

Top-up Programme specification

1. Overview/ factual information

Programme/award title(s)	BSc (Hons) (Top-up) Computing and Digital Technologies
Teaching Institution	University Centre Somerset
Awarding Institution	The Open University (OU)
Date of first OU validation	March 2019
Date of latest OU (re)validation	March 2019
Next revalidation	N/A
Credit points for the award	120 credits Level 6 Total - 120 credit points – BSc (Hons)
UCAS Code	I190
JACS Code	TBC
Programme start date	September 2019
Underpinning QAA subject benchmark(s)	Honours degree subject benchmark statement – QAA Computing 2016
Other external and internal reference points used to inform programme outcomes	Framework for Higher Education Qualifications (FHEQ) 2014 Foundation Degree Characteristics Statements 2015 SEEC Credit Level Descriptors 2016
Professional/statutory recognition	
Mode(s) of Study (PT, FT, DL, Mix of DL & Face-to-Face)	FT and PT, Face-to-face
Duration of the programme for each mode of study	1 years Full Time 2 years Part Time
Dual accreditation (if applicable)	
Date of production/revision of this specification	June 2019

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 develop and challenge students by establishing a high degree of expertise in the application, integration and critical evaluation of a range of computer and digital technologies, principles and practices.
- To produce graduates who can make a significant contribution to their chosen profession.
- To develop a range of professional knowledge and skills to analyse problems, to synthesis solutions, to work effectively with others and to maintain their own expertise in a rapidly changing area.

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 programme is accessible as a progression route to students with a Foundation Degree in Computing and Digital Technologies or very similar subject area.

Similarly, on successful completion of the BSc (Hons) (Top-up) Computing and Digital Technologies students can elect to continue onto post-graduate study (subject to meeting course entry requirements at their chosen institution), seek employment in the computing industry or enter into teaching.

2.3 For Foundation Degrees, please list where the 60 credit work-related learning takes place

Non Applicable.

2.4 List of all exit awards

BSc Degree Ordinary Degree (without Honours) - Requires any 300 credit points (with a minimum of 60 credits at Level 6 from a combination of at least three 20 credit modules excluding SCGT65 Individual Project).

3. Programme structure and learning outcomes

Programme Structure - LEVEL 6 Full Time					
Compulsory modules	Credit points	Optional modules	Credit points	Is module compensatable?	Semester runs in
SCGT61 Software Development and Quality Assurance	20			Yes	A, B
SCGT62 Smart Device Application Development	20			Yes	A, B
SCGT63 Penetration Testing and Ethical Hacking	20			Yes	A, B
SCGT64 Artificial Intelligence and Machine Learning	20			Yes	A, B
SCGT65 Individual Project	40			No	A, B

Level 6 Award:

BSc Degree with Honours - Requires 360 credit points (minimum of 120 credit points must be at Level 6).

Level 6 Exit Award: Ordinary BSc Degree (without Honours) - Requires any 300 credit points (with a minimum of 60 credits at Level 6 from a combination of at least three 20 credit modules excluding SCGT65 Individual Project).

Programme Structure - LEVEL 6 Part-time Yr. 1					
Compulsory modules	Credit points	Optional modules	Credit points	Is module compensatable?	Semester runs in
SCDT62 Smart Device Application Development	20			Yes	A, B
SCDT63 Penetration Testing and Ethical Hacking	20			Yes	A, B
SCDT61 Software Development and Quality Assurance	20			Yes	A, B

Programme Structure - LEVEL 6 Part-time Yr. 2					
Compulsory modules	Credit points	Optional modules	Credit points	Is module compensatable?	Semester runs in
SCDT64 Artificial Intelligence and Machine Learning	20			Yes	A, B
SCDT65 Individual Project	40			No	A, B

Intended learning outcomes at Level 6 are listed below:

