University of Plymouth

Academic Partnerships

CORNWALL COLLEGE

Programme Specification

BSc (Hons) Computing Technologies (Top-Up)

Academic Year 2022-2023

If you require any part of this Handbook in larger print, or an alternative format, please contact:

HE Operations
E-mail: *(CCHEA@cornwall.ac.uk)*

Please note:

All the information in this Handbook is correct at the time of printing.

The Cornwall College Group is proud of its teaching and research and it undertakes all reasonable steps to provide educational services in the manner set out in this Handbook and in any documents referred to within it. It does not, however, guarantee the provision of such services. Should industrial action or circumstances beyond the control of the College interfere with its ability to provide educational services, the University undertakes to use all reasonable steps to minimise the resultant disruption to those services.

PROGRAMME SPECIFICATION

Programme Title: **BSc (Hons) Computing Technologies (Top up)**
Internal Programme Code: **Full Time (5376), Part Time (5377)**
Partner Delivering Institution: **Cornwall College, Camborne**
State Date: **September 2022**
First Award Date: **July 2023 (Full Time), July 2024 (Part Time)**
Date(s) of Revision(s) to this Document: **23 August 2018, 26 September 2018, 15th May 2019/4 Aug 2021/19 Oct 2021/25 March 2022**

Contents

PS1. Programme Details

Awarding Institution:	University of Plymouth
Partner Institution and delivery site (s):	Cornwall College, Camborne
Accrediting Body:	N/A
Language of Study:	English
Mode of Study:	Full time and Part time (5376/5377)
Final Award:	BSc (Hons)
Intermediate Award:	N/A
Programme Title:	Computing Technologies (Top-Up)
UCAS Code:	**221B**
HECOS Code:	**100365, 100376, 100385**
Benchmarks:	Framework for Higher Education Qualifications (FHEQ), guided by the QAA Honours degree Computing Benchmark (2019). The management and delivery of the programme is in accordance with the precepts of the QAA Code of Practice.
Date of Programme Approval:	19 May 2015

PS2. Brief Description of the Programme

The programme gives students with an appropriate Foundation Degree qualification (or equivalent) the opportunity to progress to study for a full Honours Degree. It offers development and in-depth studies in the field of evolving computing technologies, and also provides an opportunity to undertake modules in either the field of networking (subject to sufficient demand) or in software development. With the developments and roll out of broadband, the computing and digital technology opportunities are constantly growing.

The course has been informed by and designed in response to the needs of both national and local employers. The development of the BSc Computing Technologies (Top-up) has provided a fantastic opportunity to work with local employers to create a top-up degree which fits exactly with what the market is looking for. It offers the opportunity to those looking to further their qualifications in the digital technologies sector.

Students will study a substantial individual autonomous project, together with common core modules covering Cloud Computing and Security, E-Business for the Entrepreneur, Digital Forensics and Agile Methods. There are electives to choose from, either Advanced Networking or Advanced Object-Oriented Programming.

There will be opportunities to undertake work related learning and vendor certifications alongside the academic qualification. The course will include guest speakers from industry, to enhance programme delivery. Local employers are looking forward to engaging with the staff and students with a view to nurturing and recruiting home-grown Cornish talent. All of this will ensure students have the skills and attributes required for success within the industry.

PS3. Details of Accreditation by a Professional/Statutory Body (If Appropriate)

N/A

PS4. Exceptions to University of Plymouth Regulations

(Note: Plymouth University's Academic Regulations are available internally on the intranet:

Student regulations, policies and procedures - University of Plymouth

There are two 10 credit modules included within the programme structure.

PS5. Programme Aims

This programme will deliver:

A1: A challenging programme of study that will enable candidates to develop the conceptual understanding, knowledge, skills and techniques required for today's computing and digital technology industry.

A2: An opportunity for specialisms (networking route will run if there is sufficient demand) relevant to the Digital Technology industry in which candidates will be employed, and a platform for successful career development.

A3: Development of a social and emotional intelligence to demonstrate effective enterprising performance both as a team member and as an individual using time, personnel and project management techniques in a range of scenarios with an emphasis on reflection.

A4: Personnel who possess the skills and knowledge that enables the efficient use of computer systems to maximise the potential of the organisation.

