

## Programme Specification

1	<b>Awarding body</b>	University of London					
2	<b>Teaching Institution</b>	Birkbeck College					
3	<b>Programme Title(s)</b>	Graduate Certificate Statistical Data Science					
4	<b>Programme Code(s)</b>	GCGSDATS_C					
5	<b>UCAS code (if applicable)</b>	N/A					
6	<b>Home Department</b>	Economics, Mathematics and Statistics					
7	<b>Exit Award(s)</b>	N/A					
8	<b>Duration of Study (number of years)</b>	1 year					
9	<b>Mode of Study</b>	FT		PT	<input checked="" type="checkbox"/>	DL	
10	<b>Level of Award (FHEQ)</b>	6					
11	<b>Other teaching depts or institution (or not applicable)</b>	N/A					
12	<b>Professional, Statutory Regulatory Body(PSRB) details (or not applicable)</b> <i>(include URL to PSRB)</i>	N/A					
13	<b><a href="#">QAA Benchmark Statement</a> (or not applicable)</b>	Mathematics, Statistics and Operational Research					
14	<b>Programme Rationale &amp; Aims</b>	<p>The Graduate Certificate 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. The Graduate Certificate can also act as a qualifying course for matriculation onto the MSc Applied Statistics portfolio of programmes.</p> <p>Distinctive features: Part-time, evening, face to face study. Regular coursework forms a part of all modules, to further develop independent learning.</p>					
15	<b>Entry Criteria</b>	<p>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.</p>					
16	<b>Learning Outcomes</b>	<p>On successful completion of this programme, it is expected that a student will:</p> <p><b>Subject Specific</b></p> <p>LO1 have knowledge and understanding of, and the ability to use, mathematical and statistical methods, results and techniques;</p>					

	<p>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;</p> <p>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;</p> <p>LO4 understand the importance of assumptions and have an awareness of where they are used and the possible consequences of their violation;</p> <p>LO5 have a deeper knowledge of some particular areas of statistics;</p> <p><b>Intellectual</b></p> <p>LO6 have the ability to comprehend conceptual and abstract material;</p> <p>LO7 have developed a logical and systematic approach to problem solving;</p> <p><b>Practical</b></p> <p>LO8 have developed problem-solving skills, including the ability to assess problems logically and to approach them analytically;</p> <p>LO9 have acquired highly developed quantitative skills;</p> <p>LO10 have the ability to transfer knowledge and expertise from one context to another;</p> <p><b>Personal and Social</b></p> <p>LO11 have the ability to work independently with patience and persistence;</p> <p>LO12 have time-management and organizational skills, including the ability to complete work in a limited time period.</p>
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17	<p><b>Learning, teaching and assessment methods</b></p> <p>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.</p> <p>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.</p> <p>Individual tutorials are provided as required and are an integral part of the teaching provision. Students may also consult staff via other media.</p> <p>The elements of assessment are: Unseen written examinations in May/June [weighted 80%]; Coursework comprising assessed assignments [weighted 20%].</p> <p>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</p>
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	<p>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 the range of learning outcomes, (ii) perform an on-going 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.</p> <p>Both the external and the second internal examiner normally scrutinize all examination papers before they are finalized. Exams (and Essays where used) are all double marked. Coursework is marked by the first examiner and moderated by the second internal examiner. All marks are moderated by the External Examiner, who is invited to comment on the suitability of the assessment methods, criteria and procedures. These comments influence any changes that are recommended at any future review of the programme.</p>
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18	<p><b>Programme Description</b></p> <p>The programme comprises two year-long 30 credit, level 6 modules: <i>Advanced Mathematical Methods</i> and <i>Statistics: Theory and Practice</i>. To qualify for the MSc Applied Statistics at Birkbeck, students need to gain at least a merit - corresponding to an average mark of at least 60 (on the College common scale).</p>
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19	<p><b>Programme Structure</b></p> <p><b>Part Time programme</b></p> <p><b>Year 1</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Level</th> <th style="width: 15%;">Module Code</th> <th style="width: 50%;">Module Title</th> <th style="width: 10%;">Credits</th> <th style="width: 15%;">Status*</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">6</td> <td>BUEM004S6</td> <td>Advanced Mathematical Methods</td> <td style="text-align: center;">30</td> <td>Compulsory</td> </tr> <tr> <td style="text-align: center;">6</td> <td>BUEM003S6</td> <td>Statistics: Theory and Practice</td> <td style="text-align: center;">30</td> <td>Compulsory</td> </tr> </tbody> </table>	Level	Module Code	Module Title	Credits	Status*	6	BUEM004S6	Advanced Mathematical Methods	30	Compulsory	6	BUEM003S6	Statistics: Theory and Practice	30	Compulsory
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6	BUEM003S6	Statistics: Theory and Practice	30	Compulsory												

