Programme specification

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

1. Overview / factual information

Programme/award title(s)	B.Sc. (Honours) Computing Top-Up
Teaching Institution	Middlesbrough College
Awarding Institution	The Open University (OU)
Date of first OU validation	2018
Date of latest OU (re)validation	2024
Next revalidation	2028/29
Credit points for the award	120
UCAS Code	A135
HECoS Code	100366
LDCS Code (FE Colleges)	CB.
Programme start date and cycle of starts if appropriate.	September 2024
Underpinning QAA subject benchmark(s)	Computing (2022)
Other external and internal reference points used to inform programme outcomes. For apprenticeships, the standard or framework against which it will be delivered.	• Framework for Higher Education Qualifications • QAA Quality Code • SEEC Credit Level Descriptors for Higher Education
Professional/statutory recognition	NA
For apprenticeships fully or partially integrated Assessment.	NA
Mode(s) of Study (PT, FT, DL, Mix of DL & Face-to-Face) Apprenticeship	FT/PT Face-to Face
Duration of the programme for each mode of study	FT: 30 weeks PT: 40 weeks
Dual accreditation (if applicable)	NA
Date of production/revision of this specification	2024

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. Programme overview

2.1 Educational aims and objectives

The overall aims of the programme are to:

- harness students' enthusiasm for the field of computing inspiring further skills development;
- involve students in an intellectually stimulating and satisfying experience of learning and studying computing;
- provide students with access to current concept and trends within computing;
- develop students' ability to understand relationships between networking, security, data science and programming concepts;
- develop practical and professional skills expected of employers and industry within the various modules covered in this programme;
- provide a sector-relevant syllabus for practitioners, or for those aiming for employment in the computing industry, in areas of networking, security, programming and the web industry;
- provide students with the skills and experience to manage large project development;
- develop students' effectiveness at written and oral communication, as well as being able to read and produce technical documentations and present results to an audience;
- develop an understanding of the legal, social, ethical and professional issues
- involved in the use of computer technologies with respect to good professional practice;
- produce graduates that are proficient in computer languages, networking and security;
- develop students to become fully independent learners.

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)

This programme is not directly linked to any others. However, it is a progression option for graduates of the Foundation Degree in Computing.

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.
NA

2.4 List of all exit awards
BSc Computing [60 Credits] BSc (Honours) Computing [120 Credits]

Compulsory modules	Credit points	Is module compensatable?	Semester runs in
Application Development	20	Y	Year Long
Ethical Hacking	20	Y	Year Long
Network Automation and Programmability	20	Y	Year Long
Data Science	20	Y	Year Long
Computing Project	40	N	Year Long

Intended learning outcomes at Level 6 are listed below:

Learning Outcomes – LEVEL 6	
3A. Knowledge and understanding	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
A1: Demonstrate a comprehensive and detailed knowledge of advanced technical concepts of various computing disciplines.	**A1**: Lectures, demonstrations, practical lab sessions and tutorials are used to demonstrate a range of concepts and techniques used across various aspects of computing. Sessions offer a mixture of lectures and written/practical exercises and in order to develop comprehensive advanced knowledge and skills tested in summative assessments which include written and practical elements. Formative assessments are provided through in-session exercises, scenarios and practical lab sessions.
A2: Demonstrate a comprehensive and detailed knowledge of techniques and processes using appropriate hardware and software tools to meet programming, data analysis, decision making and technical scenario goals.	**A2**: Lectures, demonstrations, practical lab sessions and tutorials are used to demonstrate advanced techniques in application development, advanced use of hardware and software tools for penetration testing and data analysis. Sessions offer a mixture of theory and facilitated practice and provide ample opportunity for formative feedback and feedback on summative assessments.
A3: Apply research/enquiry-based approaches to technical and/or creative goals and demonstrate an awareness of current issues/creative context and developing technologies.	**A3**: Following several group seminars in which students share their ideas for project topics, one-to-one tutorial sessions are used to help students complete their Project Briefs by Week 3.