A5: An intellectually stimulating practical framework that will enable candidates to develop their careers

PS6. Programme Intended Learning Outcomes (ILO)

By the end of this programme the student will be able to:

ILO1: Demonstrate knowledge of the theories and main methods of enquiry and be able to critically understand the principles of computer technologies.

ILO2: Recognise the value of, contribute ideas and apply detailed knowledge and understanding of key course concepts in the development of computing solutions.

ILO3: Employ graduate skills in research, autonomous working, transferable skills and employability in familiar and unfamiliar scenarios.

ILO4: Investigate, analyse and employ elements of the knowledge and understanding gained through the course regarding digital technology in relation to communications and security.

ILO5: Demonstrate initiative across theory and practice relating to all elements of the course and offer innovative and creative ideas.

PS7. Distinctive Features

- Because the course has been designed in conjunction with local businesses specifically to satisfy the local market, students will be uniquely placed to obtain graduate positions in Cornwall. The course will include guest speakers from industry and associated work placement opportunities.

- Students will study Cloud Computing and Security, E-Business for the Entrepreneur, Digital Forensics and Agile Methods. The study of a substantial individual autonomous project, together with a choice of elective from either Advanced Networking (subject to sufficient demand) or Advanced Object-Oriented Programming allow for specialism to enable chosen employment paths.

- The course provides the underpinning knowledge for a number of vendor qualifications. This complementary study of academic and industry-recognised qualifications provides graduates with a unique qualification putting them in a strong position for future employment or career progression. The college is a both a Cisco and Microsoft Academy and has testing facilities on site.

- Agile methods will be used throughout, and students will be involved in co-construction of the curriculum from content, to style of delivery and assessment method. Learner Led Project Based Problem-Solving real-life tasks and scenarios will be incorporated at every opportunity.

- Successful recruitment record with GCHQ.

PS8. Student Numbers

The following provides information that should be considered nominal, and therefore not absolutely rigid, but is of value to guide assurance of the quality of the student experience, functional issues around enabling progression opportunities to occur and staffing and resource planning:

Minimum student numbers per stage = 10

Target student numbers per stage = 12

Maximum student numbers per stage = 20

The optional module CORC372 – Advanced Networking requires the completion of CORC2110 – Local and Wide Area Networks (or an equivalent for direct entrants) as a pre-requisite. In the event that the student numbers are not viable to run CORC372 students will be required to undertake the alternative optional module CORC373 – Advanced Object-Oriented Programming.

CORC373 – Advanced Object-Oriented Programming will run regardless of student numbers as those without the pre-requisite for CORC372 – Advanced Networking will not have demonstrated that they have the expertise to successfully achieve the module.

PS9. Progression Route(s)

Approved "progression route(s)" are those where successful achievement in this programme enables direct alignment to join a stage of another programme. This is an approach employed primarily for Foundation Degree students to "top-up" to complete a Bachelor degree, but may be employed for other award types.

This is in part an automated admissions criterion and therefore progression may be impacted on by availability of a position on the progression award; however, progression opportunity, if not available in the first year of application, is guaranteed within 3 years.

Progression arrangements with institutions other than Plymouth University carry an increased element of risk. It is necessary for the delivering partner institution to obtain formal agreement from that institution to guarantee progression for existing students on the programme. For progression to Plymouth University, should there be the need to withdraw the progression route programme(s) then either this will be delayed to provide progression or appropriate solutions will be found. This arrangement is guaranteed for existing students that complete their programme of study with no suspensions or repeat years and who wish to progress immediately to the University.

The contribution of marks from prior levels of study to the progression award is governed by University regulations.

Graduates will also be encouraged to consider progression on to appropriate Master's study in a relevant field or supported in their pursuit of employment opportunities.

