

Programme Specification 2024–2025

Data Science MSc PGDip PGCert Individual modules

Significant changes made to the programme specification 2024-2025

No significant changes.

The **MSc Data Science and Artificial Intelligence** is a 180 UK credit degree programme (90 ECTS credits). For this MSc, a student must complete:

four core modules (60 credits total)

three compulsory modules (45 credits total)

three optional modules (45 credits total)

a Final Project (30 credits total)

The **MSc Data Science and Financial Technology** is a 180 UK credit degree programme (90 ECTS credits). For this MSc a student must complete:

four core modules (60 credits total)

three compulsory modules (45 credits total)

three optional modules (45 credits total)

a Final Project (30 credits total)

The **PGDip Data Science** is a 120 credit programme (60 ECTS credits). For this PGDip a student must complete:

four core modules chosen (60 credits total)

two compulsory modules (30 credits total)

two optional modules (30 credits total)

The **PGDip Data Science and Artificial Intelligence** is a 120 credit programme (60 ECTS credits). For this PGDip, a student must complete:

four core modules chosen (60 credits total)

three compulsory modules (45 credits total)

Programme Specification 2024-2025: Data Science (MSc/PGDip/PGCert); Data Science and Artificial Intelligence (MSc/PGDip); Data Science and Financial Technology (MSc/PGDip) Ur Km.757 rg/TT0 11.04 Tf319.15 700.3 Td()T532 841.92 reW* nBT0 g/TT0 11.04 Tf282

Credit value of modules

Further information about the credit systems used by universities in the UK and Europe is provided by the Quality Assurance Agency and the European Credit Transfer and

Entrance requirements

Applicants must submit an application in line with the procedures and deadlines set out on the <u>website</u>.

Entry Route 1

To be eligible to register for any of the Data Science programmes, applicants must have the following:

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Programme Specification 2024-2025: Data Science (MSc/PGDip/PGCert); Data Science

- 2. Critically evaluate emerging data analysis technologies and assess how it can be applied to different types and amounts of data.
- 3. Explain and critically assess how data analysis techniques can be applied to the analysis of financial markets.
- 4. Compare and contrast practical and theoretical contexts in which data scientists work.

B: Practical, Professional and Key Skills

A student who successfully completes the **MSc Data Science** is expected to be able to:

- 1. Critically analyse the application of technology to real world problems particularly in industry and interdisciplinary research.
- 2. Apply advanced skills and research-led specialist knowledge in the areas of machine learning and statistics to the design of software and data analyses
- 3. Demonstrate a deep understanding of cutting edge technologies in the creation of a substantial commercially and/or research-wise relevant project.
- 4. Propose, plan, execute and evaluate a significant piece of original work.
- 5. Design and programme sufficiently complex computer software and data products.
- 6. Use academic writing and presentation skills to write and present about data science topics.

A student who successfully completes the **MSc Data Science and Artificial Intelligence** is expected to be able to:

- 1. Critically analyse the application of technology to a range of real world problems particularly in industry and interdisciplinary research.
- 2. Apply advanced skills and research-

- 3. Demonstrate a deep understanding of cutting edge technologies in the creation of a substantial commercially and/or research-wise relevant project.
- 4. Propose, plan, execute and evaluate a significant piece of original work.
- 5. Design and program complex computer software and data products.
- 6. Use academic writing and presentation skills to write and present about data science topics.

PGDip Learning Outcomes

A: Knowledge, Understanding and Cognitive Skills

A student who successfully completes the **PGDip Data Science** is expected to be able to:

- 1. Explain and critically assess a range of machine learning and statistical data mining techniques used in data analytics and in other related areas.
- 2. Critically evaluate emerging data analysis technologies and assess how it can be applied to different types and amounts of data.
- 3. Analyse in depth how data analysis techniques can be applied to a range of interdisciplinary research areas.
- 4. Compare and critically contrast practical and theoretical contexts in which data scientists work.

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B: Practical, Professional and Key Skills

A student who successfully completes the PGDip Data Science is expected to be able to:

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B: Practical, Professional and Key Skills

A student who successfully completes the **PGCert Data Science** is expected to be able to:

- 1. Critically analyse the application of technology to a range of real world problems particularly in industry and interdisciplinary research.
- 2. Apply advanced skills and research-led specialist knowledge in the areas of machine -ogss reW* nl

activity and progress throughout the project. The written examination is two hours in length and consists of general questions about academic best practice, as well as specific questions about the candidate's own project work.

The grade awarded for each module is based on all the elements of and Spa:0 0 595.32 841.92 re.004 (on)

Quality evaluation and enhancement

The University of London delivers the majority of its online and distance learning programmes through a collaboration between the University of London Worldwide and University of London federation members. However, some of the online and distance learning programmes draw solely on academic input from the University of London and are delivered without academic lead by a federation member. The policies, partnerships (where applicable) and quality assurance mechanisms applicable for the programmes are defined in the following key documents: The <u>Quality Assurance Schedules</u>, <u>Guidelines for</u> <u>Examinations</u>, <u>General Regulations</u> and, for each programme, programme specific regulations.

Awards standards

All University of London qualifications must comply with the Office for Students' (OfS) <u>Conditions of Registration</u> relating to quality and standards, which includes condition B5 (<u>sector-recognised standards</u>). This is to ensure appropriate standards for each qualification. In addition, every online and distance learning programme that is developed by a federation member of the University of London (or a consortium with representation by more than one federation member) will be developed to the same standard as would be applied within the institution concerned. Proportionate and robust approval procedures, including external scrutiny and student engagement, are in place for all programmes. Learning materials are written and all assessments are set and marked by academic staff who are required to apply t

committees and the senior leadership team. Details of any resulting actions taken are published on the Virtual Learning Environment and the Student Portal.

Additionally, on completion of their programme of study, students will be invited to take a survey that seeks to measure what they have gained from their studies.

There are also opportunities for students to get involved in governance. An undergraduate and postgraduate student member is appointed by the University to the majority of committees through an annual appointment round. Some programmes also recruit student members at the programme level. Students are frequently invited to take part in quality review processes such as Periodic Programme Reviews, Programme approval, Thematic Reviews, MOOC review panels and ad hoc focus groups. Opportunities such as these are advertised through social media and on the website. More information can be found on the website.

Students can also apply to join the Student Voice Group, which meets four times a year to consider initiatives for enhancing student experience. Notes from these meetings are published on the Student Portal.