Learning Outcomes – LEVEL 6

3A. Knowledge and understanding

| **A4**: Plan, undertake and evaluate a negotiated, self-managed project in computing and demonstrate a comprehensive and detailed knowledge of the discipline investigated. | **A4**: Once a Project Supervisor signs off the Project Brief, fortnightly tutorials are used to help students to evaluate their progress and find solutions to challenging issues. Students must provide Project Supervisor access to their blog. In each tutorial, student blogs are viewed, and targets are set to be assessed at the next tutorial. Templates for Project Briefs are provided. |

3B. Cognitive skills	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
B1: Synthesise, appraise and evaluate key issues in data science and programming and ethical hacking methods technically to realise a specific goal.	**B1**: Lectures, demonstrations and practical task-based sessions in computer labs explore various attack vectors, tools and techniques. Session exercises provide students with opportunities to appraise and evaluate methodologies, concepts, tools and techniques used in penetration testing. Sessions provide opportunity for one-to-one and group demonstrations, formative feedback and tutorial support.
B2: Demonstrate the acquisition, application and evaluation of new knowledge and understanding in the creation of a major project.	**B2**: Students are supported continually to 'chunk' their practical work into tasks, and to appraise and evaluate their practical work at each stage and capture this activity in an online blog which will be invaluable in writing the Final Report (Assignment 1). Students are also required effectively to summarise their Project report and provide a practical demonstration of any practical outcomes in a Viva Voce (Assignment 2).

3B. Cognitive skills	
B3: Conduct and demonstrate the ability to research and analyse an e-commerce/application platform in order to design, develop and manage the construction of an ecommerce web presence or application.	**B3**: Computer Labs and academic support sessions provide opportunities for students independently to test and compare a number of ecommerce platforms. Students are then required to choose a preferred platform using a wide range of criteria from ease of use, through functionality to popularity in the industry. Students must also capture detailed justifications for their choice, for which they should find corroborative evidence which is presented in the form of a report in a summative assignment. use the platform to create a functional prototype which forms a second summative assignment. Computer Lab and academic support sessions provide many opportunities for both formal and informal tutorials and *ad hoc*, formative feedback.

3C. Practical and professional skills	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
C1: Act autonomously to work with a range of concepts, methodologies and techniques.	**C1**: Computer Lab-based practical sessions provide students with the opportunity to edit and programme a range of solutions autonomously. Several sessions are used to provide opportunities to compete practical work and associated written work. Some sessions are used for one-to-one feedback relating to the first assignment. Summative assessment is via a question paper in which some questions require students to undertake practical work in the computer labs.
C2: Devise and use a logical test plan for the development of a software-based solution.	**C2**: Computer Lab-based practical sessions provide students with the opportunity to develop and plan testing autonomously. Several sessions are used to provide opportunities to compete practical work associated assignments. Some sessions are used for one-to-one feedback relating

3C. Practical and professional skills	
	to the first assignment. Summative assessment is via a question paper in which some questions require students to undertake practical work in the computer labs.
C3: Determine and justify the appropriate strategy for a given problem based around a real-life case study in order to demonstrate solid problem-solving skills.	**C3**: Computing Lab-based Lectures - which include written, diagramming, group work and individual work. Case studies from industry shall be used and explored to gain understanding on the possible strategies and the appropriate use of them. Sessions provide ample opportunity for ongoing one-to-one demonstrations, formative feedback and tutorial support. Some sessions are used for one-to-one feedback relating to the first assignment. Summative assessment is a written report.
C4: Recognise and adopt professional/ethical approaches to computer technologies and research.	**C4**: Computing Lab-based lectures - which include written, diagramming, group work and individual work – are used to explore case studies from industry. Students use case studies to develop an understanding on the possible strategies including any potential ethical dilemmas. Sessions provide ample opportunity for ongoing one-to-one demonstrations, formative feedback and tutorial support. Some sessions are used for one-to-one feedback relating to the first assignment. Summative assessment is a written report.