The following vendor qualifications may also be considered:

- Cisco CCNP Routing and Switching vendor certification
- CCNA Security Certification
- BCS Foundation Certificate in Agile curriculum

PS10. Admissions Criteria

Qualification(s) Required for Entry to this Programme:	Details:
Level 4/5:	FdSc or HND in an appropriate subject. Applicants are assessed and a short training course may need to be completed to make up for any shortfall in required skills and knowledge.
Work Experience:	Relevant experience assessed on application and interview, together with an appropriate level 5 qualification
Other HE qualifications / non-standard awards or experiences:	Applications are considered on an individual basis in accordance with the academic regulations.
APEL / APCL possibilities:	Applications are considered on an individual basis in accordance with the academic regulations.
Interview / Portfolio requirements:	All students would have to demonstrate at interview the necessary motivation, potential, experience and/or knowledge.
Independent Safeguarding Agency (ISA) / Disclosure and Barring Service (DBS) clearance required:	May be required depending on work-related learning opportunities. Timing will be dependent on the nature of the placement.
Capability Statement	

PS11. Academic Standards and Quality Enhancement

The Programme Leader/Manager (or the descriptor) leads the Programme Committee in the Plymouth University's annual programme monitoring process (APM), as titled at the time of approval. APM culminates in the production, maintenance and employment of a programme level Action Plan, which evidences appropriate management of the programme in terms of quality and standards. Any formally agreed changes to this process will continue to be followed by the Programme Leader/Manager (or other descriptor) and their Programme Committee.

Elements of this process include engaging with stakeholders. For this definitive document it is important to define:

Subject External Examiner(s):

An Interim visit by External Examiner (EE) (usually between January and February) will review work that has been marked, consult students and feed back to the programme manager and module leaders and course team.

Subject Assessment Panel (SAP) reviews the assessment marking and is scrutinised by the subject EE. Representatives of the team review and present their module marks for each student on the programme.

The annual Award Assessment Board (AAB) takes place with Programme Manager, the awarding body's partnership member and the External to receive the students work and confer progression or award.

Additional stakeholders specific to this programme:

Students have the opportunity to discuss the programme independently, twice a year in the Student Review. This forms part of the discussion for the annual programme monitoring in the autumn and spring of each academic year.

The Student Perception Questionnaire (SPQ) is administered during the year and feeds into the programme review.

Students Representatives attend Annual Programme Monitoring (APM) to contribute student views alongside Module Leaders, the Programme Manager and the Assistant Registrar to monitor module delivery and the course provision.

Curriculum meetings take place once a month to review progression, department provision, resources and staffing.

PS12. Programme Structure

College:	Cornwall College Camborne	Programme Title:	BSc (Hons) Computing Technologies (Top Up)
Academic Year:	2022-2023	Mode of Attendance Course Duration:	Full Time Over 1 Year
Plymouth Programme Code:	5376	Total Credits:	120 Over The Year

FHEQ level: 6 For: Full Time (5376)				
F/T Route Year	When in Year?	Core or Option Module	Credits	Module
F/T	All	Core	20	CORC367 Agile Methods
F/T	All	Core	20	CORC368 Cloud Computing and Security
F/T	Term 1	Core	10	CORC369 Digital Forensics
F/T	Term 2	Core	10	CORC370 Entrepreneurship for E-Business
F/T	All	Core	40	CORC371 Honours Project
Computer Networking Elective:				
F/T	All	Optional	20	CORC372 Advanced Networking
Software Development Electives:				
F/T	All	Optional	20	CORC373 Advanced Object-Oriented Programming

College:	Cornwall College Camborne	Programme Title:	BSc (Hons) Computing Technologies (Top Up)
Academic Year:	2022-2023	Mode of Attendance Course Duration:	Part Time Over 2 Years
Plymouth Programme Code:	5377	Total Credits:	120 Credits Over 2 Years

FHEQ level: 6 For: Part Time (5377)				
P/T Route Year	When in Year?	Core or Option Module	Credits	Module
Year 1 Stage 3				
P/T	All	Core	20	CORC367 Agile Methods
P/T	All	Core	20	CORC368 Cloud Computing and Security
Students must choose 1 of the following optional modules:				
P/T	All	Optional	20	CORC372 Advanced Networking
P/T	All	Optional	20	CORC373 Advanced Object-Oriented Programming
Year 2 Stage 3				
P/T	All	Core	10	CORC369 Digital Forensics
P/T	All	Core	10	CORC370 Entrepreneurship for E-Business
P/T	All	Core	40	CORC371 Honours Project

PS13. Explanation and Mapping of Learning Outcomes, Teaching & Learning and Assessment

Developing graduate attributed and skills, at any level of HE, is dependent on the clarity of strategies and methods for identifying the attributes and skills relevant to the programme and where and how these are operationalised. The interrelated factors of Teaching, Learning and Assessment and how these are inclusive in nature, are fundamentally significant to these strategies and methods, as are where and how these are specifically distributed within the programme.

