

Programme Specification for Undergraduate Programme

Leading to:

BSc (Hons) Business Computing
 BSc (Hons) Business Computing with Professional Practice
 BSc (Hons) Business Computing (Human-Computer Interaction)
 BSc (Hons) Business Computing (Human-Computer Interaction) with Professional Practice
 BSc (Hons) Business Computing (eBusiness)
 BSc (Hons) Business Computing (eBusiness) with Professional Practice
 BSc (Hons) Business Computing (Social Media)

Applicable for all undergraduate students starting at **FHEQ Level 4 from 2019**

Version No.	Date	Notes – QA USE ONLY	QA
1	July 2019	New Programme Specification created for 2019/20	SB/RJC
2	22 August 2019	Updates to codes and hyperlinks.	JP

Undergraduate Programme	
1. Awarding institution	Brunel University London
2. Teaching institution(s)	Brunel University London
3. Home college/department/division	College of Engineering Design and Physical Sciences Department of Computer Science
4. Contributing college/department/division/ associated institution	LBIC for alternative Foundation Level and FHEQ Level 4 (see section 25)
5. Programme accredited by	British Computer Society
6. Final award(s) and FHEQ Level of Award	BSc (Hons) Business Computing (FHEQ level 6) BSc (Hons) Business Computing with Professional Practice (FHEQ level 6) BSc (Hons) Business Computing (Human-Computer Interaction) (FHEQ level 6) BSc (Hons) Business Computing (Human-Computer Interaction) with Professional Practice (FHEQ level 6) BSc (Hons) Business Computing (eBusiness) (FHEQ level 6) BSc (Hons) Business Computing (eBusiness) with Professional Practice (FHEQ level 6) BSc (Hons) Business Computing (Social Media) (FHEQ level 6) BSc (Hons) Business Computing (Social Media) with Professional Practice (FHEQ level 6)
7. Programme title	BSc Business Computing BSc Business Computing (Human-Computer Interaction) BSc Business Computing (eBusiness) BSc Business Computing (Social Media)
8. Programme type (Single honours/joint)	Single Honours
9. Normal length of programme (in months) for each mode of study	36 months FT Where students commence their programme in an Alternative Level in LBIC, the normal length stated above will vary as follows: Foundation Level 0 September commencement: + 12 months Foundation Level 0 January commencement: + 9 months Foundation Level 0 May commencement: + 5 months FHEQ Level 4 September commencement: no change FHEQ Level 4 January commencement: -3 months
10. Maximum period of registration for each mode of study	Normal length of programme (as defined above in 9) + 3 years