3D. Key/transferable skills	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
D1: Produce professional quality presentation/documentation and use a range of methods to research, prepare, deliver, and evaluate a documentation/presentation to peers and, subject experts/employers.	**D1**: Lab-based lectures, demonstrations, group, seminars and one-to-one tutorials help students research and communicate complex issues clearly to specialist and non-specialist audiences. Students are encouraged to rehearse their presentations with the peers and to utilise the peer feedback they receive. Students are also encouraged to produce professional quality, effective documentation throughout. Feedback on draft reports in formal tutorials will also be provided. . Tutors will also provide opportunities for students to develop their English skills and refine their written and oral skills. Providing this opportunity to develop and refine their English skills will allow for stronger communication skills which will enhance their employability.
D2: Select and utilise a range of specialist hardware and or software, where appropriate to an end goal.	**D2**: Students are expected to develop their extant specialist hardware and or software skills and to capture evidence of this skills development in their blogs which will inform their summative assignments, in the form of a final report and presentation.
D3: Reflect systematically on performance to further develop learning.	**D3**: Students reflect and evaluate on both their learning and process of learning in the context of partially or fully independent study.

4. Distinctive features of the programme structure

- **Where applicable, this section provides details on distinctive featurs 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

4.1 Programme Structure

A significant feature of the programme structure is the duration of all modules – all are delivered in year-long mode. There are many reasons for delivering modules over the academic year rather than completing in a single semester. Firstly, most modules involve the use of industry standard hardware, and/or software development tools. Students need to become proficient in their use and a year-long module delivery provides this opportunity.

More generally, year-long modules help to maintain students' focus upon learning and teaching and less upon assessment especially in the first half of the academic year. Practical assessment is completed at the end of the year, allowing students maximum time to develop their understanding and use of the practical requirements. A year-long delivery model is also better suited to students requiring more support and guidance and is helpful in developing independent learners.

4.2 Virtual Desktop Infrastructure

Another significant feature of the programme is that all learners are offered access to all software products used on the programme through remote access to the VDI (Virtual Desktop Infrastructure) free of charge as part of the programme. This will provide students with remote access to all software used within the course, this means there is no expectations that's students will have any software of their own. There is an expectation that the students will have access to a standard desktop computer or laptop in order to access this. However there are many opportunities for the students to use computers within the college campus. Students have access to shared open work space within the HE building and also the LRC in the main building. They also have access to the classrooms within the Digital Building when not in use.

4.3 Part-Time Mode

Part-time students can opt to study the course over a 2-year period utilising an extended academic year. In response to local market demand, the College offers part-time modes of delivery for some of its programmes that enable students to complete their studies in a 40-week period. The key features of the part-time mode are:

- Each stage of the programmes starts in September and concludes at the end of July.
- This allows an additional 10 weeks of delivery per academic year when compared to the full-time mode.
- The additional 10-week window is to allow an extended period of time for part-time students to complete the project or work-based element of the programme.

- All part-time students receive formal scheduled teaching sessions (FST) each week that cover all of the taught elements of the programme of study.
- Academic Support (AS) sessions for part-time students are supported via the VLE for a proportion of their learning. The approach to managing this is as follows:

    o each programme of study is allocated hours for FST and AS;
    o AS hours for part-time students are delivered via the VLE;
    o students are allocated tasks and activities designed to build on the content delivered in FST sessions;
    o part-time students are expected to complete these tasks away from the College;
    o a window for completion of the tasks is set to allow students time to refer to tutors/peers as required with a specified response time allocated;
    o staff are allocated a time in the week (usually an evening) when they will be available to respond to posted requests for help as well as engage in on-line discussions.

Support for Part-Time Students
To ensure that all part-time students can engage with the delivery model, the following support will be made available:

- Initial support and guidance during induction to ensure that part-time students are able to log-on to the VLE and understand the relevant aspects required to support their engagement in remote AS sessions.
- Information - both on the VLE and in the part-time Student Handbook - to guide students through the process of log-on and use of the various sections.
- Lap-top loans for students that encounter technical difficulties or do not have access to a computer at home.
- Technical help to support students when not at the College.

Help for Staff supporting Part-Time Students
Staff are supported in working with part-time students as follows:

- Staff are allocated time during teaching weeks to manage AS sessions.
- Staff development is provided to ensure staff make best use of the VLE for the delivery of AS sessions.
- Mentor support from the Associate Director HE (Learning and Teaching) is ongoing.