Ordered by graduate attributes and skills, the following table provides a map of the above, plus an exposition to describe and explain the ideas and strategy of each. Therefore, subsequent to the initial completion for approval, maintenance of this table as and when programme structure changes occur is also important:

FHEQ Level 6 – BSc (Hons) Computing Studies					
Definitions of Graduate Attributes and Skills Relevant to this Programme	**Teaching and Learning Strategy / Methods**	**Programme Aims**	**Programme Intended Learning Outcomes**	**Range of Assessments**	**Related Core Modules**
Knowledge / Understanding: For this Honours Degree top-up programme the following has been informed by the Computing and General Business and Management QAA Subject benchmarking documents, and Benchmark and Framework for HE Qualifications (FHEQ) **By the end of this level of this programme the students will be able to demonstrate for a threshold pass:** • Demonstrate knowledge and understanding of essential facts, concepts, principles and theories relating to computing and computer applications as appropriate to the programme of study. • Computing-related cognitive abilities and skills, relating to intellectual tasks. • Computing-related practical skills. • Additional transferable skills that may be developed	**Primary:** Practical Lab work; ICT based data analysis; learner-led teaching. **Secondary/Supplementary:** Industry visits, guest speakers, work-based learning	A1, A4, A5	ILO1, ILO2, ILO4	Reports, student-led seminars, presentations, vivas, case studies, in-class tests	CORC367 CORC368 CORC369 CORC370 CORC371

in the context of computing but which are of a general nature and applicable in many other contexts. (Computing Benchmark 3.1,2.2) • (General Business and Management 3.7)					
An explanation for embedding Knowledge and Understanding through Teaching & Learning and Assessment at this level of the programme: At Level 6 students will be expected to assimilate facts and theories and use an enquiring mind to critically evaluate these in context. They are expected to be autonomous learners and actively seek knowledge through reading, research and personal communication. They will be assessed through a variety of modes including tests, reports, student-led seminars, presentations, vivas and case studies as appropriate to the subject with advice from the industry and the External Examiner. Students will be part of co-constructing curriculum and assessment to ensure engagement and motivation. Students will be encouraged to become independent and creative thinkers to interpret and respond to assessment using their initiative.					
Cognitive and Intellectual Skills: For this Honours Degree top-up programme the following has been informed by the Computing and General Business and Management QAA Subject benchmarking documents, and Benchmark and Framework for HE Qualifications (FHEQ) **By the end of this level of this programme the students will be able to demonstrate for a threshold pass:** • Modelling: use such knowledge and understanding in the modelling and design of computer-based systems for the purposes of comprehension, communication, prediction and the understanding of trade-offs. • Requirements, practical constraints and computer-based systems (and this includes computer systems, information systems, embedded systems and distributed systems) in their context: recognise and analyse criteria and specifications appropriate to specific problems, and plan strategies for their solution. • Critical evaluation and testing: analyse the extent to which a computer-based system meets the criteria defined for its current use and future development. • Methods and tools: deploy appropriate theory,	**Primary:** Practical workshops **Secondary/Supplementary:** Guest speakers and industry visits.	A1, A2, A4	ILO2, ILO4, ILO5	Skills based assessment	CORC368 CORC369: CORC370: CORC371:

practices and tools for the specification, design, implementation and evaluation of computer-based systems. • Reflection and communication: present succinctly to a range of audiences (orally, electronically or in writing) rational and reasoned arguments that address a given information handling problem or opportunity. This should include assessment of the impact of new technologies. • Professional considerations: recognise the professional, economic, social, environmental, moral and ethical issues involved in the sustainable exploitation of computer technology and be guided by the adoption of appropriate professional, ethical and legal practices.(Computing Benchmark 3.2)					
An explanation for embedding Cognitive and Intellectual Skills through Teaching & Learning and Assessment at this level of the programme: At Level 6 students will be encouraged to take a leading role in the teaching and learning through active participation in sessions such as leading and significant contribution to seminars, workshops and practicals. Students will be encouraged to consider and potentially challenge institutional thinking and practice. Assessments will be diverse and challenging, encouraging students to use their cognitive and intellectual capacities to the full. They are expected to take part in active research and work independently with support but minimal guidance					
Key Transferable Skills: For this Honours Degree top-up programme the following has been informed by the Computing and General Business and Management QAA Subject benchmarking documents, and Benchmark and Framework for HE Qualifications (FHEQ) **By the end of this level of this programme the students will be able to demonstrate for a threshold pass:** • Effective enterprising performance as both a team member and as an individual using time, personnel & project management techniques, demonstrating effective communication using a range of techniques and media in inter-and intra-team scenarios. Self-appraise and reflect on practice, and	**Primary:** Tutorials, group seminars, embedded in all aspects of student contact, lectures, workshops etc. **Secondary/Supplementary:** Guest speakers and industry	A3, A4, A5	ILO2, ILO3, ILO5	Viva, interview, reflective report, presentation, in-class test, group projects	CORC367 CORC368 CORC369 CORC370 CORC371

develop and social and emotional intelligence and develop an understanding of the worth of lifelong learning. • Numeracy and literacy in both understanding and presenting cases involving a quantitative and qualitative dimension. • Effective use of general digital technology facilities. • The ability to work as a member of a development team, recognising the different roles within a team and different ways of organising teams. • Managing one's own learning and development including time management and organisational skills.	visits, additional research, VLE and Moodle, conferences.				
An explanation for embedding Key Transferable Skills through Teaching & Learning and Assessment at this level of the programme: At Level 6 students are expected to exercise initiative and personal responsibility in their teaching, learning and work experience. All modules require independent thinking in order to make decisions in complex and unpredictable contexts, students will be required in workshops and seminars to challenge past and current information and theories relating to the subject and consider alternatives and potential solutions.					
Employment Related Skills: For this Honours Degree top-up programme the following has been informed by the Computing and General Business and Management QAA Subject benchmarking documents, and Benchmark and Framework for HE Quals (FHEQ) **By the end of this level of this programme the students will be able to demonstrate for a threshold pass:** • Demonstrate a sound understanding of the main areas of the body of knowledge within their programme of study, with an ability to exercise critical judgement across a range of issues. • Critically analyse and apply a range of concepts, principles and practice of the subject in an appropriate manner in the context of loosely defined scenarios, showing effective judgement in the selection and use of tools and techniques. • Produce work involving problem identification, the	**Primary:** Tutorials, group seminars, embedded in all aspects of student contact, lectures, workshops, work-based learning **Secondary/Supplementary:** Guest speakers and industry visits, additional research, VLE and Moodle, conferences	A1, A2, A3, A4, A5	ILO1, ILO2, ILO3, ILO4, ILO5	Group project, honours project report, viva, demonstrations, student led seminars, presentations, in-class test, practical skills-based assessment	CORC367 CORC368 CORC369 CORC370 CORC371

analysis, the design or the development of a system, with accompanying documentation, recognising the important relationships between these. The work will show problem-solving and evaluation skills draw upon supporting evidence and demonstrate a good understanding of the need for quality. • Work independently and as an effective team member in an adaptable, flexible, goal-orientated, safe and ethical manner.					
An explanation for embedding Employment Related Skills through Teaching & Learning and Assessment at this level of the programme: At Level 6 the student has demonstrated an understanding of organisational and work-based practices; they have put theory in to practice by applying and developing discipline related skills, and knowledge and understanding through workshops and assessed real-life problem-solving scenarios. They will have to work with stakeholders in a meaningful way both in sessions and independently with positive targets and outcomes. Develop vocationally relevant managerial skills demonstrated through reflection and projection forward.					
Practical Skills: For this Honours Degree top-up programme the following has been informed by the Computing and General Business and Management QAA Subject benchmarking documents, and Benchmark and Framework for HE Qualifications (FHEQ) **By the end of this level of this programme the students will be able to demonstrate for a threshold pass:** • Work safely in computing workshops. • Competently utilise a variety of digital technology.	**Primary:** Practical workshops **Secondary/Supplementary:** Guest speakers and industry visits.	A1, A2, A4	ILO2, ILO4, ILO5	Skills based assessment	CORC368 CORC369 CORC370 CORC371
An explanation for embedding Practical Skills through Teaching & Learning and Assessment at this level of the programme: At Level 6 students will research niches in an E-Business context with a view to identifying a business opportunity. Students will be exposed to a range of different businesses in the sector to learn about practical working environments. Students will have to practically communicate findings to a variety of audiences through a range of media and assessment types.					

