Year of entry: 2021/22

Programme Specification

1	**Awarding body**	University of London
2	**Teaching Institution**	**Birkbeck College**
3	**Programme Title(s)**	**BSc Computing** **BSc Computing with Foundation Year**
4	**Programme Code(s)**	UBSCOMPG_C (Part-time, 4 years) UBSCOMPT_C (Full-time, 3 years) UBSCOMPD_C (Decelerated, 6 years) UUBFCOMP_C (Full-time with Foundation Year, 4 years)
5	**UCAS code**	I100, I102 (with Foundation Year)
6	**Home Department**	Computer Science & Information Systems
7	**Exit Award(s)**	Diploma Higher Education, Certificate of Higher Education, Certificate of Continuing Education
8	**Duration of Study (number of years)**	4 years part time or 6 years decelerated part time or 3 years full time, 4 years full-time with Foundation Year
9	**Mode of Study**	Part Time or Full time
10	**Level of Award (FHEQ)**	6
11	**Other teaching depts or institution**	Department of Management
12	**Professional, Statutory Regulatory Body(PSRB) details**	N/A
13	***QAA Benchmark Group***	Computing

14	**Programme Rationale & Aims**
	The programme aims to develop knowledge, technical skills and self-directed learning skills in computing, especially in areas affected by rapidly changing information technology. Final year students carry out a complex real-world computing project. Modern computing and information systems skills often become obsolete as new technology is developed. Therefore, the programme strikes a balance between learning current skills, which are important in the market place, and emphasising the underlying theories, which last longer and which provide a sound basis for developing new skills, techniques and technologies, and even new theories. The social and organisational impacts of information technology are also included. Students with a Foundation Degree in IT or an equivalent qualification such as an HND in Computing may register for year 3 of the four-year part-time programme and if successful, graduate with a BSc in Computing after two further years of part-time study. Similarly, such students may register for year 4 of the six-year decelerated part-time programme and if successful, graduate with a BSc in Computing after three further years of part-time study. **Distinctive Features**

	The programme is distinct from the BSc in Information Systems & Management (BSc IS&M) in that there is an emphasis on technical computing skills and information systems rather than on the general management skills found in the BSc IS&M. **BSc Computing with Foundation Year** The BSc Computing with Foundation Year is designed for applicants who do not meet the entry requirements for direct entry to an undergraduate degree, who do not feel they are quite ready for an undergraduate degree, or who are returning to study after a significant break and need extra help and support with their studies. The foundation year element of the Programme provides the core knowledge and skills required for the successful study of Computing at undergraduate level. It includes modules covering introductory, subject-specific areas such as IT, Computing and Programming. It also includes more transferable skills modules, covering approaches to study, academic writing and working in teams. Successful completion of the foundation year enables students to progress to the BSc element of the Programme. The BSc element of the Programme aims to develop the knowledge, technical skills, and self-directed learning skills required by employers in the fast-evolving world of Computing and Information Technology. The primary focus is on developing strong programming and software engineering skills. Emphasis is also placed on exploring the socio, ethical and legal aspects of Computing. At the end of the BSc element of the Programme, students carry out a complex, real-world project.

15	**Entry Criteria**
	We welcome applicants without traditional entry qualifications as we base decisions on our own assessment of qualifications, knowledge and previous work experience. We may waive formal entry requirements based on judgement of academic potential. **BSc Computing** UCAS tariff: 112-128 points. The UCAS tariff score is applicable to students who have recently studied a qualification that has a UCAS tariff equivalence. GCSES Applicants are expected to have GCSE grade C or 4, or equivalent, in English and mathematics. **BSc Computing with Foundation Year** UCAS tariff: 48 points. The UCAS tariff score is applicable to students who have recently studied a qualification that has a UCAS tariff equivalence. GCSES Applicants are expected to have GCSE grade C or 4, or equivalent, in English and mathematics.

16	**Learning Outcomes**
	The Programme learning outcomes are: **Foundation year specific:** 1. To provide students with the subject specific skills and knowledge required to study Computing at undergraduate level.