<u>Learning Outcomes – LEVEL 6</u>	
3A. Knowledge and understanding	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>A5 A comprehensive understanding of the core techniques, tools and methods of management, testing and quality assurance of computing and digital technologies solutions.</p> <p>A6 Comprehensive understanding of the professional, economic, social, environmental, moral and ethical issues involved in the design, development and deployment of computing and digital technologies solutions.</p>	<p>At Level 6, students are expected to consolidate their critical knowledge and understanding of new material and to take greater responsibility for the selection of concepts, principles and methodology needed to analyse, synthesise and evaluate particular systems, processes and products in a range of contexts.</p> <p>Students undertake major individual project addressing the development of A5 and A6 in focussing on aspects of the project life cycle of a specific computer system. The project is designed to allow students to integrate and contextualise their understanding skills and abilities in a supportive and semi-structured environment.</p> <p>Assessment</p> <p>Formal assessment of knowledge and understanding is through coursework which will include practical work, case study reports and project work and documentation. A5 is directly assessed within SCDT61 Software Development and Quality Assurance. A6 is directly assessed within SCDT63 Penetration Testing and Ethical Hacking.</p> <p>In addition, all Level 6 learning outcomes are assessed within the major</p>

Learning Outcomes – LEVEL 6

3A. Knowledge and understanding

computing project SCDT65 Individual Project.

3B. Cognitive skills

Learning outcomes:

- B5** Creatively solve complex problems through deploying appropriate theory, practices and tools for the specification, design, implementation and evaluation of a computing and digital technologies solution.
- B6** Critically evaluate technical information, concepts, arguments, assumptions and evidence derived from a wide variety of sources to devise a computing and digital technologies solution to a complex problem.

Learning and teaching strategy/ assessment methods

At Level 6 individual project work addresses B5 and B6, in which student learning includes an appreciation of the open-endedness and incompleteness of knowledge in practical computer problems.

Throughout Level 6, the learner is encouraged to undertake independent study both to supplement and consolidate what is being taught/learnt and to broaden their individual cognitive skills and understanding of the subject.

Some material will be presented via lectures and tutorials, but a significant component will be gained through self-study, some of it unguided.

Assessment

Formal assessment of cognitive skills is through coursework which will include presentations, case study reports, practical and project work. B5 is directly assessed in SCDT62 Smart Device Application Development. B6 is directly assessed in SCDT63 Penetration Testing and Ethical

3B. Cognitive skills	
	<p>Hacking.</p> <p>In addition, all Level 6 learning outcomes are assessed within the major computing project SCDT65 Individual Project.</p>
3C. Practical and professional skills	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>C5 Manage own learning with confidence adhering to professional codes of conduct and industry standard practices required in the computing sector.</p> <p>C6 Propose, research, and undertake individual project activity. Report a devised solution for a complex computer-related problem in a structured manner, relying on minimal supervision.</p>	<p>At Level 6 practical and professional skills are acquired mainly through the implementation of a major computing project, in which the students will need to independently undertake technical research conducted professionally and following the scientific method. Coursework and practical laboratories are also used to deliver practical and professional skills.</p> <p>The self-defined and individually managed major project offers enhanced opportunities for developing either a wider range of professional skills, or developing specific practical skills to higher levels of proficiency.</p> <p>Throughout Level 6, the learner is encouraged to develop practical skills further by undertaking independent study.</p> <p>Assessment Formal assessment of practical and professional skills is through coursework which will include practical work, written reports and team project work. C5 is directly assessed in SCDT61 Software Development</p>