PS14. Work Based/ Related Learning

WBL is an essential element of Foundation Degrees and therefore needs to be detailed here. However, for all types of HE Programmes there should be an element of employability focus through, at least, Work Related Learning, and therefore the following is applicable for all:

FHEQ Level 6 – BSc (Hons) Computing Studies					
WBL/WRL Activity:	**Logistics**	**Programme Aim**	**Programme Intended Learning Outcome**	**Range of Assessments**	**Related Core Module(s)**
Industry visits	Sullivan Cuff Software Ltd, Cornwall College IT Systems,	A2, A3, A4, A5	ILO2, ILO3, ILO5	Reports, group projects, presentations, case studies	CORC367
Guest speakers **Competitions**	Blue Diamond Internet Systems, GCHQ, Richfords Fire and Flood, Bluefruit Software, n-Coders Software Developers, Packet Ship	A2, A3, A4, A5	ILO2, ILO3, ILO4 ILO5		CORC368 CORC369 CORC367 CORC370 CORC371
Work related Honours Project				Report, demonstration, presentation, viva	CORC371

An explanation of this map:

This is not designed to be a definitive or comprehensive list but to showcase the potential for industry involvement, work related and experiential learning. It is expected that all module leaders will make every effort to engage with relevant employers and organisations throughout the course to ensure that students have optimal opportunities to network with potential employers and stakeholders. The industry engagement and the experience and networking that this provides is considered to be integral to the success of graduates in gaining employment and as such is it considered a fundamental of the course.

PS.15 appendix – Module Details

Module Code	Module Title	Assessment Mode	Short Module Descriptor
CORC367	Agile Methods	70% (CW) 30% (Practical)	This module covers topics relating to the agile methodology. It investigates contemporary management styles in the software industry and wider business contexts. It provides the core understanding of working in an Agile manner.
CORC368	Cloud Computing and Security	60% (CW) 40% (Test)	This module introduces the main computing models exploited in Grids and Clouds to evolve from cluster computing towards more virtualized resources and across-institutional user communities. As the Internet of Everything brings new economic and social opportunities worldwide, global demand increases the need for security and risk management skills, knowledge of Open Source software, Cloud Computing and social media.
CORC369	Digital Forensics	100% (CW)	This module explores the importance of forensic capability in terms of the digital forensic methodologies, principles and disciplines of acquisition, examination, analysis and presentation reporting procedures. Fundamental ethical and professional issues associated with the use of digital forensics are also examined.
CORC370	Entrepreneurship for E-Business	80% (CW) 20% (Practical)	This module covers topics relating to examining the various models for e-business, develop skills in writing business plans and forecasts and investigate the role technology can play in starting and operating an e-business.
CORC371	Honours Project	90% (CW) 10% (Practical)	This module allows students to explore in detail an academic subject of their choice. The module comprises a substantial autonomous research study/investigation and implementation of a computing project. The student's ability to design a valid investigation and collect, collate, and implement a product based on the research and to communicate the outcome/s is assessed.
CORC372	Advanced Networking	50% (Test) 50% (Practical)	This module covers topics relating to advanced networking. It will equip students with the knowledge and skills needed to plan, implement, verify, secure, maintain and troubleshoot local and wide-area enterprise networks, and how to work collaboratively with specialists on advanced security, voice, wireless and video solutions.
CORC373	Advanced Object-Oriented Programming	60% (CW) 40% (Test)	This module will develop in depth the necessary skills and knowledge for the development of software development applications using an Object-Oriented

			programming language, such as C++ and Java. Students will demonstrate the skills required to engineer Object Oriented based software application from initial specifications through to implementation, testing and documentation.