Year of entry: 2021/22

Programme Specification

1	**Awarding body**	University of London						
2	**Teaching Institution**	**Birkbeck College**						
3	**Programme Title(s)**	**Graduate Certificate Mathematics by Distance Learning**						
4	**Programme Code(s)**	GCGMTHDJ_C (January start) GCGMTHDL_C (October start)						
5	**UCAS code**	N/A						
6	**Home Department**	Economics, Mathematics and Statistics						
7	**Exit Award(s)**	N/A						
8	**Duration of Study** (number of years)	7 months (Jan-July) or 1 year (October – July)						
9	**Mode of Study**	FT		PT		DL	✓	
10	**Level of Award (FHEQ)**	6						
11	**Other teaching depts or institution**	N/A						
12	**Professional, Statutory Regulatory Body(PSRB) details**	N/A						
13	**QAA Benchmark Statement**	N/A						

14	**Programme Rationale & Aims**
	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. ***Rationale:*** 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.

15	**Entry Criteria**
	• A degree in a quantitative subject, normally at least 2:1 or equivalent. • Standard college English language requirement. • Students may be able to be admitted without a 2:1 in a quantitative degree, subject to passing an entrance test.

16	**Learning Outcomes**
	Subject Specific: **LO1** Knowledge and understanding of, and the ability to use, mathematical methods and techniques. **LO2** Knowledge and understanding of a range of results in mathematics. **LO3** Appreciation of the need for proof in mathematics, and the ability to follow and construct mathematical arguments. **LO4** Understand the importance of assumptions and an awareness of where they are used and the possible consequences of their violation. **LO5** Appreciation of the power of generalization and abstraction in the development of mathematical theories. **LO6** A deeper knowledge of some particular areas of mathematics. ***Intellectual:*** **LO7** Ability to comprehend conceptual and abstract material. **LO8** Develop a logical and systematic approach to problem solving. ***Practical:*** **LO9** Problem-solving skills, including the ability to assess problems logically and approach them analytically. **LO10** Highly developed quantitative skills. **LO11** Ability to transfer knowledge and expertise from one context to another. ***Personal and Social:*** **LO12** Ability to work independently with patience and persistence. **LO13** Time-management skills and organizational skills. **LO14** Good communication skills, including the ability to write coherently. **LO15** Ability to complete work in a limited time period.

17	**Learning, teaching and assessment methods**

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"

Assessment Methods:

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

18	**Programme Description**

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

In 2020-21, the programme will only have a January start.

October start (currently suspended); course duration 1 year/3 terms.

- Any 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 (from Jan 2020); course duration 2 terms.

- Any 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.

19	**Programme Structure**

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

- Any 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:

- Any 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.

Modules available

Level	Module Code	Module Title	Credits	Status*
6	BUEM122H6 (Jan 2021)	Advanced Calculus	15	option
6	BUEM123H6 (Jan 2021)	Abstract Algebra 1	15	option
6	BUEM124H6 (Apr 2021)	Abstract Algebra 2	15	option
6	BUEM125H6 (Apr 2021)	Real Analysis	15	option
6	BUEM126H6 (Oct 2021)	Advanced Algebra	15	option

6	-	Any other appropriate 15 credit level 6 module, subject to the approval of the programme director	15	option

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*

20	**Programme Director**	Sarah Hart
21	**Start Date** ***(term/year)***	January 2021
22	**Date approved by Education Committee**	Summer 2020
23	**Date approved by Academic Board**	Autumn 2020
24	**Date(s) updated/amended**	August 2020