4.4 Additional Certifications
Students are given the opportunity to engage in the Microsoft Fundamentals Certification within the course. These certifications offer a wide range of technical skills that students are able to engage with at their own pace or choosing. Learning such as the Azure Platform will provide them with the specific Microsoft skillset application and use in the workplace.

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

5.1 Induction

The following activities are provided in induction week:

- students are introduced to the VLE and any other communication/file sharing tools necessary

- students are given two taster sessions for Level 6 modules to give them a feel for the course and to get them creating computing content quickly

- alumni speak to new students about their experience of the programme and specifically address what students need to do to achieve a First-Class award

- a representative from the Student Union helps to elect student representatives.

5.2 Engagement Support

Engagement is monitored closely to ensure that all students are getting the best from the programme. Should a student need to miss a session for any reason, they are required to contact the lecturer beforehand. Where a lecturer notes that a student has not attended with no prior warning, the student is contacted at the end of the session, asking if the student is well and reminding the student that they are required to let lecturers know if they cannot attend.

Where a student misses three consecutive sessions, the year tutor also contacts the student with an invitation to attend a formal meeting. Where attendance problems persist, the year tutor works with the College student support staff who, where necessary, direct students to the relevant confidential support (personal, financial, etc). Where students are facing difficulties, it is vital to ensure they get the right support and where necessary, decide to withdraw or suspend as the timing of any withdrawal/suspension can affect their student loan.

5.3 Tutorial Support

Student tutorial opportunities are embedded in all sessions. Theory sessions are structured to provide input followed by practical experimentation, the results of which can then be fed back into spontaneous tutorials in further sessions. Formative and summative feedback tutorials are also embedded into each module and feedback tutorial sessions are listed in module guides. Students are asked to log their practical activity, which is used as the basis of regular tutorials with their year tutor.

5.4 Pastoral Tutors

The tutor offers return to study sessions during which students are encouraged to reflect on their performance in preceding programmes and develop support strategies, determine the highest award classification that is attainable, and develop strategies to achieve this best outcome.

The programme team have all attended staff development sessions relating to Asperger's and dyslexia (attendance at many of these sessions is mandatory). For students with dyslexia, staff offer dyslexia-friendly versions of lecture notes and include a higher-contrast background on notes/session plans. Students declaring either condition receive a formal assessment after which the programme team are advised on the steps they must take.

5.5 Encouraging Completion

One of the significant advantages offered by the programme is the amount of time students are given by module tutors. This is due to the relatively small number of students and the mode of delivery discussed above. There are, therefore, plenty of opportunities to give formative feedback and emphasise the importance of submitting on time.

5.6 Reassessment Period

Tutorials are provided for students offered reassessment and the facilities remain available.

5.7 Module compensation

All programme modules other than Computing Project may be compensated. Each student may be compensated to the value of 20 credits per level.

5.8 Academic Support and Skills

The delivery of many modules is based upon individual sessions that consist of demonstrations and practical exercises. This delivery strategy ensures that theory is always applied, that practical skills, knowledge, and understanding are regularly checked, and that formative feedback is continuous rather than focussed at specific points in the academic year.

In addition to in-session help, students can also make appointments to get support from:

- members of the programme team: module leaders, lecturers, and technicians;

- the programme leader and year tutors.

The personal tutoring system is in place to support a student's full engagement with their programme of study and gain as much as possible from their time at the College. Though the emphasis is on academic support the meetings are also an opportunity to raise pastoral issues which may be having an impact on a student's academic performance. Tutors can offer support and advice and, if required, direct students to further support services available within the College which they may find of value. This is further supported by the personal tutor system. The development of generic academic skills is supported by these same modules via teaching/learning and assessment. The modules focus on research, presentation, acquisition of knowledge, planning, and collaboration to various degrees of emphasis. The development of written work is embedded widely throughout the programme as specified in module specifications.

5.9 Research Skills Development

The module 'Computing Project' is utilised to comprehensively develop students' research skills and extend the scope of research conducted on this programme and in further study. In the experience of the programme team, research focussed modules at each level are necessary on a vocational course to thoroughly embed the necessary skills to produce well-rounded, practically skilled graduates, who are also well prepared for the rigours of further study and/or research.