11. Variation(s) to September start	None for standard levels See document "Validated Programme Element Specification for LBIC First Year University Studies in Information and Computer Science" and document "Validated Programme Element Specification for LBIC Foundation University Studies" for alternative Level entry points.
12. Modes of study	Full Time; Thick Sandwich
13. Modes of delivery	Standard (on campus)
14. Intermediate awards and titles and FHEQ Level of Award	CertHE Computing (FHEQ level 4) DipHE Computing (FHEQ level 5) BSc (Ord) Business Computing (FHEQ level 6) DipHE Computing with Professional Practice (FHEQ level 5) BSc (Ord) Business Computing with Professional Practice (FHEQ level 6)
15. UCAS Code	G500
16. HECoS Code	100360
17. Route Code	BSc (Hons) Business Computing G500UBUSCOMP BSc (Hons) Business Computing (Human-Computer Interaction) G500UBUSCOMH BSc (Hons) Business Computing (eBusiness) G500UBUSCOME BSc (Hons) Business Computing (Social Media) G500UBUSCOMS LBIC for alternative Foundation Level and FHEQ Level 4 G500UNVBCOMP
18. Relevant subject benchmark statements and other external and internal reference points used to inform programme design.	UK Quality Code for Higher Education QAA Subject Benchmark Statement (Computing). Brunel 2030 Brunel Placement Learning Policy, as published under the 'Placements' section of the ' Managing Higher Education Provision with Others ' page.
19. Admission Requirements	Details of entry requirements are provided on the University's and College website. Levels of English for non-native speakers are outlined on Brunel International's language requirements pages.
20. Other relevant information (e.g. study abroad, additional information on placements)	All students entering the Department follow a common FHEQ level 4 programme and at FHEQ level 5 they take the group project and 2 out of the remaining 4 assessment blocks. The remaining two assessment blocks are common to all Business Computing programmes. Whilst a prospective student must apply for a particular course they will be free to change after arrival: <ul style="list-style-type: none"> • they can choose between the Business Computing and Computer Science branches at the end of FHEQ level 4, and • at the end of FHEQ level 5 they can optionally select a particular specialism. To enable informed decision-making we will run taster events at the end of FHEQ level 4 and FHEQ level 5. This flexibility is being marketed as an advantage of the Brunel programmes. The current programme addresses the specifications for accreditation requirements of the British Computer Society as set out in the Student Handbook and we expect to obtain continued accreditation for the revised programme. For students on the sandwich programme there is a comprehensive study guide that details the aims and requirements for the work placement (CS2555). Successful completion of this assessment block (which includes supervised work experience and the development of a reflective portfolio) leads to the award of the relevant degree "With Professional Practice".
21. Programme regulations not specified in Senate Regulation 2. Any departure from regulations specified in Senate Regulation 2 must be stated here and approved by Senate.	Specialist Degree Awards Where a student is registered for a degree with a specialism, i.e. BSc Business Computing (specialism), the degree will only be awarded if: <ol style="list-style-type: none"> i) the project (CS3605) successfully addresses a problem within the specified specialism, and ii) the student passes (at D- or above) the assessment for the specialist module.

	<p>If either of these is not the case, then a student who meets the grade profile requirements in Senate Regulation 2 will be recommended for the award of a BSc Business Computing without the named specialism.</p> <p>Specialist/Option Module Assessment</p> <p>FHEQ Level 6 specialist/option modules (CS3009, CS3607, CS3608, CS3100, CS3609) will be assessed by coursework at the end of term 1. This assessment determines whether students have met the basic threshold requirements (grade D- /40%). If the work submitted by a student does not achieve the threshold standard (i.e., it is E or F grade) confirmed by a Panel of Examiners, they will be given formative feedback to help them to undertake remedial work towards meeting the standard. They will then be offered reassessment in term 2 by written submission and viva-voce (the Board of Examiners shall however maintain adherence to SR2 re-assessment credit limits).</p> <p>Having achieved a threshold pass in the specialist module at either first or second attempt, a student will further be assessed in the module by unseen examination in Term 3, which will test the full grade range. Students who achieve D- grade or better in the examination will be awarded the examination grade for the module. Students who achieve lower than a D- grade in the examination will be awarded a D- grade for the module.</p> <p>A student who fails to achieve grade D- in the threshold assessment at both the first and second attempt shall not be eligible for any further assessment/re-assessment in the module (including the examination).</p> <p>Placement</p> <p>For BSc Business Computing with Professional Practice CS2555 will contribute one third of FHEQ level 5 profile and approximately 11% of the overall degree weighting.</p>
<p>22. Further information about the programme is available from the College website.</p>	<p>Business Computing programmes</p>

23. EDUCATIONAL AIMS OF THE PROGRAMME

The aim of all undergraduate programmes offered by the Department of Computer Science is primarily to equip our graduates with appropriate knowledge and skills required for their mainly commercial careers, making them highly employable. The general skills our graduates will develop are:

- Problem solving skills (individually and in groups) that involve model building and analysis, applying both theoretical and empirical knowledge to make choices and find solutions.
- Ability to make compromises to deliver appropriate solutions within the constraints imposed by the context and resources.
- Good communication skills that would enable them to communicate clearly, both verbally and in writing, with clients, managers and technical colleagues.
- Mastery of commonly used notations and methods to reason and communicate clearly about requirements, specifications, designs and solutions.
- Ability to research and to critically evaluate relevant topics, ideas and issues.
- Capability to learn and adapt quickly to the specific techniques or approaches that an organisation uses.
- Responsibility for setting appropriate standards in their own work and ensuring that they have, or acquire, the relevant knowledge and skills to complete assigned tasks.
- Professional etiquette in their work so that they display appropriate respect for the work of others by acknowledging their contributions appropriately and respecting intellectual property rights.