**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	<p><b>Regulations</b></p> <ul style="list-style-type: none"> <li>• <b>Admissions</b> This programme adheres to the College Admissions Policy <a href="http://www.bbk.ac.uk/registry/policies/documents/admissions-policy.pdf">http://www.bbk.ac.uk/registry/policies/documents/admissions-policy.pdf</a></li> <li>• <b>If the programme has additional information re: Admissions please state here:</b> <a href="http://www.bbk.ac.uk/study/2021/postgraduate/programmes/GDCSTATI_C/#entry-requirements">http://www.bbk.ac.uk/study/2021/postgraduate/programmes/GDCSTATI_C/#entry-requirements</a> (correct at the time of drafting this document)</li> <li>• <b>Credit Transfer</b></li> </ul>
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	<p>Accredited Prior Learning will be considered in line with the College Policy on Accredited Prior Learning  <a href="http://www.bbk.ac.uk/registry/policies/documents/accreditation-prior-learning.pdf">http://www.bbk.ac.uk/registry/policies/documents/accreditation-prior-learning.pdf</a></p> <ul style="list-style-type: none"> <li>• <b>Programme Regulations</b>            This programme adheres to the College Common Awards Scheme  <a href="http://www.bbk.ac.uk/registry/policies/regulations">http://www.bbk.ac.uk/registry/policies/regulations</a></li> <li>• <b>Programme Specific Regulations (or not applicable)</b> N/A</li> </ul>
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21	<b>Student Attendance Framework – in brief</b>
	<p>The full version of the ‘Student Attendance Framework’ is available  <a href="http://www.bbk.ac.uk/mybirkbeck/services/rules/Attendance-Framework.pdf">http://www.bbk.ac.uk/mybirkbeck/services/rules/Attendance-Framework.pdf</a> .</p> <p><b>Principle</b>            Consistent and regular student attendance in class (or equivalent) promotes and affords student success. Inconsistent and irregular attendance is less likely to result in student success and is consistent with lower marks and degree classifications being achieved and awarded.</p> <p><b>Attendance expectation</b>            Birkbeck, University of London expects you to consistently attend all timetabled sessions, including lectures, seminars, group and individual tutorials, learning support sessions, workshops, laboratories, field trips, inductions and demonstrations.</p> <p><b>E-Registers</b>            All Birkbeck students are issued with student cards. Students are expected to take them to classes and to assessment venues and to present them to a member of staff if requested. This is for the purpose of identifying Birkbeck students.</p>

22	<b>Student Support and Guidance</b>
	<p>All Birkbeck students have access to a range of student support services, details can be found on our website here: <a href="http://www.bbk.ac.uk/student-services">http://www.bbk.ac.uk/student-services</a></p>

23	<b>Methods of Enhancing Quality and Standards</b>
	<p>The College has rigorous procedures in place for the monitoring and enhancing its educational provision. This includes regular monitoring of programmes drawing on feedback from various sources including external examiner's reports, student feedback, student achievement and progression data. In addition, departments are reviewed every four to five years through the internal review process that includes external input.</p> <p>For more information please see the Academic Standards and Quality website  <a href="http://www.bbk.ac.uk/registry/about-us/operations-and-quality">http://www.bbk.ac.uk/registry/about-us/operations-and-quality</a> .</p>

24	<b>Programme Director</b>	Dr. Anthony C. Brooms
25	<b>Start Date (term/year)</b>	Autumn 2009
26	<b>Date approved by Education Committee</b>	Spring 2009
27	<b>Date approved by Academic Board</b>	Summer 2009
28	<b>Date(s) updated/amended</b>	23 Oct 2020