5.10 Technical Support

The specialised labs and facilities containing relevant equipment are supported by excellent technician staff. They ensure that equipment is used and maintained

appropriately and oversee all the health and safety and risk management concerns. Students can log IT support requests via the HALO system.

5.11 Programme Documentation and Online Learning Support
Students are provided with programme and module guides that contain comprehensive information on how their programme and modules are structured and delivered. These documents are also available to students throughout each academic year (and for the duration of their registration) via the College Virtual Learning Environment (VLE). All teaching and learning content is made available via the VLE. This online resource includes lecture notes and a range of audio/video materials. Assessments are communicated to and submitted by students using the VLE.

5.12 Virtual Learning Environment (VLE)
Every programme uses the College VLE which is a key resource to support student learning as well as engagement with the programme and the College in general. All teaching materials and general course information is backed up on the VLE, ensuring that students can access what they need when they need it. The VLE is also used as a portal to other sources of support. Students can access the programme of informal workshops designed to support their learning, including: improving writing style and referencing, planning assignments, developing critical thinking and other key skills. All elements of the VLE are checked for accessibility to ensure inclusion throughout all resources.

5.13 Library and Learning Resources
Students can access a range of resources through the College Learning Resource Centre (LRC) and associated online services. Online services are listed in the background document for this programme. Students can access specific sessions with the LRC staff with regard to advanced academic and research skills. This activity is introduced as part of the induction sessions at the start of each year but can be revisited again throughout the year through refresher sessions.

5.14 Additional Learning Support
Any student that considers that they have, or may have, additional learning support needs can access a range of support through the College. Initial assessments by the College HE Student Support and Participation Coordinator are provided to support understanding of the range of support that may be needed which then triggers the provision required.

5.15 Student Services
All students are able to access the College student services which are based in the Dock Street building which has its own reception and drop in facilities. As well as general advice about the College, the student services team also provide: counselling, financial support, learning support and signposting to additional or partner services.

5.16 HE Student Areas
All HE students have areas in the College that are exclusively for their use. In the main HE building, all HE students have access to the HE open-plan working space, which has access control to retain its exclusivity.

5.17 The Fitness Studio
All students are entitled to free membership of the Fitness Studio. The Techno Gym equipped facility, provides a range of cardiovascular and resistance exercise

equipment. Together with the latest innovations in IT wellness programme monitoring, students can engage in regular exercise in a friendly and easily accessible environment. Support and guidance are available during opening hours from experienced staff.

5.18 Other Facilities
The College has a wide range of other facilities which students can access either free of charge or at subsidised or nominal rates. Examples include:

- 156 seat theatre which produces several performances throughout the year many of which are free for students to attend
- hair salon providing low cost services
- beauty Spa facility which offers
- jacuzzi, light therapy sauna and steam room, flotation room, 39 private treatment rooms and nail bar
- Fully equipped recording studios and control rooms.

5.19 Digital Building
This programme makes use of both the HE building for delivery and also the dedicated Digital Building which contains labs, classrooms and all specialist equipment for the successful delivery of Digital courses from Level 1 to 6. The specialist classrooms contain industry standard equipment which has been selected and developed based on the requirements from industry to best fit their needs for a smooth transition from education to employment. Each room is sponsored by a digital employer and they invest time and support into the courses through their engagement with Digital Advisory Boards and also workshops and guest speakers. Developing this strong link with employers not only prepares the students for transition into employment but also offers links and contacts for their own professional networking.

5.20 Laptop Scheme
Middlesbrough College's MC Click scheme provides all HE students with a Microsoft Surface to assist with their studies. Students who complete the laptop scheme for 2 years get to keep the device. Any student who leaves within 2 years is required to return the device to the College.

5.21 EDI Statement
At Middlesbrough College we strive to ensure equality, diversity and inclusion in every aspect of our provision. We recognise and appreciate individual uniqueness and believe it should be embraced. We foster a culture where every individual feels supported, valued, respected and accepted regardless of their age, race, ethnicity, disability, gender identity or expression, sexual orientation, religion, or any other characteristic which makes them who they are.