Specific skills for Business Computing graduates relate to the purpose, the use and the context in which information systems are used and therefore our graduates should be able:

- To develop an understanding of the underlying organisational business system (which may be explicit or implicit);
- To determine a dynamic mix of processes that enable the information delivery system and the enfranchised users to carry out the business of the organisation effectively and efficiently;
- To understand what change is doing to the organisation to enable the information systems to adapt in a timely and effective manner.

24. PROGRAMME AND INTERMEDIATE LEARNING OUTCOMES

The programme provides opportunities for students to develop and demonstrate knowledge and understanding (K) cognitive (thinking) skills (C) and other skills and attributes (S) in the following areas:

FHEQ Level	Category (K = knowledge and understanding, C = cognitive (thinking) skills, S = other skills and attributes)	Learning Outcome	Associated Assessment Blocks Code(s)	Associated Study Blocks Code(s)	Associated Modular Blocks Code(s)
4					
	K	The basic properties of software artefacts: information, algorithms, programs, and common commercial system and network architectures.	CS1809_CB CS1810_CB CS1811_CB CS1805_CN	CS1701_SB CS1702_SB CS1703_SB	CS1004_CN CS1005_CN
	K	System development approaches, requirements capture; design methods, models, tools and techniques; implementing and testing systems; software maintenance.	CS1809_CB CS1810_CB CS1811_CB	CS1701_SB CS1702_SB CS1703_SB	CS1004_CN CS1005_CN
	K	Basic appreciation of project management issues arising from team based software development.	CS1803_CB	CS1701_SB CS1702_SB	

	K	Understanding the importance of demonstrating professional and ethical behaviour.	CS1803_CB	CS1701_SB	
	C	To be able to learn and adapt quickly to the specific techniques or approaches that an organisation uses.			CS1004_CN
	C	To code and test a simple software artefact.	CS1809_CB CS1810_CB CS1811_CB	CS1701_SB CS1702_SB CS1703_SB	CS1005_CN
	S	To communicate clearly, both verbally and in writing, with clients, managers and technical colleagues.	CS1809_CB CS1810_CB CS1803_CB CS1811_CB CS1805_CN	CS1701_SB CS1702_SB CS1703_SB	CS1004_CN CS1005_CN
	S	To work effectively as a member of a team recognising the different roles within a team and different ways of organising teams.	CS1809_CB CS1810_CB CS1803_CB CS1811_CB CS1805_CN	CS1701_SB CS1702_SB CS1703_SB	CS1004_CN CS1005_CN
	S	To work independently and be able to reflect on their work.	CS1809_CB CS1810_CB CS1803_CB CS1811_CB CS1805_CN	CS1701_SB CS1702_SB CS1703_SB	CS1004_CN CS1005_CN
2					
	K	IS Strategic planning: aligning business and information systems, benefits realisation and measurement, and common tradeoffs (such as efficiency vs. effectiveness, products vs. services, make in house vs. buy or outsource).			CS2006_CN
	K	IS Management issues: organisational structure, managing technology and people, management of change, IS economics and IS integration.			CS2007_CN
	K	IS Development: commissioning and procuring systems; requirements elicitation; evaluating information systems.			CS2007_CN
	K	System development approaches, requirements capture; design methods, models, tools and techniques; implementing and testing systems; software maintenance.			CS2001_CB CS2002_CN
	K	A reflective approach to project management issues arising from team based software development.			CS2001_CB
	K	Understanding the importance of demonstrating professional and ethical behaviour			CS2001_CB
	K	Recognising the needs of users when developing effective software solutions			CS2001_CB CS2002_CN CS2003_CN

