, including some who now work in cybersecurity roles. We have also consulted current level-3 students who are considering further study in the cybersecurity field. It is clear from these discussions that the programme needs to be rooted in computer science while covering a range of cybersecurity disciplines and at the same time maintaining the strong practical focus of our previous Foundation Degree programme. It will provide an opportunity for you to progress to a third year specialising in cybersecurity or to start work in a cybersecurity role equipped with the underpinning knowledge and technical skills needed by industry.

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

Annexe 1: Curriculum map

Annexe 2: Curriculum mapping against the apprenticeship standard or framework
(delete if not required.)

Annexe 3: Notes on completing the OU programme specification template

Annexe 1 - Curriculum map

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

Level	Study module/unit	Programme outcomes																														
		A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2	C3	C4	C5	C6	C7	C8	D1	D2	D3	D4	D5	D6	D7
4	Introduction to Programming			✓									✓					✓			✓							✓	✓			
	Computer Hardware Fundamentals	✓								✓								✓		✓								✓	✓			
	Information Security Concepts	✓	✓							✓				✓						✓						✓		✓				
	Database Design Principles			✓								✓						✓			✓							✓	✓			
	Discrete Maths and Cryptography			✓	✓						✓							✓										✓				
	Professionalism in the Digital Sector	✓				✓								✓					✓							✓	✓	✓				

Level	Study module/unit	Programme outcomes																														
		A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2	C3	C4	C5	C6	C7	C8	D1	D2	D3	D4	D5	D6	D7
5	Information Security in Practice	✓	✓							✓		✓								✓								✓				
	Individual Research Proposal		✓								✓		✓								✓					✓	✓	✓				
	Building a Secure Database	✓	✓							✓		✓						✓	✓	✓							✓	✓				
	Website Security Technologies	✓										✓							✓	✓							✓	✓				
	Secure Networking Practices	✓	✓									✓						✓									✓	✓				
	Developing Secure Applications	✓										✓							✓	✓							✓	✓				

Annexe 3 - Curriculum mapping against the apprenticeship standard-N/A

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

Please ammend this mapping to suit Frameworks used within the different Nations if appropriate.

Level	Study module/unit	Apprenticeship standard																							
		K1	K2	K3	K4	K5	K6	K7	K8	S1	S2	S3	S4	S5	S6	S7	S8	B1	B2	B3	B4	B5	B6	B7	B8
4																									

Annexe 2: 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 than English** must have programme specifications both in English and the language of delivery.