

Level 1

Semester 1

Semester 2

Introduction to Algebra & Analysis

Mathematical Reasoning

Mathematical Methods 1

Algorithmic Thinking

Introduction to Probability & Statistics

Introduction to SOR Methods

Core Mathematics

Pure Mathematics

Applied Mathematics Applications of Maths Theoretical Physics

Statistics & Operational Research

Modules taught in alternate years available at Level 3 or 4

0 CATS module

Note: not all core mathematics modules are compulsory on some programmes.

Level 2

Semester 1

Semester 2

Linear Algebra

Analysis

Classical Mechanics

Employability for Mathematics

Methods of Operational Research

Group Theory

Metric Spaces

Mathematical Methods 2

Statistical Inference

Level 3

Semester 1

Semester 2

Algebra

Measure and Integration

Numerical Analysis

Classical Fields

Quantum Theory

Applied Mathematics Project

Linear Models

Stochastic Processes and Risk

Mathematical Investigation

Dynamical Systems

Modelling & Simulation

Financial Mathematics

Investigations

Applied Mathematics Project

Team Project Mathematics with Finance

Statistical Data Mining with Machine Learn.

Level 4

Semester 1

Semester 2

Topological Data Analysis / Geometry of Optimisation

Topology

MSci Project

Practical Methods for PDEs

Advanced Quantum Theory

MSci Project

Bayesian Statistics

MSci Project

Functional Analysis / Fourier Analysis & Appl. to PDEs

Applied Algebra & Cryptography

Information Theory and Biodiversity

Mathematical Methods for Quant. Inf. Proc.

Statistical Mechanics / Quantum Fields

Survival Analysis

In 2025-26 alternate Level 3/Level 4 modules are Topological Data Analysis (S1), and Statistical Mechanics (S2); Classical Fields (S1) and Functional Analysis (S2) are suspended.