2. To provide students with the generic skills and knowledge required to study computing at undergraduate level.

Programme as a whole:

Subject Specific

1. Computer literacy
2. Ability to discuss various forms and levels of information
3. Structured techniques for information systems analysis and design
4. Number systems, computer architectures, data structures, algorithms, software engineering fundamentals
5. Web programming
6. Knowledge of the technology underlying web-based commercial activity
7. Knowledge of the current social and organisational issues surrounding the deployment of information technology.
8. Understanding of database concepts and in particular relational database technology. An understanding of the systems and context of IS projects.
9. Knowledge of computer networking
10. Knowledge of information security

Intellectual

11. Critically evaluate arguments and evidence.
12. Construct and present theoretical and empirical arguments.
13. The ability to write and present substantial reports arguing a case.

Practical

14. Make informed decisions.
15. Develop models within which problems can be solved, for example database models. Plan, implement and test solutions.
16. Code an algorithm into a programming language; design, test and evaluate programs.
17. Write a substantial report.
18. Search for information.
19. Argue a case.

Personal and Social

20. Work under pressure.
21. Communicate using appropriate interpersonal skills.
22. Work in teams.
23. Take responsibility for own learning and time management.

17	**Learning, teaching and assessment methods**

Foundation Year

Instruction will be predominantly via lectures. Lectures will be augmented with group and individual tutorial work and practical lab work. Instructional material will also be made available online. Assessment will be through a mix of exam, coursework (test, essay, practical task, presentation) and project work.

BSc Degree

Lecturing
Lecturing is a major method for knowledge transfer. However, most modules mix other activities with lectures on any particular evening. Mature students can be highly interactive and staff are encouraged to obtain student feedback about areas that may need deeper attention.

Group Tutorials
Several modules mix lectures with work in small groups, in which higher levels of student interaction are possible. This works particularly well with complicated topics.

Written Exercises (Essays)
Feedback from written essays encourages students to develop appropriate formal and precise writing habits. It leads students to express themselves in a structured manner in writing. Major essays are completed in the compulsory module Professional Issues in Computing and the optional module Strategic Information Systems.

Laboratory Based Exercises
Computing laboratory exercises are used to give the students hands-on experience in developing information systems artifacts such as systems analysis and design models and computer programs. Some of these exercises are assessed.

Group Exercises
Group exercises are used in several modules e.g. Information Systems Concepts. Group exercises improve students' social interactions and their ability to work in teams.

Presentations
Presentations are a powerful learning experience. Students giving presentations develop their powers of information discovery, equip themselves with a deep understanding of the topics to be presented and transfer some of their knowledge to their peers who at the same time acquire skills in verbal academic discourse. In the optional module Strategic Information Systems each student delivers a presentation which is peer assessed (5% of the available marks come from an aggregate poll of the students; the lead tutor provides a further 10%).

Final Year Project
Projects are of two types: 3) Information Systems Development, and 4) Computing. The numbering of the types of project is chosen to ensure consistency with the types of projects in the BSc in Information Systems and Management. All projects require the students to take an integrative approach to a major piece of work. They are required to set a boundary for the work, formulate their aims and objectives, gather information, analyze information, reflect on their work and produce a substantial report.

Students must obtain a mark of at least 40% to pass a module. A maximum of three attempts are allowed for any module assessment.

	On successful completion of the degree, students will be awarded a classification of 1 (First), 2.1, 2.2, 3 (Third) or Fail, based on a weighted average of the marks for all level 5 and 6 modules studied as follows: • 1: >= 70% • 2.1: >= 60% & <= 69% • 2.2: >= 50% & <= 59% • 3: >= 40% & <= 49% • Fail: <=39%

