Programme Specification

1	**Awarding body**	University of London
2	**Teaching Institution**	**Birkbeck College**
3	**Programme Title(s)**	**Graduate Diploma in Statistical Data Science**
4	**Programme Code(s)**	GDGSDATS_C
5	**UCAS code (if applicable)**	N/A
6	**Home Department**	Economics, Mathematics and Statistics
7	**Exit Award(s)**	Graduate Certificate in Statistical Data Science
8	**Duration of Study** (number of years)	2 years
9	**Mode of Study**	FT		PT	✓	DL	
10	**Level of Award (FHEQ)**	
11	**Other teaching depts or institution**	N/A
12	**Professional, Statutory Regulatory Body(PSRB) details**	N/A
13	[*QAA Benchmark Statement*](#)	Mathematics, Statistics and Operational Research

14	**Programme Rationale & Aims**
	The Graduate Diploma in Statistical Data Science is aimed at students with a first degree who need or desire to develop specialist knowledge in statistical science and its practical implementation, in a package such as R. Distinctive features: Part-time, evening, face to face study. Regular coursework forms a part of all modules, to further develop independent learning.

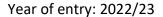|	
15	**Entry Criteria**
	The entry requirement would, in general, be a relevant quantitative first degree containing some introductory statistics within it, and an A-level, or equivalent, in Mathematics. In exceptional circumstances candidates without a first degree may be admitted, provided they have equivalent level qualifications or professional experience that convinces the admissions team that they are suitably qualified to enter the programme.

16	**Learning Outcomes**
	On successful completion of this programme, it is expected that a student will: **Subject Specific** LO1 have knowledge and understanding of, and the ability to use, mathematical and statistical methods, results and techniques; LO2 have knowledge of the use of statistical techniques to analyse data sets and the ability to collate and analyse data using a statistical computer package (such as R), and draw appropriate conclusions;

LO3 have awareness of the use of mathematics and/or statistics to model problems in the natural and social sciences, and the ability to formulate such problems using appropriate notation;

LO4 understand the importance of assumptions and have an awareness of where they are used and the possible consequences of their violation;

LO5 have a deeper knowledge of some particular areas of statistics; Intellectual

LO6 have the ability to comprehend conceptual and abstract material;

LO7 have developed a logical and systematic approach to problem solving;

Practical

LO8 have developed problem-solving skills, including the ability to assess problems logically and to approach them analytically;

LO9 have acquired highly developed quantitative skills;

LO10 have the ability to transfer knowledge and expertise from one context to another;

Personal and Social

LO11 have the ability to work independently with patience and persistence;

LO12 have time-management and organizational skills, including the ability to complete work in a limited time period.

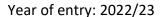| 17	**Learning, teaching and assessment methods**

Most teaching sessions are either lectures or statistical computing sessions. Lectures present both theory and worked examples. Computing sessions use statistical software packages, such as R, and enable students to learn about these packages and allow them to develop a greater understanding of the course material. The computing sessions are usually self-paced and informal.

Detailed course notes, problems and worked solutions are provided to accompany lectures on each module. This facilitates the independent study necessary to understand and assimilate the material. Regular coursework and a variety of assessment methods are also designed to be formative and promote learning.

The elements of assessment for the modules that contribute to this programme normally comprise the following: Unseen written examinations in May/June [weighted 80%];

Coursework comprising assessed assignments [weighted 20%].

The range of assessments, and the types of questions and problems set within examinations and assignments are structured to balance theory and practice, to address the individual learning outcomes and to discriminate between different levels of achievement. However, the assessment strategy recognizes that students may exhibit very different aptitudes and abilities in different aspects of the programme and in different forms of assessment. This is particularly relevant to Birkbeck students who vary considerably in terms of academic background, prior work experience, current career and future career plans. The assessment strategy is therefore designed to: (i) ensure a good coverage of the curriculum and address a reasonable range of the learning outcomes, (ii) perform an ongoing formative function via the theoretical and practical assignments associated with all modules; (iii) give all students the opportunity to demonstrate their strengths and show what they can do well.

18	**Programme Description**
	The programme comprises up to 120 credits worth of modules, taken over two years. In year 1 students take the modules *Advanced Mathematical Methods* and *Statistics: Theory and Practice*. In year 2 students take at least one further statistics module, plus one or more (depending on credit value) other module in either mathematics or statistics (from an approved list that will be brought to the attention of students just prior to the start of their Yr 2 of studies).

19	**Programme Structure**

Part Time programme

Year 1

Level	Module Code	Module Title	Credits	Status*
6	BUEM004S6	Advanced Mathematical Methods	30	Compulsory
6	BUEM003S6	Statistics: Theory and Practice	30	Compulsory

Year 2

Level	Module Code	Module Title	Credits	Status*
6	-	Option Module from an approved list (taken from the BSc Mathematics and/with Statistics provision), of which at least 30 credits should be statistics- or data science- oriented [see indicative list below]	60	Optional

Indicative list of statistics or data science orientated options

Level	Module Code	Module Title	Credits	Status*
6	BUEM135S6	Data Science	30	Optional
6	BUEM105S6	Finite Mathematics	30	Optional
6	BUEM021S6	Calculus 3: Transforms & Models	30	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

20	**Programme Director**	Dr. Anthony C. Brooms
21	**Start Date** (term/year)	Autumn 2009
22	**Date approved by Education Committee**	Spring 2009
23	**Date approved by Academic Board**	Summer 2009
24	**Date(s) updated/amended**	July 2022 (for 2022/23 entry)