	C	To reason and communicate clearly about requirements, specifications, designs and solutions via commonly used notations such as UML.			CS2001_CB CS2002_CN
	C	To develop the ability to critique information gathered.			CS2001_CB CS2003_CN
	C	To evaluate an IS in operation and determine its impact on the business.			CS2006_CN
	C	To code and test a simple software artefact			CS2001_CB
	S	To communicate clearly, both verbally and in writing, with clients, managers and technical colleagues.			CS2001_CB CS2002_CN CS2003_CN CS2006_CN CS2007_CN
	S	To work effectively as a member of a team recognising the different roles within a team and different ways of organising teams.			CS2001_CB CS2002_CN CS2003_CN CS2006_CN CS2007_CN
	S	To work independently and be able to reflect on their work.			CS2001_CB CS2002_CN CS2003_CN CS2006_CN CS2007_CN
	Placement	Demonstrate knowledge and understanding of the structures, processes and business environment relevant to the work placement		CS2554_SB	CS2555_CB
	Placement	Demonstrate problem-solving skills, analytical and creative skills given real life situations		CS2554_SB	CS2555_CB
	Placement	Analyse and critically reflect on the work placement context;		CS2554_SB	CS2555_CB
	Placement	Demonstrate numerical, technical, professional and communication skills;		CS2554_SB	CS2555_CB
3					
	K	Project management issues and practices sufficient to enable them to work in a project team where mechanisms like version, quality and change control mechanisms are being applied.			CS3100_CN
	K	Ethical and legal issues and responsibilities sufficient to be able to judge their own responsibilities towards the development team, their client and society at large.			CS3100_CN CS3605_CB
	K	A detailed knowledge of the chosen specialism/option (eBusiness, Human Computer Interaction or Social Media, Cybersecurity, Software Project Management).			CS3607_CB CS3607_CN CS3009_CB CS3009_CN CS3608_CB CS3608_CN CS3605_CB CS3100_CN CS3609_CN
	C	To research and to critically evaluate relevant topics, ideas and issues.			CS3605_CBC S3001_C1
	C	To display a critical approach and be willing to ask relevant questions concerning purpose, objectives,			CS3605_CB CS3606_CB

		effectiveness of systems they encounter or are asked to develop.			
	C	To elicit, analyse and document detailed requirements demonstrating a clear understanding of the business context and justification for the system.			CS3605_CB
	S	To communicate clearly, both verbally and in writing, with clients, managers and technical colleagues.			CS3605_CB CS3100_CN CS3606_CE CS3607_CB CS3009_CB CS3608_CB CS3607_CB CS3009_CN CS3608_CB CS3609_CN
	S	To work effectively as a member of a team recognising the different roles within a team and different ways of organising teams.			CS3605_CB CS3100_CN CS3606_CE CS3007_CB CS3607_CB CS3009_CB CS3608_CB
	S	To work independently and be able to reflect on their work.			CS3605_CB CS3100_CN CS3607_CB CS3009_CB CS3608_CB CS3606_CE CS3009_CN CS3609_CN

Learning/teaching strategies and methods to enable learning outcomes to be achieved, including formative assessments

Opportunities designed to aid learners in their task include a mix of lectures, small-group seminars and computer laboratory sessions across modules that comprise the degree. Throughout, learners are encouraged to undertake independent reading both to supplement and consolidate what is being formally taught in the classroom and to broaden their individual knowledge and understanding of the subject. Our Departmental support on u-link provides a highly effective means of disseminating information about a range of issues relating to study. The mandatory study guide for each module expands on the module outline and offers learners not only details on the content of the module, but also guidance on issues related to assessment and time management.

A particular feature of the programme is the group projects, which provide a spine for FHEQ Levels 4 and 5. We expect groups to comprise 3-5 students supported by regular contact with a member of academic staff in traditional style tutorials. The typical project task will include requirements gathering, software development, context, communication, team working, and project management. This will integrate much of the other material in the level and deliver a synoptic view of the discipline. Thus, the group projects will counteract the fragmentation of topics introduced by the modular nature of the degree programmes.

At FHEQ level 6 the 40-credit final year project is problem-focused, and provides learners with the opportunity to bring together the various strands of their skills, abilities and capabilities in the discipline. Formal and informal feedback on their learning and progress is provided to students creating a further opportunity for learning.

