

COURSE CURRICULUM INFORMATION

MSc (1AL1) MATHEMATICS

Year 1 Core Subject: MA500 Mathematics (90 Credits)

Required Modules

CS4102 Geometric Foundations of Data Analysis I

CS4103 Geometric Foundations in Data Analysis II

MA500-1 Mathematics of Finance

MA500-2 Algebraic Foundations of Quantum Computing

CS402 Cryptography

Optional Modules

CS319 Scientific Computing

CS3304 Logic

CS424 Object Oriented Programming/Internet Programming

CS4423 Networks

MA215 Mathematical Molecular Biology

MA216 Mathematical Molecular Biology II

MA2287 Complex Analysis

MA284 Discrete Mathematics

MA3101 Euclidean and Non-Euclidean Geometry

MA3343 Groups

MA341 Metric Spaces

MA342 Topology

MA3491 Fields & Applications

MA378 Numerical Analysis

MA385 Numerical Analysis I

MA416 Rings

MA418 Differential Equations with Financial Derivatives

MA4344 Advanced Group Theory

MA482 Functional Analysis

MA490 Measure Theory

MA495 Actuarial Mathematics: Life Contingencies II

MP305 Modelling I

MP307 Modelling II

MP403 Cosmology and General Relativity

MP491 Nonlinear Systems

ST311 Applied Statistics I

ST312 Applied Statistics II

ST313 Applied Regression Models

ST417 Introduction to Bayesian Modelling

EC3101 Microeconomics and Public Policy

EC3102 Macroeconomics and Public Policy

EC501 Microeconomic Theory

EC5109 Macroeconomic Theory and Policy

RESEARCH PROJECT

A 30-credit Research Project is completed under the guidance of an academic staff member and submitted in August. The project is an opportunity to explore a particular topic of interest in great depth. You are strongly encouraged to seek out potential supervisors as early in first semester as possible. A full list of School academic staff and their research interests is [here](#). Consult the Course Director, Dr. Tobias Rossmann (E: tobias.rossmann@nuigalway.ie), if you need assistance in finding a suitable project supervisor.