UNIVERSITY OF LIVERPOOL

BSc (Hons)

Mathematics and Economics

UCAS code GL11

Entry requirements	Study mode	Duration
A level: ABB	Full-time	3 years

Apply by: **29 January 2025**
Starts on: **22 September 2025**

About this course

Economics and Mathematics are two subjects that compliment each other and will offer a firm foundation for your future career. At Liverpool you will have a choice of modules meaning you can tailor your degree to your strengths and interests.

Introduction

Mathematics is a fascinating, beautiful and diverse subject to study. It underpins a wide range of disciplines; from physical sciences to social science, from biology to business and finance. At Liverpool, our programmes are designed with the needs of employers in mind, to give you a solid foundation from which you may take your career in any number of directions.

A Mathematics degree at the University of Liverpool is an excellent investment in your future. We have a large department with highly qualified staff, a first-class reputation in teaching and research, and a great city in which to live and work.

Economics and mathematics are both highly relevant subjects in today's world. The two subjects come very much hand-in-hand and offer a firm foundation for your future career. This degree combines them in about equal measure, with considerable flexibility in the choice of modules after the first year. Modules covered include

microeconomics, macroeconomics, statistics, numbers, groups and codes, as well as core mathematics modules.

What you'll learn

- Problem solving
- Critical thinking
- Teamwork
- How to present and communicate clearly

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Course content

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

Year one

All modules taken in the first year are compulsory.

Modules

Compulsory modules	Credits
CALCULUS I (MATH101)	15
CALCULUS II (MATH102)	15
INTRODUCTION TO LINEAR ALGEBRA (MATH103)	15
INTRODUCTION TO STATISTICS USING R (MATH163)	15
PRINCIPLES OF MICROECONOMICS (ECON121)	15
MATHEMATICAL IT SKILLS (MATH111)	15
PRINCIPLES OF MACROECONOMICS (ECON123)	15
INTRODUCTION TO FINANCE (ACFI103)	15

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

Year two

Choose one module from: ECON211, ECON224, ECON241, ULMS254. Choose one module from MATH221, MATH226, MATH242, MATH260, MATH269.

Modules

Compulsory modules	Credits
STATISTICS AND PROBABILITY I (MATH253)	15
ECONOMETRICS 1 (ECON212)	15
MICROECONOMICS 1 (ECON221)	15
MICROECONOMICS 2 (ECON222)	15
MACROECONOMICS 1 (ECON223)	15
STATISTICS AND PROBABILITY II (MATH254)	15

Optional modules	Credits
DIFFERENTIAL EQUATIONS (MATH221)	15
METRIC SPACES AND CALCULUS (MATH242)	15
FINANCIAL MATHEMATICS (MATH260)	15
OPERATIONAL RESEARCH (MATH269)	15
SECURITIES MARKETS (ECON241)	15
MATHEMATICAL ECONOMICS 2 (ECON211)	15
MACROECONOMICS 2 (ECON224)	15
NUMERICAL METHODS FOR APPLIED MATHEMATICS (MATH226)	15

Optional modules	Credits
BECOMING ENTREPRENEURIAL (ULMS254)	15

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

Year three

Year three optional modules: Choose 2 MATH modules and 2 ECON modules from each semester.

Modules

Optional modules	Credits
QUANTITATIVE FINANCIAL ECONOMICS (ECON308)	15
GAME THEORY (ECON322)	15
INTERNATIONAL TRADE (ECON335)	15
ADVANCED MICROECONOMICS (ECON342)	15
APPLIED PROBABILITY (MATH362)	15
LINEAR STATISTICAL MODELS (MATH363)	15
PROFESSIONAL PROJECTS AND EMPLOYABILITY IN MATHEMATICS (MATH390)	15
INDUSTRIAL ORGANISATION (ECON333)	15
THE ECONOMICS OF DEVELOPING COUNTRIES (ECON306)	15
METHODS OF ECONOMIC INVESTIGATION 1: TIME SERIES ECONOMETRICS	15

Optional modules	Credits
(ECON311)	
ADVANCED MACROECONOMICS (ECON343)	15
NUMERICAL METHODS FOR ORDINARY AND PARTIAL DIFFERENTIAL EQUATIONS (MATH336)	15
COMBINATORICS (MATH344)	15
APPLIED STOCHASTIC MODELS (MATH360)	15
THEORY OF STATISTICAL INFERENCE (MATH361)	15
MEDICAL STATISTICS (MATH364)	15
MEASURE THEORY AND PROBABILITY (MATH365)	15
MATHEMATICAL RISK THEORY (MATH366)	15
NETWORKS IN THEORY AND PRACTICE (MATH367)	15
FINANCIAL REPORTING AND FINANCE (NON-SPECIALIST) (ACFI290)	15
ENVIRONMENTAL ECONOMICS AND SUSTAINABILITY POLICIES (ECON315)	15
STATISTICAL METHODS IN INSURANCE AND FINANCE (MATH374)	15
ACTUARIAL MODELS (MATH376)	15
FINANCIAL AND ACTUARIAL MODELLING IN R (MATH377)	15
MATHEMATICS OF NETWORKS AND EPIDEMICS (MATH338)	15
MATHS SUMMER INDUSTRIAL RESEARCH PROJECT (MATH391)	15

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

Teaching and assessment

How you'll learn

Your learning activities will consist of lectures, tutorials, practical classes, problem classes, private study and supervised project work.

In year one, lectures are supplemented by a thorough system of group tutorials and computing work is carried out in supervised practical classes. Key study skills, presentation skills and group work start in first-year tutorials and are developed later in the programme.

The emphasis in most modules is on the development of problem solving skills, which are regarded very highly by employers. Project supervision is on a one-to-one basis, apart from group projects in year two.