18	**Programme Structure**
	Description The programme consists of modules. The syllabus for each module consists of a closely related set of topics, as indicated by the title of the module. Each module has a level, which indicates the academic level of the module, and a value in credits. Most modules are taught over one term and have a value of 15 credits. Some modules are taught over two terms and have a value of 30 credits. The final year project has a value of 30 credits. In order to graduate, it is necessary to accumulate 360 credits. Under normal circumstances, the maximum number of credits that can be accumulated in an academic year is 90 credits for the four-year part-time programme, 60 credits for the six-year decelerated part-time programme, and 120 credits for the three-year full-time programme. **Four-year part-time programme**: all of the modules in years 1 and 2 are compulsory. There is a mix of compulsory and optional modules in years 3 and 4. Modules in year 1 have level 4. Modules in year 2 are level 5, while modules in years 3 and 4 are either level 5 or level 6. In order to graduate, it is necessary to accumulate at least 120 credits at level 6. For convenience, all the optional modules listed below in the four-year programme are placed in year 3. However, any of these optional modules can also be chosen in year 4. An optional module can be chosen only if its prerequisites are satisfied. **Six-year decelerated part-time programme**: all the modules in years 1, 2 and 3 are compulsory. There is a mix of compulsory and optional modules in years 4, 5 and 6. Modules in year 1 are level 4. Modules in year 2 are either level 4 or level 5. Modules in year 3 are level 5. Modules in years 4, 5 and 6 are either level 5 or level 6. In order to graduate, it is necessary to accumulate at least 120 credits at level 6. **Three-year full-time programme**: all of the modules in year 1 are compulsory. There is a mix of compulsory and optional modules in years 2 and 3. Modules in year 1 are level 4 or 5. Modules in years 2 and 3 are level 5 or 6. In order to graduate, it is necessary to accumulate at least 120 credits at level 6. For convenience, all the optional modules listed below in the three-year programme are placed in year 2. However, any of these optional modules can also be taken in year 3. An optional module can be taken only if its prerequisites are satisfied. **BSc Computing with Foundation Year** The BSc Computing with Foundation Year provides a perfect route to study for those who do not meet the entry requirements for direct entry to an undergraduate Computing degree, who do not feel they are quite ready for an undergraduate degree, or who are returning to study after a significant break and need extra help and support.

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	The foundation year helps build confidence and provide skills to study successfully at undergraduate level. It also provides students with a strong foundation in the main subject area of Computing. Upon successful completion of the Foundation Year, students automatically progress to our three-year, full-time evening study BSc Computing. The BSc focuses on key software development skills, including algorithms and data structures, systems analysis and design, programming, software testing and project management.

4 year part-time programme

Year 1

Level	Module Code	Module Title	Credits	Status
4	COIY040H4	Mathematics for Computing	15	Compulsory
4	BUCI008H4	Introduction to Computer Systems	15	Compulsory
4	BUCI007H4	Introduction to Programming	15	Compulsory
4	COIY016H4	Systems Analysis and Design I	15	Compulsory
4	SSCS004H4	Introduction to Web Authoring	15	Compulsory
5	BUCI036H5	Computer Networking	15	Compulsory

Year 2

Level	Module Code	Module Title	Credits	Status
5	BUCI030H5	Data Structures and Algorithms	15	Compulsory
5	SSCS025H5	Web Programming Using PHP	15	Compulsory
5	BUCI066H5	Software Engineering I	15	Compulsory
5	COIY018H5	Software and Programming 1	15	Compulsory
5	COIY019H5	Systems Analysis and Design II	15	Compulsory
		Option 1	15	Optional

Year 3

Level	Module Code	Module Title	Credits	Status
5	BUCI055H5	Computer Organisation and System Software	15	Compulsory
6	COIY045H6	Information Security	15	Compulsory
6	COIY028H6	Database Management	15	Compulsory
6	COIY026H6	Software and Programming 2	15	Compulsory
		Option 2	15	Optional
		Option 3	15	Optional

Year 4

Level	Module Code	Module Title	Credits	Status
6	COIY030H6	Professional Issues in Computing	15	Compulsory
6	COIY039S6 BUCI026S6 BUCI027S6	Project BSc Computing OR BSc Project Type 3 OR BSc Project Type 4	30	Compulsory
6	BUCI067H6	Software Engineering II	15	Compulsory
		Option 4	15	Optional
		Option 5	15	Optional