The programme level learning outcomes - to display a critical approach and to research and critically evaluate issues - get particular support from the advanced topics teaching (CS3606). This is based around a series of student researched and lead seminars on current questions and issues within the discipline.

Laboratory sessions (including those in the group project) serve both to demonstrate key tools and techniques and to provide an opportunity for learners to practise what has been learned both by way of teacher-led sessions and also by way of private study outside of these. The Department supports locally-provided and resourced computer laboratories by way of a team of computer specialists employed by the Department; computers and computer laboratories are key.

Summative assessment strategies and methods to enable learning outcomes to be demonstrated

The learning outcomes of the assessment blocks, which comprise the degree, are assessed by way of a mix of unseen written examinations and assessed coursework. In FHEQ levels 4 and 5 a significant element of the course work is associated with the group projects.

Both the examinations and the coursework test the attainment and application of knowledge; however, the coursework also serves to test the ability of learners to put theory into practice and their ability to develop particular areas of interest in greater depth. Coursework is a mixture of written reports, essays, oral presentations, and the writing/designing of computer programs.

The final year project provides an opportunity for learners to demonstrate their skills, abilities and capabilities across the range of discipline-specific (and other, transferable) skills.

If a student fails to engage in the advanced topics seminars (CS3606) they have not even made an effort to achieve the relevant programme level learning outcome. The assessment block, therefore, includes 0 credit Pass-Fail elements as core assessments to reflect the significance attached to appropriate engagement in the learning activities.

The Business Computing specific skills are combined cognitive and practical skills which demand that the cognitive ability is reflected in its practical application. The final year project (CS3605) is the critical assessment block for ensuring that individual learning has been drawn together in this holistic way.

The specific requirement for theory (cognitive skills above) to translate into practical design and implementation skills may be assessed using in class tests based in the laboratory.

The ability to work effectively as a member of a team is developed as part of the FHEQ level 4 and 5 group projects (CS1803, CS1809 and CS1810 and CS2001). If students fail to engage in these activities there is no evidence that they have even made an effort to achieve this programme level learning outcome. Each of the relevant assessment blocks, therefore, includes 0 credit Pass-Fail elements as core assessments to reflect the significance attached to appropriate team and collegiate behaviour.

25. Programme Structure, progression and award requirements

Programme structures and features: levels, assessment blocks, credit and progression and award requirements

- **Compulsory block:** one which all students registered for the award are required to take as part of their programme of study. These will be listed in the left-hand column;
- **Optional block:** one which students choose from an 'option range'. These will be listed in the right-hand column;
- A **core assessment** is an assessment identified within an assessment block or modular block (either compulsory or optional) which must be passed (at grade D- or better) in order to be eligible to progress and to be eligible for the final award. All core assessments must be specified on the programme specification next to the appropriate assessment or modular block:

Where students are expected to pass the block at D- or better, but not necessarily all elements, then the block itself is core.

e.g. AB3000 Project (40)
Core: Block

Where only some elements of assessments are required to be passed at D- or better, these will be identified by listing each element that is core

e.g. ABXXX1 Title (XX credits)
Core: 1 & 4

Where students are expected to pass all assessments in a block then this will be identified. By setting the assessment this way, students are also required to pass the block by default. This will be identified thus:

e.g. ABXXXX Title (XX credits)
Core: All, Block

- A **non-core assessment** does not have to be passed at grade D- or better, but must be better than a grade F, in order to progress and to be eligible for the final award.

Foundation Level
The Foundation level structure available to international students is specified in document "Validated Programme Element Specification for LBIC Foundation University Studies". The Foundation level structure available to Gulf-sponsored students is specified in document "Validated Programme Element Specification for LBIC Gulf-Sponsored Generic Foundation level Studies". These documents also specify the admission and progression requirements.

