

MSc

Business Analytics and Big Data

Study mode

Full-time

Part-time

Duration

12 months

24 months

Apply by: **11 September 2026**Starts on: **28 September 2026**

About this course

The Business Analytics and Big Data MSc equips you with the technical and analytical skills to turn data into strategic insight. Designed in collaboration with industry, the programme blends data science, business acumen, and practical applications. You'll graduate ready to solve complex business challenges in a data-driven world.

Introduction

Competitive advantage and innovation in the digital world involve the accurate analysis and insights offered by big data – huge data sets that are constantly being generated – in order to improve effectiveness and efficiencies across several business areas, such as operations management and marketing.

In order to exploit the insights provided by big data, business analytics and the effective use and understanding of data is crucial. This is a rapidly developing field, which is exhibiting massive demand from industry for qualified individuals in this area to take up roles in management globally.

You will develop your knowledge of the organisation, administration and governance of this data, as well as hone your analytical, organisational and leadership skills. The programme is

designed for students who wish to pursue a career in this dynamic field or continue their studies to PhD level.

Developed in collaboration with industry contributors and partners including PepsiCo and AstraZeneca, the programme is also underpinned by multidisciplinary research.

Who is this course for?

This course is ideal for students who want to use data to drive business decisions and solve real-world problems. It suits those with a strong interest in analytics, technology, and business strategy, and who are looking to build a career in data-driven roles across industries.

What you'll learn

- How to collect, manage, and analyse big data for business insights
 - Data mining and machine learning techniques
 - Use of analytics and simulation tools such as Witness, R, Qlik, and SAP
 - How to develop and implement digital business strategies
 - Data visualisation and communication of analytical findings
 - Applying big data solutions to real business challenges.
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Accreditation

The University of Liverpool Management School (ULMS) is one of an elite group of institutions worldwide to hold the gold standard 'triple-crown' accreditation from AACSB, AMBA and EQUIS.

Accreditation in detail

AACSB

AACSB Accreditation Standards require a high quality teaching environment, a commitment to continuous

improvement, and curricula responsive to the needs of businesses. This achievement means that the Management School meets specific standards of excellence. It also means it's committed to on-going improvement in delivering high quality education.

AMBA

AMBA is the highest standard of achievement in postgraduate business education. MBA students and graduates, business schools and employers all recognise it as a gold standard. AMBA's rigorous criteria and assessment process ensure that only programmes that demonstrate the highest standards in teaching, learning and curriculum design; career development and employability; and student, alumni and employer interaction achieve accreditation.

EQUIS

The School is also accredited by EQUIS, which is the leading international system of quality assessment, improvement and accreditation of higher education institutions in management and business administration. Institutions that are accredited by EQUIS must demonstrate not only high general quality in all dimensions of their activities, but also a high degree of internationalisation and corporate connections.

Course content

Discover what you'll learn, what you'll study, and how you'll be taught and assessed.

Semester one

The 12-month programme consists of four compulsory modules and two optional modules followed by the Main Project over the summer period on completion of Semester two (a choice of either EBUS635 or EBUS621).

Modules

Compulsory modules	Credits
MANAGING EMERGING TECHNOLOGIES (EBUS702)	20
BIG DATA ANALYTICS (EBUS707)	20

Optional modules	Credits
PROJECT MANAGEMENT AND FINANCIAL PRINCIPLES (EBUS704)	20
PROJECT RISK MODELLING (EBUS705)	20
GLOBAL LOGISTICS (EBUS706)	20

Programme details and modules listed are illustrative only and subject to change.

Semester two

The 12-month programme consists of four compulsory modules and two optional modules followed by the Main Project over the summer period on completion of Semester two (a

choice of either EBUS635 or EBUS621).

Modules

Compulsory modules	Credits
DATA MINING AND MACHINE LEARNING (EBUS709)	20
ENTERPRISE SYSTEMS WITH SAP (EBUS710)	20

Optional modules	Credits
AI ETHICS AND GOVERNANCE (EBUS708)	20
LEADING AND MANAGING PROJECTS (EBUS711)	20

Programme details and modules listed are illustrative only and subject to change.