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6 year decelerated programme				
Year 1				
Level	**Module Code**	**Module Title**	**Credits**	**Status**
4	COIY040H4	Mathematics for Computing	15	Compulsory
4	BUCI007H4	Introduction to Programming	15	Compulsory
4	COIY016H4	Systems Analysis and Design I	15	Compulsory
4	SSCS004H4	Introduction to Web Authoring	15	Compulsory
Year 2				
Level	**Module Code**	**Module Title**	**Credits**	**Status**
4	BUCI008H4	Introduction to Computer Systems	15	Compulsory
5	BUCI066H5	Software Engineering I	15	Compulsory
5	SSCS025H5	Web Programming Using PHP	15	Compulsory
5	COIY019H5	Systems Analysis and Design II	15	Compulsory
Year 3				
Level	**Module Code**	**Module Title**	**Credits**	**Status**
5	BUCI030H5	Data Structures and Algorithms	15	Compulsory
5	BUCI036H5	Computer Networking	15	Compulsory
5	COIY018H5	Software and Programming 1	15	Compulsory
5	BUCI055H5	Computer Organisation and System Software	15	Compulsory
Year 4				
Level	**Module Code**	**Module Title**	**Credits**	**Status**
6	COIY045H6	Information Security	15	Compulsory
6	COIY026H6	Software and Programming 2	15	Compulsory
6	COIY028H6	Database Management	15	Compulsory
		Option 1	15	Optional
Year 5				
Level	**Module Code**	**Module Title**	**Credits**	**Status**
6	COIY030H6	Professional Issues in Computing	15	Compulsory
6	BUCI067H6	Software Engineering II	15	Compulsory
		Option 2	15	Optional
		Option 3	15	Optional
Year 6				
Level	**Module Code**	**Module Title**	**Credits**	**Status**
6	COIY039S6 BUCI026S6 BUCI027S6	Project BSc Computing OR BSc Project Type 3 OR BSc Project Type 4	30	Compulsory
		Option 4	15	Optional
		Option 5	15	Optional

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3 year full-time programme				
Year 1				
Level	**Module Code**	**Module Title**	**Credits**	**Status**
4	COIY040H4	Mathematics for Computing	15	Compulsory
4	BUCI008H4	Introduction to Computer Systems	15	Compulsory
4	BUCI007H4	Introduction to Programming	15	Compulsory
4	COIY016H4	Systems Analysis and Design I	15	Compulsory
4	SSCS004H4	Introduction to Web Authoring	15	Compulsory
5	BUCI036H5	Computer Networking	15	Compulsory
5	SSCS025H5	Web Programming using PHP	15	Compulsory
5	COIY018H5	Software and Programming 1	15	Compulsory
Year 2				
Level	**Module Code**	**Module Title**	**Credits**	**Status**
5	BUCI066H5	Software Engineering I	15	Compulsory
5	BUCI030H5	Data Structures and Algorithms	15	Compulsory
5	COIY019H5	Systems Analysis and Design II	15	Compulsory
6	COIY030H6	Professional Issues in Computing	15	Compulsory
5	BUCI055H5	Computer Organization and System Software	15	Compulsory
6	COIY026H6	Software and Programming 2	15	Compulsory
		Option 1	15	Optional
		Option 2	15	Optional
Year 3				
Level	**Module Code**	**Module Title**	**Credits**	**Status**
6	COIY045H6	Information Security	15	Compulsory
6	COIY028H6	Database Management	15	Compulsory
6	COIY039S6 BUCI026S6 BUCI027S6	Project BSc Computing OR BSc Project Type 3 OR BSc Project Type 4	30	Compulsory
6	BUCI067H6	Software Engineering II	15	Compulsory
		Option 3	15	Optional
		Option 4	15	Optional
		Option 5	15	Optional
Full Time with Foundation year programme (4-years)				
Foundation Year (0)				
Level	**Module Code**	**Module Title**	**Credits**	**Status**
4	COIY067H4	Fundamentals of IT	15	Compulsory
3	BUCI084H3	IT Tools and Techniques	15	Compulsory
4	BUCI085H3	Programming Logic	15	Compulsory
3	BUMN166H3	Mathematics for Business	15	Compulsory
3	CASE002S3	Fundamentals of Study: Learning through the Global City	30	Compulsory
3	BUCI075H3	Teamwork	15	Compulsory
3	BUCI076H3	Computing Foundation Year Project	15	Compulsory

