PROGRAMME SPECIFICATION

Name, title and level of final qualification(s)	**PG Cert Applied Data Science** (Level 7)
Name and title of any exit qualification(s)	Not applicable
Awarding Body	University of London
Teaching Institution(s)	Birkbeck, University of London
Home Department/other teaching departments	School of Computing and Mathematical Sciences
Location of delivery	Online
Language of delivery and assessment	English
Mode of study, length of study and normal start month	Part-time (1 year) October
Professional, statutory or regulatory body	Not applicable
[QAA subject benchmark group(s)](#) [Higher Education Credit Framework for England](#)	Computing
Birkbeck Course Code	TPCCOMIP_C
HECoS Code	100366
Start date of programme	October 2020
Date of programme approval	Spring 2020
Date of last programme amendment approval	November 2022
Valid for academic entry year	**2024-25**
Date of last revision to document	20/08/2022

Admissions requirements

A second-class honours degree (2:2) or above in any subject other than computer science. Applicants with less than the required level of academic qualification may be considered if they have significant experience in the IT industry.

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 PG Cert in Applied Data Science is a one year programme. It is an intensive course in applied data science for people who wish to enhance their digital skills, including professionals across the cultural heritage, finance, banking, engineering, business, education, law, IT and management sectors.

Key aspects of the programme:

- Study applied data science without having any prior experience and become a data scientist in just a year.
- Learn Python and machine learning tools to support your professional career by focusing on the applied data science aspects.
- Study an intensive programme in class for three months and develop your personal skills in the area of programming with Python and machine learning.
- Develop your personal Applied Data Science project with the guidance of a project supervisor.

The programme will provide professionals with an understanding of basic programming and the use of analytic tools to support them in their careers. The project module will allow professionals to apply their knowledge to a topic in the area of applied data science.

Students will gain broad knowledge of computer science, data science and software engineering, and acquire practical problem-solving and analytical skills. For students who are new to the subject, the programme provides a foundation for a career in the IT industry as a data scientist or analyst; for those already working in IT, it provides an opportunity to strengthen and update their knowledge and skills in the areas of data analytics while obtaining a formal qualification.

Course structure

Level	Module Code	Module Title	Credit	Comp Core/ Option	Likely teaching term(s)
Part-time – 1 year					
7	BUCI081H7	Demystifying Computing with Python	15	Comp	1
7	BUCI080H7	Analytics Tools for Data Science	15	Comp	2
7	BUCI082S7	PG Cert Applied Data Science Project	30	Core	3

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

Formal lectures are the principal teaching method, but these frequently incorporate practical sessions, for example in programming, and also group exercises carried out in class. There is a large element of practical coursework which students carry out in their own time; some of these coursework assignments are carried out in groups. The project provides an opportunity for students to investigate in depth an aspect of data science that particularly interests them.

How we will assess you

Assessment is by the coursework assignments, written examinations and the project proposal and final report.

Learning outcomes (what you can expect to achieve)

'Learning outcomes' indicate what you should know or be able to 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:

- demonstrate a knowledge of programming (S1),
- appreciate mathematical and algorithmic foundations of computing (S2),
- demonstrate knowledge of data analysis tools, techniques and applications (S3),
- show an appreciation of research topics related to data science (S4).

Intellectual:

- develop an algorithm to carry out a specified task and to convert this into an executable program (I1),
- debug a program (I2),
- appreciate security and general data protection regulations (I3),
- analyse data using appropriate methods (I4),
- perform abstract thinking and to exhibit abstraction skills (I5).

Practical:

- write programs in an appropriate programming language (P1),
- use tools to analyse data (P2).

Personal and Social:

- demonstrate self-direction and originality in tackling and solving problems (PS1),
- act autonomously in planning and implementing tasks at a professional level (PS2),
- conduct a critical appraisal of material synthesised from research papers (PS3),
- communicate conclusions clearly to specialist and non-specialist audiences (PS4),
- deal with complex issues systematically and creatively (PS5),
- advance further your knowledge, skills and understanding (PS6),

Careers and further study

You will find PG Cert Applied Data Science graduates in the following kinds of roles:

- Data analyst
- Data scientist

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.