Final project

The 12-month programme consists of four compulsory modules and two optional modules followed by the Main Project over the summer period on completion of Semester two (a choice of either EBUS635 or EBUS621).

Modules

Compulsory modules	Credits
BUSINESS SIMULATION AND ANALYSIS (EBUS635)	60
MSC PROJECT (EBUS621)	60

Programme details and modules listed are illustrative only and subject to change.

Teaching and assessment

How you'll learn

Modules are taught using the latest active learning techniques including business simulations, real-world case studies, coding in higher-level programming languages (e.g. RStudio, Python), business analytics software (e.g. Tableau, Qlik, SAP), interactive participation software, lecture capture, tutorials and project work.

The principal forms of teaching are lectures and seminars or computer labs, with most sessions normally supported by additional resources such as hand-outs and online materials accessible via the virtual learning environment (Canvas).

In addition, a concerted effort has been made to include a significant amount of case study material and practical work in order to demonstrate the application of principles and theories delivered within the main lecture programme. The practical elements of the programme take the form of both team-based and individual or self-directed exercises.

Following semester two you will complete either the Business Simulation and Analysis or MSc Project with the support of an academic supervisor.

Teaching time will account for an average of 10 hours per week and you should anticipate an additional 20 hours of self-directed study and group work.

How you're assessed

In semester one and two, you will take modules totalling 120 credits. The Business Simulation or Project option completed during the summer period is worth 60 credits and students will be supported by their academic supervisor.

Students are required to complete 180 credits to achieve a full MSc.

Subject to meeting specific criteria outlined by the University, students will graduate with a Pass, Merit or Distinction.

Assessment tasks are varied and some may be designed specifically to meet the learning outcomes of a particular programme of study, but students can expect to be assessed via coursework, essay, group work, presentations, case studies, negotiation exercises, reports and examinations. The weighting of individual components will vary from one module to another. All assessment information is included within the module specification.

Liverpool Learning Framework

At Liverpool, we take a distinctive approach to education through the Liverpool Learning Framework. This means teaching that is engaging, inclusive and designed to help you succeed during your studies and beyond.

You'll develop specialist subject knowledge alongside the skills employers value most, including:

- Digital fluency
- Confidence
- Global citizenship

Our curriculum is characterised by the three Liverpool Hallmarks:

- Research-connected teaching - learning informed by the latest ideas and discoveries
- Active learning - taking part, applying knowledge and learning by doing
- Authentic assessment - assessments designed around real-world tasks and challenges

We also embed key priorities across our curriculum, including AI literacy, employability, and sustainability, helping you prepare for the future and make a positive impact in the world.

We're committed to creating a supportive and inclusive learning environment where every student can thrive.

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Careers and employability

The Management School's master's programmes have been designed from the ground up to prepare you for success in your chosen career. We have close ties with local, national and international organisations and constantly review the content of our programmes to meet the demands of top graduate employers.

From the moment you start your master's programme, you'll have access to a specialist, in-house [careers team](#) and one-to-one careers guidance, workshops, seminars and employability initiatives.

Through exposure to strategic initiatives in the management of Big Data, as well as case-based workshops and practical application developments for data mining, analysis and visualisation using industry-leading software, graduates of the programme shall find themselves well-equipped to meet the many challenges associated with strategic, operational and technological adaptation in the digital enterprise.

Alumni have secured jobs with the following companies:

- Hampshire Bank Trust
- Ericsson UK
- Amazon
- Liverpool Association for Space Engineering Research
- Future

In roles such as:

- PCB engineer
- Reward Analyst
- Lead Commercial Analyst
- Business solution architect

Career support from day one to graduation and beyond

Career planning

From education to employment

Networking events

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Fees and funding

Your tuition fees, funding your studies, and other costs to consider.

Tuition fees

UK fees (applies to Channel Islands, Isle of Man and Republic of Ireland)

Full-time place, per year – £15,000

Part-time place, per year – £7,500

International fees

Full-time place, per year – £32,000

Part-time place, per year – £16,000

Tuition fees are for the academic year 2026/27.

