PROGRAMME SPECIFICATION

Name, title and level of final qualification(s)	**Dip HE Mathematics** (Level 5)
Name and title of interim exit qualification(s)	Cert HE Mathematics
Awarding Body	University of London
Teaching Institution(s)	Birkbeck, University of London
Home Department/other teaching departments	Computer and data science
Location of delivery	Central London
Language of delivery and assessment	English
Mode of study, length of study and normal start month	Part-time (3 years) September
Professional, statutory or regulatory body	N/A
QAA subject benchmark group(s) Higher Education Credit Framework for England	Mathematics, Statistics and Operational Research
Birkbeck Course Code	UDHMTHMT_C
HECoS Code	100403
Start date of programme	Autumn 2010
Date of programme approval	Summer 2010
Date of last programme amendment approval	October 2022
Valid for academic entry year	**2024-25**
Date of last revision to document	21/10/2022

Admissions requirements

Students who have recently undertaken qualifications require a minimum of two A-levels, or the equivalent. 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. A-level mathematics, or the equivalent, is desirable, but not essential. Applicants without such a qualification are required to pass an entrance test.

Course aims

The Diploma of Higher Education in Mathematics (Dip HE) is aimed at students with an A-level or equivalent in mathematics who wish to acquire some university level mathematics but are not willing or able to commit to a full four year BSc programme. This award has the advantage that it is a less fast-paced introduction to higher education. A main aim of this programme is to provide more flexible provision at undergraduate level.

Distinctive features: Part-time, evening, face to face study. Regular coursework forms a part of all modules, to further develop independent learning. Completion would allow a flexible entry route into year 3 of an appropriate BSc programme at Birkbeck.

Course structure

Level	Module Code	Module Title	Credit	Comp Core/ Option	Likely teaching term(s)
Part-time – 3 years					
Year 1					
4	EMMS096S4	Calculus 1	30	Core	T1-2
4	EMMS097S4	Algebra 1	30	Core	T1-2
Year 2					
4	BUEM096S4	Numbers, Proofs and Counting	30	Compulsory	T3
4		Option	30	Option	T1 or 2
5		Option	30	Option	T1 or 2
Year 3					
5	Options	Indicative list below	60	Option	T1, 2 or 3
5/6	Option	Indicative list below (students may take at most 30 credits at level 6 with approval of programme director)	30	Option	T1, 2 or 3
Indicative list of options (not all level 6 modules run every year; this is an indicative list only)					
4	BUEM132H4	Data Skills	15	Option	T1
4	BUEM133H4	Mathematical Explorations	15	Option	T2
4		Module(s) from other subject areas	30	Option	T1+T2
5	BUEM001S5	Calculus 2	30	Option	T3
5	BUEM130H5	Probability Models	15	Option	T1
5	BUEM131H5	Analysing Data	15	Option	T2

5	BUEM100S5	Number Theory and Cryptography	30	Option	T2
5	BUEM101S5	Algebra 2	30	Option	T1
6	BUEM021S6	Calculus 3	30	Option	T3
6	BUEM003S6	Statistics Theory and Practice	30	Option	T1
6	BUEM134S6	Algebra and Analysis	30	Option	T2
6	BUEM105S6	Finite Mathematics	30	Option	T2
6	BUEM135S6	Data Science	30	Option	T3

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.

Your learning for this course will be organised around the activities outlined below.

Teaching on this course is a combination of lectures (pre-recorded) and seminars. Lectures are designed to engage you with the material and to describe new topics and techniques, illustrated with plenty of examples. They are a springboard for your own learning. Seminars are group sessions where you will be asked to contribute to discussion of problems / exercises which you need to have attempted in advance, and work on new problems / exercises. Statistics modules also include lab sessions where you work with a statistical package.

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.

Short written exercises, quizzes and problems to solve.

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:

- Understand and use mathematical and/or statistical techniques.
- Apply a range of results from mathematics and/or statistics.
- Construct mathematical arguments to establish a range of mathematical results.
- Demonstrate an understanding of the importance of assumptions and the possible consequences of their violation.
- Present, analyse and interpret data.

- Demonstrate an appreciation of the power of generalization and abstraction in the development of mathematical theories.
- Apply the processes of mathematical approximation and computational mathematics and quantify their limitations.
- Demonstrate a deeper knowledge of some particular areas of mathematics.
- Comprehend conceptual and abstract material.
- Develop a logical and systematic approach to problem solving.
- Transfer knowledge and expertise from one context to another, by applying mathematical and/or statistical techniques in unfamiliar situations.
- Learn independently with patience and persistence using a variety of media.
- Communicate effectively, writing mathematics and/or statistics in a coherent way.
- Complete a sustained and substantial task in a limited time period.

Careers and further study

You will find mathematics graduates in the following kinds of roles:

- Actuary
- Data Scientist
- Economist
- Statistical analyst
- Business analyst
- Management consultant
- Market research analyst
- Technology professional
- Software developer
- Financial analyst
- Teacher
- Accountant

Birkbeck's DipHE Mathematics graduates will complete their degree with a set of valuable attributes, for example:

- Well-developed problem-solving skills
- Mathematical modelling skills
- Highly developed quantitative skills
- The ability to work independently
- Excellent time management skills

Birkbeck offers a range of careers support to its students. You can find out more on the careers pages of our website.

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.