COURSE CURRICULUM INFORMATION

MSc (1AL1) MATHEMATICS

Year 1 Core Subject: MA500 Mathematics (90 Credits)

Required Modules

Semester I  
CS4102 Geometric Foundations of Data Analysis I  
MA437 Mathematics for Decision Making I  
MA4102 Algebraic Foundations of Quantum Computing

Semester II  
CS4103 Geometric Foundations of Data Analysis II  
MA438 Mathematics for Decision Making II  
CS402 Cryptography

Optional Modules

CS319 Scientific Computing  
CS3304 Logic  
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.