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Year 1 (as BSc)				
Level	**Module Code**	**Module Title**	**Credits**	**Status**
4	COIY040H4	Mathematics for Computing	15	Compulsory
4	BUCI008H4	Introduction to Computer Systems	15	Compulsory
4	BUCI007H4	Introduction to Programming	15	Compulsory
4	COIY016H4	Systems Analysis and Design I	15	Compulsory
4	SSCS004H4	Introduction to Web Authoring	15	Compulsory
5	BUCI036H5	Computer Networking	15	Compulsory
5	SSCS025H5	Web Programming using PHP	15	Compulsory
5	COIY018H5	Software and Programming 1	15	Compulsory
Year 2 (as BSc)				
Level	**Module Code**	**Module Title**	**Credits**	**Status**
5	BUCI066H5	Software Engineering I	15	Compulsory
5	BUCI030H5	Data Structures and Algorithms	15	Compulsory
5	COIY019H5	Systems Analysis and Design II	15	Compulsory
6	COIY030H6	Professional Issues in Computing	15	Compulsory
5	BUCI055H5	Computer Organization and System Software	15	Compulsory
6	COIY026H6	Software and Programming 2	15	Compulsory
		Option 1	15	Optional
		Option 2	15	Optional
Year 3 (as BSc)				
Level	**Module Code**	**Module Title**	**Credits**	**Status**
6	COIY045H6	Information Security	15	Compulsory
6	COIY028H6	Database Management	15	Compulsory
6	COIY039S6 BUCI026S6 BUCI027S6	Project BSc Computing BSc Project Type 3 BSc Project Type 4	30	Compulsory
6	BUCI067H6	Software Engineering II	15	Compulsory
		Option 3	15	Optional
		Option 4	15	Optional
		Option 5	15	Optional
Indicative List of Optional Modules				
5	SSCS019H5	JavaScript	15	Optional
5	SSCS018H5	Web Data with XML, JSON and Ajax	15	Optional
5	BUEM001S5	Calculus 2	30	Optional
5	SSCS023H5	Building Web Applications using MySQL and PHP	15	Optional
6	BUCI028H6	Cloud Computing Concepts	15	Optional
6	BUCI034H6	Concepts of Intelligent Technologies	15	Optional
6	COIY044H6	Enterprise Computing	15	Optional
6	BUCI032H6	Programming Language Paradigms	15	Optional
6	COIY031H6	Strategic Information Systems	15	Optional

6	GGPH036S6	Principles of Geographical Information Systems	30	Optional
6	BUCI056H6	Software and Programming 3	15	Optional
5	MOMN018H5	Commercial Law for Business	15	Optional
5	BUCI051H5	Advanced Web Authoring	15	Optional
6	BUCI053H6	Interactive Systems Design (IRSD)	15	Optional
6	BUCI046H6	Wireless and Mobile Computing	15	Optional
5	MOMN047H5	Organizational Behaviour	15	Optional
6	BUCI047H6	Introduction to Search Engines and Web Navigation	15	Optional
6	BUCI045H6	Introduction to Data Analytics using R	15	Optional
5	BUCI044H5	Mobile Application Development	15	Optional
6	BUCI048H6	Introduction to Semantic Web	15	Optional
5	COIY042H5	E-business	15	Optional

Status*

CORE – Module must be taken and passed by student; COMPULSORY – Module must be taken, mark can be reviewed at sub-exam board; OPTIONAL – Student can choose to take this module

19	**Programme Director**	David Weston/ Gordon McIntyre (Foundation Year)
20	**Start Date (term/year)**	Autumn 2012
21	**Date approved by TQEC**	Spring 2011
22	**Date approved by Academic Board**	Summer 2011
23	**Date(s) updated/amended**	30 October 2020