How you're assessed

Most modules are assessed by a two and a half hour examination in January or May, but many have an element of coursework assessment. This might be through homework, class tests, mini-project work or key skills exercises.

Liverpool Hallmarks

We have a distinctive approach to education, the Liverpool Curriculum Framework, which focuses on research-connected teaching, active learning, and authentic assessment to ensure our students graduate as digitally fluent and confident global citizens.

The Liverpool Curriculum framework sets out our distinctive approach to education. Our teaching staff support our students to develop academic knowledge, skills, and understanding alongside our **graduate attributes**:

- Digital fluency
- Confidence
- Global citizenship

Our curriculum is characterised by the three **Liverpool Hallmarks**:

- Research-connected teaching
- Active learning
- Authentic assessment

All this is underpinned by our core value of **inclusivity** and commitment to providing a curriculum that is accessible to all students.

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Careers and employability

A mathematically-based degree opens up a wide range of career opportunities, including some of the most lucrative professions.

Recent employers of our graduates are:

- Barclays Bank plc
- Deloitte
- Forrest Recruitment
- Marks and Spencer
- Mercer Human Resource Consulting Ltd.
- Venture Marketing Group.
- BAE Systems
- BT
- Guardian Media Group
- Royal Bank of Scotland
- Siemens
- Unilever.

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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 - £9,535
Year abroad fee - £1,430 (applies to year in China)

International fees

Full-time place, per year - £26,600
Year abroad fee - £13,300 (applies to year in China)

The tuition fees shown are correct for 2025/26 entry. Please note that the year abroad fee also applies to the year in China.

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

A levels

ABB including Mathematics A level grade A.

Applicants with the Extended Project Qualification (EPQ) are eligible for a reduction in grade requirements. For this course, the offer is **ABC** with **A** in the EPQ.

You may automatically qualify for reduced entry requirements through our contextual offers scheme. Based on your personal circumstances, you may automatically qualify for up to a two-grade reduction in the entry requirements needed for this course. When you apply, we consider a range of factors – such as where you live – to assess if you're eligible for a grade reduction. You don't have to make an application for a grade reduction – we'll do all the work.

Find out more about how we make reduced grade offers.

If you don't meet the entry requirements, you may be able to complete a foundation year which would allow you to progress to this course.

Available foundation years:

- Mathematical Sciences BSc (Hons) (Foundation, 4 year route with Carmel College) BSc (Hons)

T levels

T levels are not currently accepted.

GCSE

4/C in English and 4/C in Mathematics

Subject requirements

Applicants must have studied Mathematics at Level 3 within 2 years of the start date of their course.

For applicants from England: For science A levels that include the separately graded practical endorsement, a "Pass" is required.

BTEC Level 3 National Extended Diploma

D*DD in relevant diploma when combined with A level Mathematics grade A

International Baccalaureate

33 including 6 in Higher Mathematics.

Irish Leaving Certificate

H1, H2, H2, H2, H3, H3 including Mathematics at H1.

Scottish Higher/Advanced Higher

Advanced Highers accepted at grades ABB including grade A in Mathematics.

Welsh Baccalaureate Advanced

Acceptable at grade B or above alongside AB at A level including grade A in Mathematics.

Access

Access - 45 Level 3 credits in graded units in a relevant Diploma, including 39 at Distinction and a further 6 with at least Merit. 15 Distinctions are required in Mathematics.

International qualifications

Select your country or region to view specific entry requirements.

If you hold a bachelor's degree or equivalent, but don't meet our entry requirements, you could be eligible for a Pre-Master's course. This is offered on campus at the University of Liverpool International College, in partnership with Kaplan International Pathways. It's a specialist preparation course for postgraduate study, and when you pass the Pre-Master's at the required level with good attendance, you're guaranteed entry to a University of Liverpool master's degree.

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

6.0 overall, with no component below 5.5

TOEFL iBT

78 overall, with minimum scores of listening 17, writing 17, reading 17 and speaking 19. TOEFL Home Edition not accepted.

TOEFL Paper

Grade 6 at Standard Level or grade 5 at Higher Level

Duolingo English Test

115 overall, with speaking, reading and writing not less than 105, and listening not below 100

Pearson PTE Academic

59 overall, with no component below 59

LanguageCert Academic

65 overall, with no skill below 60

Cambridge IGCSE First Language English 0500

Grade C overall, with a minimum of grade 2 in speaking and listening. Speaking and listening must be separately endorsed on the certificate.

Cambridge IGCSE First Language English 0990

Grade 4 overall, with Merit in speaking and listening

Cambridge IGCSE Second Language English 0510/0511

0510: Grade C overall, with a minimum of grade 2 in speaking. Speaking must be separately endorsed on the certificate. 0511: Grade C overall.

Cambridge IGCSE Second Language English 0993/0991

0993: Grade 5 overall, with a minimum of grade 2 in speaking. Speaking must be separately endorsed on the certificate. 0991: Grade 5 overall.

Cambridge ESOL Level 2/3 Advanced

169 overall, with no paper below 162

LanguageCert

Grade 4 at Standard Level or grade 4 at Higher Level

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
5.5 overall, with no component below 5.5	6 weeks	On campus
5.5 overall, with no component below 5.0	10 weeks	On campus and online options available
5.0 overall, with no component below 5.0	12 weeks	On campus and online options available
5.0 overall, with no component below 4.5	20 weeks	On campus
4.5 overall, with no component below 4.5	30 weeks	On campus
4.0 overall, with no component below 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 6.0 overall, with no component below 5.5, for further details.

Alternative entry requirements

- If your qualification isn't listed here, or you're taking a combination of qualifications, contact us for advice
- Applications from mature students are welcome.

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