PROGRAMME SPECIFICATION

Name, title and level of final qualification(s)	**MSc Computer Science** (Level 7)
Name and title of any exit qualification(s)	PG Dip Computer Science PG Cert Computer Science
Awarding Body	University of London
Teaching Institution(s)	Birkbeck, University of London
Home School/other teaching departments	School of Computing and Mathematical Sciences
Location of delivery	Central London
Language of delivery and assessment	English
Mode of study, length of study and normal start month	Full-time (1 year) Part-time (2 years) October
Professional, statutory or regulatory body	Not applicable
QAA subject benchmark group(s) Higher Education Credit Framework for England	Computing
Birkbeck Course Code	TMSCOSCI_C
HECoS Code	100366
Start date of programme	Prior to 2008/09
Date of programme approval	Prior to 2008/09
Date of last programme amendment approval	November 2022
Valid for academic year and cohorts	2023/24
Date of last revision to document	12/09/2022

Admissions requirements

At least a second-class honours degree (2:2) or equivalent, in a subject other than computer science, together with some aptitude for programming. Applicants without a degree-level qualification but with significant computing experience may also be considered.

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.

Course aims

The programme provides an intensive course in computing for graduates of other subjects. As well as gaining a broad knowledge of the subject, they acquire practical skills and have the opportunity to investigate certain areas of current research more deeply. For students who are new to the subject, it provides a foundation for a career in IT; for those already working in IT, it provides an opportunity to broaden their knowledge and update their skills while obtaining a formal qualification.

Holders of the MSc will have demonstrated a systematic understanding and a critical awareness, much of it at the forefront of the discipline, a comprehensive and practical understanding of applicable techniques, originality in the application of knowledge, the ability to evaluate current research and methodologies, and the independent learning ability required for continuing professional development.

Course structure

Level	Module Code	Module Title	Credit	Comp Core/ Option	Likely teaching term(s)
Full-time – 1 year					
7	COIY060H7	Computer Systems	15	Comp	2
7	COIY061H7	Data and Knowledge Management	15	Comp	1
7	COIY058H7	Fundamentals of Computing	15	Comp	1
7	COIY059H7	Information Systems	15	Comp	2
7	BUCI033S7	Programming in Java	30	Comp	1
7	COIY062H7	Software Design and Programming	15	Comp	2
7	COIY065D7	MSc Computer Science Project	60	Core	3
7		Option module x1	15	Option	1-2
Part-time – 2 years					
Year 1					
7	COIY060H7	Computer Systems	15	Comp	2
7	COIY058H7	Fundamentals of Computing	15	Comp	1
7	COIY059H7	Information Systems	15	Comp	2
7	BUCI033S7	Programming in Java	30	Comp	1-2
Year 2					
7	COIY061H7	Data and Knowledge Management	15	Comp	1
7	COIY062H7	Software Design and Programming	15	Comp	2
7	COIY065D7	MSc Computer Science Project	60	Core	3
7		Option module x1	15	Option	1-2

Indicative option modules					
7	COIY025H7	Advances in Data Management	15	Option	2
7	BUCI029H7	Cloud Computing	15	Option	1
7	BUCI040H7	Information and Network Security	15	Option	1
7	COIY063H7	Internet and Web Technologies	15	Option	2

Core: *Module must be taken and passed by student*
Compulsory: *Module must be taken but can be considered for compensated credit (see CAS regulations paragraph 24)*
Option: *Student can choose to take this module*

How you will learn

Your learning and teaching is organised to help you meet the learning outcomes (below) of the course. As a student, we expect you to be an active learner and to take responsibility for your learning, engaging with all of the material and sessions arranged for you.

Each course is divided into modules. You will find information on the virtual learning site (Moodle, see Academic Support below) about each of your modules, what to expect, the work you need to prepare, links to reading lists, information about how and when you will be assessed.

Formal lectures are the principal teaching method, but these frequently incorporate practical sessions, for example in programming, and also group exercises carried out in class.

How we will assess you

The course will use a variety of assessment methods. Assessment is used to enhance your learning rather than simply to test it. For most of the modules associated with this course, your assessment will be through practical lab exercises, coursework and written examinations.