Every programme reflects our commitment to create an inclusive environment where each individual has equal opportunities to achieve and succeed. Discriminatory practice, unconscious biases and systemic barriers are challenged and eliminated. We will continue to develop a learning environment where we celebrate diversity, treat everyone with respect, dignity and fairness.

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

The most popular (and directly relevant) entry qualifications is the Foundation Degree in Computing (or a closely related field) or a Higher National Diploma. Where applicants apply with qualifications that are not directly relevant, the Programme Team looks for evidence of experience with computing, specifically programming/web development and/or networking/IT Support/Sys Admin and frequently, applicants in this category are able to offer the relevant experience/grades. Applications from students with non-standard entry qualifications are welcome. Admission tutors take into account any alternative qualifications or other experience they may have.

In all cases successful candidates require qualifications in English Language and Mathematics to at least GCSE grade C/4 level or equivalent.

Applications from students with non-standard entry qualifications are welcome. Admission tutors take into account any alternative qualifications or other experience they may have which will be considered under the College RPL process.

7. Language of study
English

8. Information about non-OU standard assessment regulations (including PSRB requirements)
NA

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)
NA

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

10.1 College HE Teaching and Learning
The College has recognised the importance of having a distinct approach to HE teaching and learning for over ten years. The first HE specific Learning and Teaching process was introduced in 2009. Subsequent reviews and updates in 2011 and 2014 have enhanced the process to reflect the aims of the UK Professional Standards Framework and prepared the College to meet the expectations of the Teaching Excellence Framework.

Many of the innovations established in the evolution of this process have been subsumed into the current Cross-College Learning and Teaching model for all levels, including a non-graded observation process. The underlying principle is to place the

student at the centre of the process to ensure that their learning and attainment of learning outcomes drives the process. Underpinning this has been a focus on ensuring that lecturing staff are fully engaged in the process to match outcomes to professional discussion and peer review. These approaches have been further refined to form part of the College departmental review process.

10.2 Observation of Teaching and Learning (OTL)
The OTL process for HE provision has been contextualised to reflect the differences between HE and FE. The OTL process for FE courses is based upon the expectations of the Common Inspection Framework, whereas the HE model is aligned to the expectations of the UKPSF and the TEF. Central to the process is the student as an independent learner, developing their academic skills as they progress through their academic career.

The College model distinguishes between different levels of study and differing abilities of the students. At Level 4, teaching staff take a lead role in the student learning process, but as students progress, the balance gradually evolves so that the students become leaders/co-leaders of learning. To facilitate this model, student learning and reflection may not take place at the same time as content delivery, making it difficult for an observer to see the product of the model. To work around this, the OTL process for HE lessons is based on mapping the observation of the session to the scheme of work and planned assessment tasks.

The outcome of the OTL forms the basis of a professional discussion with a Teaching and Learning mentor as well as with members of the HE teaching team, to ensure that good practice is shared across the College. Any trends identified from OTL reports or staff feedback are used to inform relevant CPD activity.

10.3 Feedback from Students
Another input to the process of evaluating and improving the quality and standards of teaching and learning is feedback from students. Feedback emerges through several routes. The most significant is through module evaluation questionnaires. In addition to five-point Likert scale questions, students are asked to state 'what worked and what could be improved' regarding any aspect of the module. The results and comments from the module evaluation questionnaires feed into module reports. Over the past twelve years this student feedback has been vital in informing the major and minor modifications the programme has undergone. Student feedback is also collected from induction surveys, the Student Reps, the NSS and in both formal and *ad hoc* tutorials.

10.4 Staff Workforce Development
Improving the quality and standards of teaching and learning is also a focus of the internal and external workforce development (WFD) sessions. Academic staff attend a range of internal and external staff development events aimed at improving teaching and learning. The academic year 20/21 saw the introduction of Teaching Innovation Groups (TIG).

10.5 Staff New to HE
All staff new to teaching HE at the College are required to hold a relevant degree and a PGCE as part of the terms of their employment. A higher degree is desirable for all staff and for those teaching Level 6, holding a relevant level 7 qualification or the commitment to study for one is essential. Staff new to teaching HE at the College receive initial tailored CPD to help them to make the transition including:

- An HE induction session;
- An HE assessment, marking, and feedback session;
- A number of HE specific developmental observations.

