

PROGRAMME SPECIFICATION

Name, title and level of final qualification(s)	Graduate Certificate Mathematics by Distance Learning (Level 6)
Name and title of any exit qualification(s)	N/A
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	Part-time (7 months Jan-July or 1 year Oct-July - <i>suspended</i>) October (<i>currently suspended</i>), January
Professional, statutory or regulatory body	N/A
QAA subject benchmark group(s) Higher Education Credit Framework for England	N/A
Birkbeck Course Code	GCGMTHDJ_C (January start) GCGMTHDL_C (October start - suspended)
HECoS Code	100403
Start date of programme	January 2021
Date of programme approval	Autumn 2020
Date of last programme amendment approval	March 2024
Valid for academic year and cohorts	2024/25
Date of last revision to document	22/03/24

Admissions requirements

A second-class honours degree (2:2 or above) in a quantitative subject; students without the required degree may be admitted subject to passing an entrance test.

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 aim of the programme is to provide a high quality qualifying course for our mathematics postgraduate provision, delivered by distance learning to ensure maximum flexibility for learners, whether based in London or further afield in the UK or internationally.

The College mission is to educate busy working people. This Graduate Certificate, with its online delivery, gives students huge flexibility, both in the way they structure their study time during the week, but also in the fact that it enables us to offer both January and October starts.

Although the Graduate Certificate can be taken as a stand-alone course, its main purpose is to act as a qualifying course for our postgraduate provision. The MSc in Mathematics, and in Mathematics with Financial Modelling, have both part-time and full-time variants, and as such can be taken by both home and international students.

Although our core provision remains face-to-face teaching and learning, for shorter programmes such as the proposed Graduate Certificate, international students are excluded because of visa rules. This means that, at present, such students, if they do not meet the MSc entry criteria, have no access to existing qualifying courses.

Strengths of the programme:

The Graduate Certificate in Mathematics by distance learning will allow students to take this course from January and qualify for an MSc starting the next October. The flexibility of online study means students can fit their learning more easily around job commitments and caring responsibilities. The modules have been designed specifically to give students the key knowledge from core undergraduate topics, to allow them to access postgraduate study. Students will be learning from experienced academics, all active mathematics researchers.

Knowledge and Skills that will be developed:

Students completing the Graduate Certificate in Mathematics by Distance Learning will gain crucial skills in understanding and applying core mathematics results from areas such as algebra, calculus and analysis. In particular, they will learn the importance of rigorous mathematical arguments, and gain understanding of key mathematical concepts that are the basis of postgraduate study in mathematics. Students will improve their quantitative and analytical skills, and can use successful completion of this programme as a stepping-stone to our Masters courses in Mathematics.

Course structure

Students will take four 15-credit, level 6, online mathematics modules, over either two terms or three terms (note the October start is currently suspended). Each module will be delivered online, with the only physical attendance requirement being the end-of-module examination.

October start (*currently suspended*); course duration 1 year:

- Four 15 credit modules from the Autumn, Spring or Summer Terms.
- All modules run for a single term with the exam at the end of the term.
- Programme completed at end of Summer Term.

January start; course duration 2 terms:

- Four 15 credit modules from the Spring and Summer Terms.
- Programme completed at end of Summer Term.
- All modules run for a single term with the exam at the end of the term.

Grad Cert Mathematics by Distance Learning (4 x 15 credits)					
Part-time – 1 year, January start					
Level	Module Code	Module Title	Credit	Comp Core/ Option	Likely teaching term(s)
6	BUEM123H6	Abstract Algebra 1	15	Compulsory	Spring
6	BUEM122H6	Advanced Calculus	15	Compulsory	Spring
6	BUEM124H6	Abstract Algebra 2	15	Compulsory	Summer
6	BUEM125H6	Real Analysis	15	Compulsory	Summer

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.

Learning and teaching:

- Pre-recorded online lectures
- Online self-assessment quizzes with automated marking/feedback
- Live-streamed examples classes
- Moodle discussion boards
- Virtual “office hours”

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 the following types of assessment:

- Online assessed quizzes
- Short problem-based assignments, submitted and marked online
- Formal unseen 2-hour examinations, taken in person

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:

- Understand and use mathematical methods and techniques.
- Demonstrate knowledge and understanding of a range of results in mathematics.
- Appreciate the need for proof in mathematics, and the ability to follow and construct mathematical arguments.
- Appreciate the power of generalization and abstraction in the development of mathematical theories.
- Demonstrate a deeper knowledge of some particular areas of mathematics.

Intellectual

- Comprehend conceptual and abstract material.
- Develop a logical and systematic approach to problem solving.

Practical

- Demonstrate problem-solving skills, including the ability to assess problems logically and to approach them analytically.
- Demonstrate highly developed quantitative skills
- Transfer knowledge and expertise from one context to another.

Personal and Social

- Work independently with patience and persistence.
- Demonstrate time-management and organizational skills.
- Demonstrate good communication skills, including the ability to write coherently.
- Complete work in a limited time period.

Careers and further study

Graduates can pursue career paths in the financial sector, actuarial profession, IT and computing, teaching and academia. Possible professions include:

- actuary
- statistician
- chartered accountant
- corporate investment banker
- investment analyst
- quantity surveyor.

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](#).

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