Each student also undertakes an individual project of their own devising (which includes background research) and is supervised by a member of staff. The project provides an opportunity for students to investigate an aspect of the subject that particularly interests them and to build a larger and more complex system than they encounter in the assignments.

Learning outcomes (what you can expect to achieve)

'Learning outcomes' indicate what you should be able to know or do at the end of your course. Providing them helps you to understand what your teachers will expect and also the learning requirements upon which you will be assessed.

At the end of this course, you should be able to:

Subject Specific:

- demonstrate a knowledge of programming (S1),
- understand mathematical and algorithmic foundations of computing (S2),
- appreciate information systems design and social implications (S3),
- undertake database design and management (S4),
- practise software engineering and design (S5),

- understand computer architecture and operating systems (S6),
- demonstrate an appreciation of some research topics (S7).

Intellectual:

- develop an algorithm to carry out a specified task and to convert this into an executable program (I1),
- debug a program (I2),
- develop designs in databases and information systems (I3),
- plan and carry out a project spanning several months (I4),
- perform abstract thinking and to exhibit abstraction skills (I5).

Practical:

- write programs in Java (P1),
- use the SQL data-manipulation language (P2),
- create and document a design using UML (P3),
- use a coherent information system development process (P4).

Personal and Social:

- demonstrate self-direction and originality in tackling and solving problems (PS1),
- act autonomously in planning and implementing tasks at a professional level (PS2),
- conduct a critical appraisal of material synthesized from research papers (PS3),
- communicate your conclusions clearly to specialist and non-specialist audiences (PS4),
- deal with complex issues systematically and creatively (PS5),
- advance further your knowledge, skills and understanding (PS6).

Careers and further study

You will find Computer Science graduates in the following kinds of roles:

- Programmer
- Software engineer
- Systems analyst,
- Database administrator
- Web developer
- Systems administrator
- Testing and software quality engineer

Birkbeck offers a range of careers support to its students. You can find out more on the careers pages of our website: https://www.bbk.ac.uk/student-services/careers-service.

Academic regulations and course management

Birkbeck's academic regulations are contained in its Common Award Scheme Regulations and Policies published by year of application on the Birkbeck website.

You will have access to a course handbook on Moodle and this will outline how your course is managed, including who to contact if you have any questions about your module or course.

Support for your study

Your learning at Birkbeck is supported by your teaching team and other resources and people in the College there to help you with your study. Birkbeck uses a virtual learning environment

called Moodle and each course has a dedicated Moodle page and there are further Moodle sites for each of your modules. This will include your course handbook.

Birkbeck will introduce you to the Library and IT support, how to access materials online, including using Moodle, and provide you with an orientation which includes an online Moodle module to guide you through all of the support available. You will also be allocated a personal tutor and provided with information about learning support offered within your School and by the College.

Please check our website for more information about student support services. This covers the whole of your time as a student with us including learning support and support for your wellbeing.

Quality and standards at Birkbeck

Birkbeck's courses are subject to our quality assurance procedures. This means that new courses must follow our design principles and meet the requirements of our academic regulations. Each new course or module is subject to a course approval process where the proposal is scrutinised by subject specialists, quality professionals and external representatives to ensure that it will offer an excellent student experience and meet the expectation of regulatory and other professional bodies.

You will be invited to participate in an online survey for each module you take. We take these surveys seriously and they are considered by the course team to develop both modules and the overall courses. Please take the time to complete any surveys you are sent as a student.

We conduct an annual process of reviewing our portfolio of courses which analyses student achievement, equality data and includes an action plan for each department to identify ongoing enhancements to our education, including changes made as a result of student feedback.

Our periodic review process is a regular check (usually every four years) on the courses by department with a specialist team including students.

Each course will have an external examiner associated with it who produces an annual report and any recommendations. Students can read the most recent external examiner reports on the course Moodle pages. Our courses are all subject to Birkbeck Baseline Standards for our Moodle module information. This supports the accessibility of our education including expectations of what information is provided online for students.

The information in this programme specification has been approved by the College's Academic Board and every effort has been made to ensure the accuracy of the information it contains.

Programme specifications are reviewed periodically. If any changes are made to courses, including core and/or compulsory modules, the relevant department is required to provide a revised programme specification. Students will be notified of any changes via Moodle.

Further information about specifications and an archive of programme specifications for the College's courses is available online.