10.6 Staff New to Delivering at Level 6

New staff employed for the delivery of Level 6 awards are required to hold a relevant Level 7 qualification. Those staff already teaching at the College making the transition to Level 6 delivery are provided with funding and support to complete a Level 7 qualification at the earliest opportunity.

Programme teams new to Level 6 awards are provided with advice and guidance from the Higher Education Office (HEO) during the programme development phase to ensure that the teams understand the difference in expectations at Level 6. As well as general information, which is also available via the VLE, programme teams are required to submit draft submissions for feedback. A process of meetings and regular reviews of the design and content of the new awards ensures that awards are aligned to the FHEQ and expectations of the UK Quality Code for Higher Education. In programme teams where there is no prior expertise amongst the team of delivering at Level 6, mentor support is provided by the HEO and experienced staff throughout the first year of delivery.

10.7 Ongoing Subject and Pedagogic Development

All HE teams share resources and good practice via the HE Staff Room located in the University Centre. The area is set up to encourage HE staff from across the College to meet, both formally and informally, to share good practice and discuss ideas and approaches to module and programme design and delivery. All teaching staff are supported by more experienced members of the team who act as mentors. In addition, cross-college learning and teaching mentors, made up of advanced practitioners, provide 1:1 support to teams as well as tailored CPD sessions. The College has a research and scholarly activity procedure which encourages and supports staff to maintain and annually update both pedagogical and subject expertise.

10.8 HE Digital Champion

The College is focussed on providing the highest quality online provision to enhance programmes delivered face to face. Each department has been allocated a 'digital champion', who is an expert practitioner using Microsoft 365 for teaching and learning. Digital champions are the first point of contact for any staff member requiring support with online teaching and learning, and they regularly provide in person and online sessions tailored to the specific requirements of staff. Digital champions are managed by the College Director of Digital Innovation who holds regular cross-college meetings where information/updates are shared to be passed on to departments.

10.9 Staff CDP

Staff are encouraged to engage in CPD to enhance the delivery of the subjects, whether that is subject specific upskilling or teaching and learning. Staff are encouraged and supported with undertaking new courses or industry specific skills development. Funding is available yearly for staff CPD to undertake further HE qualifications and time is allocated for that work within their weekly contact. A number of the team have had time and funds to complete further HE qualifications to assist in the delivery of the qualification.

10.10 Staff Research

The college have a Research Group that meet regularly to explore research opportunities and support in the writing and publications of research papers. Two of the delivery team for this course have had papers published and are presenting them at an upcoming conference. Staff are supported in this endeavour and given time and resources to complete the work and also resources to attend and present at the conference. The most recent paper is titled "Revolutionizing Vehicle Damage Inspection: A Deep Learning Approach for Automated Detection and Classification" to the 9th International Conference on Internet of Things, Big Data and Security (IoTBDS 2024). The submitted paper aims to explore the use of deep learning algorithms to automate the process of vehicle damage detection and classification. The paper focused on three main deep learning architectures: Convolutional Neural Networks (CNNs), Generative Adversarial Networks (GANs), and Deep Neural Networks (DNNs). The results of the experiment revealed significant differences in the performance of the CNN, DNN, and GAN models. The CNN model achieved the highest accuracy rate, at 91%, followed by the DNN model at 84%. The GAN model achieved a more modest accuracy rate of 78%. These findings contribute to the advancement of vehicle damage detection technology and have important implications for industries, policymakers, and researchers interested in deploying state-of-the-art solutions for faster and more precise identification of various levels of damage and their severity.

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

Removed the e-commerce module and replaced with Network Automation and Programmability.

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 (x) particular programme learning outcomes.

Level	Study module/unit	A1	A2	A3	A4	B1	B2	B3	C1	C2	C3	C4	D1	D2	D3															
														Programme outcomes															
6	Application Development	x	x			x		x	x	x				x																
	Computing Project	x		x	x	x	x		x			x	x	x	x															
	Data Science	x	x			x	x		x			x	x	x																
	Ethical Hacking	x	x			x			x			x	x	x																
	Network Automation and Programmability	x			x			x		x	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 than English** must have programme specifications both in English and the language of delivery.