

Level 1

Level 2

Level 3

Level 4

Semester 1

Semester 2

Semester 1

Semester 2

Semester 1

Semester 2

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

Linear Algebra

Analysis

Classical Mechanics

Employability for Mathematics

Methods of Operational Research

Modules taught in alternate years available at Level 3 or 4

0 CATS module

Group Theory

Metric Spaces

Mathematical Methods 2

Statistical Inference

0 CATS module

Rings and Modules

Measure and Integration

Numerical Analysis

Classical Fields

Quantum Theory

Applied Mathematics Project

Linear Models

Stochastic Processes

In 2021-22: at Level 3, Set Theory (S1) is given instead of Measure & Integration; Metric and Normed Spaces (S2) and Linear and Dynamic Programming (S1) are available; at Level 4: Integration Theory (S1) is given, Bayesian Statistics is not. Level 3 Numerical Analysis cannot be taken by those who took it at Level 2.

Mathematical Investigation

Discrete Mathematics

Dynamical Systems

Modelling & Simulation

Financial Mathematics

Investigations

Applied Mathematics Project

Team Project Mathematics with Finance

Statistical Data Mining with Machine Learn.

Topological Data Analysis / Geometry of Optimisation

Topology

MSci Project

Practical Methods for PDEs

Advanced Quantum Theory

MSci Project

Survival Analysis

MSci Project

Functional Analysis / Fourier Analysis & Appl. to PDEs

Applied Algebra & Cryptography

Information Theory

Mathematical Methods for Quant. Inf. Proc.

Statistical Mechanics / Quantum Fields

Bayesian Statistics

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