3C. Practical and professional skills	
	<p>and Quality Assurance. C6 is directly assessed SCDT64 Artificial Intelligence and Machine Learning. Students will always be required to provide a demonstration of any practical work or software artefacts.</p> <p>In addition, all Level 6 learning outcomes are assessed within the major computing project SCDT65 Individual Project.</p>
3D. Key/transferable skills	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>D5 Conduct research effectively, drawing on a wide variety of sources under minimal direction, and be proficient in the use of referencing sources of information;</p> <p>D6 Apply critical thinking skills and an analytical and scientific approach to problem solving to complex systems and situations.</p>	<p>At Level 6 transferrable skills will be addressed using lectures and tutorials for the presentation of instructional material, with practical, independent study and project work offering the opportunity to practice the skills in a supportive environment.</p> <p>The students are being expected to take an increased responsibility for developing their own transferable skills and identifying resources to support this development. Throughout, the learner is encouraged to develop key transferable skills further by undertaking independent study and research.</p> <p>Assessment Formal assessment of key transferable skills will be undertaken via a combination of presentations, case studies reports, practical and project work. D5 is directly assessed in SCDT62 Smart Device Application Development. D6 is directly assessed in SCDT64 Artificial Intelligence and Machine Learning.</p>

3D. Key/transferable skills	
	In addition, all Level 6 learning outcomes are assessed within the major computing project SCDT65 Individual 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**

- The programme covers a wide variety of progressive computing topics throughout the Top-up for example software development, smart device application development, ethical hacking and machine learning. Knowledge and practical skills will be developed in advanced programming, artificial intelligence and penetration testing.
- The programme equips graduates with a range of valuable skills securely underpinned by relevant and up-to-date knowledge of the principles of computing and modern digital technologies throughout the Top-up programme.
- The learners have access to a well-resourced and specialised cyber security and networking laboratory where they will have the opportunity to practice the skills and knowledge gained in the theoretical sessions.
- The programme fosters autonomy within the student body in their professional development and a professional approach, bound by professional codes of conduct appropriate to employment within the computing sector.
- The programme provides opportunities for learners to develop products and/or relationships with regional, national and international companies involved with Computing and Digital Technologies as well as foster own professional skills to support the South West.
- The programme incorporates various modes of delivery for flexibility and diversity, helping to support the student learning by tools such as, Smartboards, Virtual Learning Environments, Forums, etc., and making available to students resources such as online tutorials and learning materials.

The Level 6 Top-up programme:

- Provides skills and knowledge to enter a range of computing professions, which have seen increased demand for employees at graduate level, and will equip learners with the necessary skills and academic standing to enter postgraduate study.
- Enhances employability of students by providing training with industry-standard software and access to specialised resources such as the Cyber Security and Networking Laboratory, graphics tablets, programmable robotics, 3D additive printer and VR hardware.
- Incorporate substantial practical and theoretical work by undertaking a major computing project in which the learner will have the opportunity to independently conduct technical research conducted professionally, ethically and following

scientific methodologies, thus preparing them for the workplace.

5. Support for students and their learning

Seminars/Tutorials/Workshops

Seminars, tutorials and workshops are a crucial part of the learning process, as students have the opportunity to analyse problems and discuss issues in depth. Students should come to these sessions prepared to participate fully as these are a key means of facilitating active learning. These sessions are invaluable in developing independent learning; critical thinking and stronger analytical skills facilitating a process that encourages students to develop many of the key skills employers look for in the creative media industries. Students receive tutorial sessions. Tutorials focus on the development of academic and professional skills including the development of a professional digital portfolio. These sessions allow students to have one-to-one tutorials with their personal tutor to discuss any personal, professional or academic issues.

Other Academic Support

Some modules may have relatively little formally timetabled teaching. Where this is the case, there will be other academic support such as:

- Formative and summative feedback on assessed work – to help develop knowledge, understanding and skills through undertaking assessments and practical projects;
- Tutorials – many subjects have timetabled tutorials where work can be discussed with subject tutors. Students can also arrange to meet tutors to discuss work;
- HE Study Centre is available for study skills session. Students will also undergo the HEAD Start study skills programme as part of their Tutorial provision. This programme covers academic skills including researching, referencing and academic writing.
- Additional learning support – many of our students benefit from the additional learning support by our dedicated Additional Learning Support team. This support is tailored to each student's individual needs as well as specialist additional support in close collaboration with the course programme team;
- College Virtual Learning Environment, Student Portal and email. Some staff use these to initiate discussions and set up learning support groups for their modules;
- Electronic learning – Access to eBooks, electronic journals and research papers as well as resources such as eBook readers and laptop computers all serve to facilitate and support student learning and research practice;

- Learning packs. Some modules use learning packs for students to work through in their own time. These may involve exercises to help develop understanding of the materials.