FHEQ Level 4	
Compulsory assessment block codes, titles and credit	Optional assessment block codes, titles and credits
CS1809_CB Software Design (10) Core: Block	None
CS1810_CB Software Implementation Event (20) Core: 2, Block	
CS1803_CB FHEQ Level 4 Group Project Reflection (10) Core: 2, Block	
CS1811_CB Fundamental Programming Assessment (20) Core: Block	
CS1805_CN Data and Information Assessment (20)	
Compulsory study block codes, titles and credit volume	Optional Study block codes, titles and credit volume
CS1701_SB FHEQ Level 4 Group Project Lectures & Tutorials (40)	None
CS1702_SB Introductory Programming (20)	
CS1703_SB Data and Information (20)	
Compulsory modular block codes, titles and credits	Optional modular block codes, titles and credits
CS1004_CN Information Systems and Organisations (20)	None
CS1005_CN Logic and Computation (20)	
An alternative FHEQ Level 4 structure for international students is specified in document "Validated Programme Element Specification for LBIC First Year University Studies in Information and Computer Science". This document also specifies the admission and progression requirements.	
FHEQ Level 4 Progression and Award Requirements	
As per Senate Regulation 2	

FHEQ Level 5	
Compulsory assessment block codes, titles and credits	Optional assessment block codes, titles and credits
None	None
Compulsory study block codes, titles and credit volume	Optional Study block codes, titles and credit volume
CS2554_SB Graduate Development (5)	None

Compulsory modular block codes, titles and credits	Optional modular block codes, titles and credits
CS2001_CB FHEQ Level 5 Group Project (40) Core: Block	None
CS2002_CN Software Development and Management (20)	
CS2003_CN Usability Engineering (20)	
CS2006_CN Business Analysis and Process Modelling (20)	
CS2007_CN ICTs in Society (20)	
FHEQ Level 5 Progression and Award Requirements	
As per Senate Regulation 2	

FHEQ Level 5 – Sandwich Placement	
Compulsory assessment block codes, titles and credits	Optional assessment block codes, titles and credits
CS2555_CB DISC Placement Year (120) Core: Block	None
Compulsory study block codes, titles and credit volume	Optional study block codes, titles and credit volume
None	None
Compulsory modular block codes, titles and credits	Optional modular block codes, titles and credits
None	None
FHEQ Level 5 Placement Progression and Award Requirements	
As per Senate Regulation 2	
For BSc Business Computing with Professional Practice, CS2555 will contribute one third of the FHEQ Level 5 profile and approximately 11% of the overall degree calculation	

FHEQ Level 6	
Compulsory assessment block codes, titles and credits	Optional assessment block codes, titles and credits
None	None
Compulsory study block codes, titles and credit volume	Optional study block codes, titles and credit volume
None	None
Compulsory modular block codes, titles and credits	Optional modular block codes, titles and credits
<p>CS3605_CB Business Computing Project (40) Core: Block</p> <p>CS 3606_CE Advanced Topics in Business Computing (20) Core: 1</p> <p>This assessment block is only part of the BSc Business Computing (eBusiness) programme:</p> <p>CS3607_CB eBusiness (20) Core: Block</p> <p>This assessment block is only part of the BSc Business Computing (Human-computer interaction) programme:</p> <p>CS3009_CB Human-Computer Interaction (20) Core: Block</p> <p>This assessment block is only part of the BSc Business Computing (Social Media) programme:</p> <p>CS3608_CB Social Media (20) Core: Block</p>	<p>Choose from these options to make up 120 credits:</p> <p>CS3607_CN eBusiness (20)</p> <p>CS3009_CN Human-Computer Interaction (20)</p> <p>CS3608_CN Social Media (20)</p> <p>CS3100_CN Software Project Management (20)</p> <p>CS3609_CN Cybersecurity (20)</p>
FHEQ Level 6 Progression and Award Requirements	
<u>As per Senate Regulation 2</u>	
For BSc Business Computing with Professional Practice, CS2555 will contribute one third of the FHEQ Level 6 profile and approximately 11% of the overall degree calculation	

Please note: this specification provides a concise summary of the main features of the programme and the learning outcomes that a student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods can be found in the modular block, assessment and study block outlines and other programme and block information. The accuracy of the information contained in this document is reviewed by the University from time to time and whenever a modification occurs.