Tuition fees cover the cost of your teaching and assessment, operating facilities such as libraries, IT equipment, and access to academic and personal support.

- You can pay your tuition fees in instalments.
- All or part of your tuition fees can be funded by external sponsorship.
- International applicants who accept an offer of a place will need to pay a tuition fee deposit.

If you're a UK national, or have settled status in the UK, you may be eligible to apply for a Postgraduate Loan worth up to £12,858 to help with course fees and living costs.

[Learn more about paying for your studies.](#)

Additional costs

We understand that budgeting for your time at university is important, and we want to make sure you understand any course-related costs that are not covered by your tuition fee. This could include buying a laptop, books, or stationery.

Find out more about the [additional study costs](#) that may apply to this course.

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Entry requirements

The qualifications and exam results you'll need to apply for this course.

Postgraduate entry requirements

We accept a 2:2 honours degree from a UK university, or an equivalent academic qualification from a similar non-UK institution. This degree should be in Physics, Mathematics, Computing, Engineering, Management or closely related disciplines.

Non-graduates with very extensive professional experience and/or other prior qualifications may also be considered.

International qualifications

[Select your country or region to view specific entry requirements.](#)

Many countries have a different education system to that of the UK, meaning your qualifications may not meet our entry requirements. Completing your Foundation Certificate, such as that offered by the [University of Liverpool International College](#), means you're guaranteed a place on your chosen course.

English language requirements

You'll need to demonstrate competence in the use of English language, unless you're from a [majority English speaking country](#).

We accept a variety of [international language tests](#) and [country-specific qualifications](#).

International applicants who do not meet the minimum required standard of English language can complete one of our [Pre-Sessional English courses](#) to achieve the required level.

IELTS

6.5 overall, with no component below 6.0

TOEFL iBT

If you took a TOEFL test on or before 20 January 2026, you'll need 88 overall, with minimum scores of listening 19, writing 19, reading 19 and speaking 20. If you took a TOEFL test from 21 January 2026 onwards, when a new scoring system was introduced, you'll need 4.5 overall, with 4 or above in all components. TOEFL Home Edition not accepted.

Duolingo English Test

125 overall, with writing not less than 125, speaking and reading not less than 115, and listening not below 110. For academic year 2025/26 only, we will also accept the production, literacy, comprehension and conversation score set: 120 overall, with no component below 105.

Pearson PTE Academic

61 overall, with no component below 59

LanguageCert Academic

70 overall, with no skill below 65

PSI Skills for English

B2 Pass with Merit in all bands

INDIA Standard XII

National Curriculum (CBSE/ISC) - 75% and above in English. Accepted State Boards - 80% and above in English.

WAEC

C6 or above

Pre-sessional English

Do you need to complete a Pre-sessional English course to meet the English language requirements for this course?

The length of Pre-sessional English course you'll need to take depends on your current level of English language ability.

Pre-sessional English in detail

If you don't meet our English language requirements, we can use your most recent IELTS score, or [the equivalent score in selected other English language tests](#), to determine the length of Pre-sessional English course you require.

Use the table below to check the course length you're likely to require for your current English language ability and see whether the course is available on campus or online.

Your most recent IELTS score	Pre-sessional English course length	On campus or online
6.0 overall, with writing at 6.0 and no component below 5.5	6 weeks	On campus or online
5.5 overall, with writing at 5.5 and no component below 5.0	10 weeks	On campus or online
5.5 overall, with no more than one component at 5.0	12 weeks	Online
5.5 overall, with no component below 5.0	20 weeks	On campus
5.0 overall, with no more than one component at 4.5	30 weeks	On campus
4.5 overall, with no more than one component at 4.0	40 weeks	On campus

If you've completed an alternative English language test to IELTS, we may be able to use this to assess your English language ability and determine the Pre-sessional English course length you require.

Please see our guide to [Pre-sessional English entry requirements](#) for IELTS 6.5 overall, with no component below 6.0, for further details.

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