6. Criteria for admission	
GCSEs required at Grade C or above	4 GCSE subjects at 9-4 (or grades A* - C) including English and Maths.
A level 5 qualification in Computing such as: HND or Foundation Degree	RPL of applicant's prior learning at HE level considered.
Foundation Degree / HND Computing	RPL may be awarded in respect of a completed programme of study (e.g. HND, DipHE, PG Diploma) or in respect of one or more modules or units of a programme. RPL is the award of credit towards an Open University award in respect of knowledge and skills acquired through life, work experience, and/or study which are not formally attested through certification by a recognised professional or academic body. Academic regulations for OU Validated Awards will be applied.
Interview/portfolio requirements	Interview
Disclosure and Barring Services (DBS) Check – (formerly CRB check)	No

7. Language of study
<p>All classes are conducted in English. If English is not your first language you will be asked to provide evidence of your English language ability in order to apply and start the course. The standard English language requirement for entry is IELTS 6.0 with a minimum of 5.5 in any one paper, or equivalent.</p>

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

There will be no exceptions to the academic regulations of The Open University.

The Open University Academic Regulations are available on the VLE and the college website at <http://someset.ac.uk>.

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

All programme teams participate in Annual Programme Monitoring during their Programme Committee Meeting every Autumn. This process involves obtaining student views as well as the views of the staff that delivered each module and where appropriate may consider the views of employers who have been involved with the programme. In order to ensure robust evaluation of the programme, the programme team also consider student opinion, programme statistics, (including retention, achievement, gender and ethnicity), and student survey results, in addition to the External Examiner report.

The programme team produces an action plan based on their evaluation to assist in bringing about the developments they have identified. Each Spring the Programme Committee Meeting is held again to review progress with the action plan and to canvas opinions from staff, students and employers connected to the programme. This evaluation process is overseen by the cross-college HE Senate, the Senate receives summary reports of all HE matters each term and produces and monitors a top level cross-college HE Enhancement Action Plan as a result.

Frequent Continuing Professional Development (CPD) sessions are run at the College for academic staff, to share good practice and to support effective teaching, learning and assessment. Peer Review is used at UCS. It is a supportive and productive developmental tool where staff observe each other.

University Centre Somerset has a formal structure for hearing the student voice. Student representatives from each group gather views that are widely felt, strongly felt and achievable and report these to the twice yearly Programme Committee Meetings. In addition to programme level activities designed for students to feedback comments to their teaching team, UCS also appoints a student representative for each Curriculum Area. This representative collates comments from the Programme Committee Meetings and feeds this back to the HE Student Executive meeting. The focus of this meeting is to obtain feedback about any cross College matters, or unresolved issues as well as highlighting matters to celebrate from across the curriculum areas. In addition to this the Learning Resource Centre hold regular student forums to gain feedback, which helps them to improve their service to learners. Students are requested to complete written surveys: the Student Perception Questionnaire/National Student Survey (NSS) in order to formally record their impressions of the programmes. The HE Student Governor provides the student voice at Senate meetings which oversee HE provision at UCS, and also at the Standards Committee of the Board of Governors.

These mechanisms are all designed to evaluate and improve the quality and standards of teaching and learning.

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

None.

Annexe 1: Curriculum map

Annexe 2: 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							
		A5	A6	B5	B6	C5	C6	D5	D6
6	SCDT61 Software Development and Quality Assurance	✓				✓			
	SCDT62 Smart Device Application Development			✓				✓	
	SCDT63 Penetration Testing and Ethical Hacking		✓		✓				
	SCDT64 Artificial Intelligence and Machine Learning						✓		✓
	SCDT65 Individual Project	✓	✓	✓	✓	✓	✓	✓	✓

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.