Mathematics MMath (Hons)

UCAS Code: G101 | **Duration: 4 years** | **Full-time** | **Hope Park** | **2021/2022**
Placement year opportunities available

Course Overview

Mathematics is a fascinating and exciting subject. It is the language of modern business and commerce, engineering, science and technology and is as old as mankind. At Liverpool Hope, you will develop a passion and enthusiasm for mathematics and its applications. Mathematics encompasses many analytical and numerical methods that are used to solve scientific and industrial problems.

Mathematics at Liverpool Hope has been designed to help you develop strong analytical and numerate abilities and skills so that you learn how to look at problems, break them down into simpler questions and then solve them.

By the end of the degree, you will be confident in tackling real world problems mathematically. By studying with us, you can expect to be given not only first class tuition and teaching, but first class support. We pride ourselves on providing an excellent student experience, and the academics at Liverpool Hope work hard to ensure that you get the most from your degree. The degree will cover all areas of mathematics including pure mathematics, applied mathematics and statistics.

Entry Requirements

The standard offer level is 112 UCAS tariff points. You also need an A Level (or equivalent) in Mathematics.

Fees and Additional Costs

The tuition fees for 2021/2022 are £9,250 for full-time undergraduate courses.

As well as your tuition fees, you need to consider the cost of books, software, and general computer consumables such as USB flash drives and printing. We estimate this to cost around £300.

You will also need to consider the cost of your accommodation each year whilst you study at university. Visit our accommodation webpages for further details about our Halls of Residence: www.hope.ac.uk/halls

LIVERPOOL HOPE UNIVERSITY
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TEF Gold

Institute of mathematics & its applications

CONTACT

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Mathematics MMath (Hons)
Curriculum

Year One

- Linear Algebra
- Calculus
- Logic
- Sets
- Complex Numbers
- How to code using MAPLE
- Mathematical Communication
- Writing Mathematics in LaTeX
- Probability
- Introduction to Numerical Analysis
- Applications of Mathematics
- Discrete Mathematics
- Graph Theory
- Introduction to Programming (C and MATLAB)

Year Two

- Multi-variable Calculus
- Ordinary Differential Equations
- Further Linear Algebra
- Differential Geometry
- Number Theory
- Statistics and R
- Probability
- Further Ordinary Differential Equations
- Partial Differential Equations
- Waves
- Further Numerical Analysis
- Further Programming in MAPLE

Year Three

- Group Theory and Algebra
- Lie Groups and Algebras
- Orthogonal Polynomials and Special Functions
- Calculus of Variations
- Complex Analysis
- Algebraic Geometry
- Chaos Theory
- Topology and Manifolds
- Advanced Numerical Analysis
- Quantum Mechanics
- Integrable Systems
- Cardiac Models

Year Four

A selection of topics will be taken from the following:

- Singularity Theory
- Applied Dynamical Systems
- Advanced Wave Analysis
- Applied Complex Variables
- Fluid Dynamics
- Calculus of Variations
- Function Spaces and Functional Analysis
- Lebesgue Integration
- Advanced Numerical Methods for Eigenvalue Problems
- Dissertation

COURSE STRUCTURE

Teaching on this degree is structured into lectures, seminars and tutorials.

In your first year of study there are approximately 12 teaching hours each week, which reduces to approximately 10 teaching hours in your second, third and fourth years.

On top of teaching hours, you are also expected to spend a number of hours studying independently each week, as well as studying in groups to prepare for any group assessments you may have.

ASSESSMENT AND FEEDBACK

There are a number of assessments across your four years of study, including written exams, portfolios and coursework.

You will be given feedback on your assessments, and you will have the opportunity to discuss this with your tutor in more detail.

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