

As a mathematics major it might be difficult to study abroad and still take the courses required for your major. However, there are several host institutions that allow you to fulfill course requirements and experience the cultural diversity of studying in Britain, Ireland, or South Africa. If you are studying mathematics, you will be able to learn familiar topics from a different perspective through both traditional mathematics courses and courses unique to your host country's experience. The following is a sample of courses available. Contact Interstudy for a complete listing and more information at 800.663.1999.

BRITAIN

Queen Mary, University of London

MTH6139 Time Series

A time series is a collection of observations made sequentially, usually in time. This kind of data arises in a large number of disciplines ranging from economics and business to astrophysics and biology. This module introduces the theory, methods and applications of analysing time series data.

Other Courses Offered: MTH6128 Number Theory; MTH6124 Mathematical Problem Solving; MTH5110 Introduction to Numerical Computing; MTH5109 Geometry II: Knots and Surfaces

Swansea University

MAA221 - Vector Calculus

The basic techniques required to solve Poisson's equation for a variety of coordinate systems. Vector differential operations and their forms with respect to generalised curvilinear coordinate systems. The existence and uniqueness of a solution to the Poisson equation using integral theorems and the use of special functions in representing solutions.

Other Courses Offered: MAM32110 Differential Equations; MAP10110 Divisibility and Congruences; MAP-23510 Measure and Probability; MAAM6110 Numerical Analysis

University of St Andrews

MT3706 Markov Chains and Processes

This module provides an introduction to the theory of stochastic processes and to their use as models, including applications to population processes and queues. The syllabus includes the Markov property, the Chapman-Kolmogorov equations, classification of states of Markov chains, decomposition of chains, stationary distributions, random walks, branching processes, the Poisson process, birth-and-death processes and their transient behaviour, embedded chains, Markovian queues.

Other Courses Offered: MT4510 Solar Theory; MT4111 Symbolic Computation; MT4527 Forecasting; MT5758 Applied Multivariate Analysis

University of Warwick

MA3E5 History of Mathematics

The course offers an overview of the rise of modern algebra, a sense of what doing history is, and an acquaintance with primary sources. The module aims to consider topics in the 19th Century history of abstract algebra and number theory and discuss what was taken to be so important about them.

Other Courses Offered: MA3F1 Introduction to Topology; MA222 Metric Spaces; MA377 Rings and Modules; MA3F2 Knot Theory

IRELAND

Trinity College Dublin

MA1261 Mathematical Computation I

This module introduces the principles of computation, the use of computers and the underlying concepts.

Other Courses Offered: MA2326 Ordinary differential equations; MA22S4 Mechanics; MA22S2 Vector calculus for science; MA346B Cryptology

National University of Ireland, Galway

MA337 Statistics I

This course will give explanation of the difference between probability and statistics. The role of probability in statistical decision making; review of basic probability and statistical inference; review of techniques of data presentation and summarization; discussion of several probability models, including binomial, geometric, Poisson and normal moments of distribution; statistical inference: concepts of point and interval estimation, and of hypothesis testing, P-value and power of tests.

Other Courses Offered: MA327 Numerical Mathematics; MA313 Linear Algebra I; MP212 Mechanics I; MA301 Advanced Calculus

National University of Ireland, Maynooth

MT341P Rings & Fields 1

Module Objective: To give a rigorous introduction to Rings and Fields. Concrete Rings: Polynomial rings and Matrix rings. The integers mod n . The abstract definition of a ring. Elementary concepts: subrings, ideals, quotient rings. Divisibility in rings. Prime and irreducible elements. Concrete Fields: the rationals, reals and complex numbers. The integers mod p , p a prime. The abstract definition of a field. Euclidean Domains, Principal Ideal Domains, Unique Factorization Domains. Gaussian Integers and Applications. Gauss' Lemma, Irreducibility of Polynomials.

Other Courses Offered: MT312S Cryptography; MT236S Introduction To Analysis; MT364S Anova & Regression; MT465S Applied Probability

SOUTH AFRICA

Nelson Mandela Metropolitan University

MATH102 Differential Calculus 102

This module aims to introduce students into the theory and application of differential calculus to single variable functions which is important to many fields of science and economics.

Other Courses Offered: MATH103 Calculus 103, MATH203 Linear Algebra 203, MATH211 Multivariable and Vector Calculus

University of the Western Cape

MAM011 Precalculus I

This course's main content includes polynomial functions, including factorization using synthetic division and graphs; rational functions and their graphs; graphs of absolute value functions and inequalities including those involving absolute values.

Other Courses Offered: MAM121 Integral Calculus and Linear Algebra; MAM231 Numerical Methods and Scientific Computing; STA111 Introductory Statistics; STA223 Statistical Software module I

MATHEMATICS

interstudy

Rhodes University

Mathematical Modelling

Mathematical modelling is the simulation of a real-world process using mathematical notions. In this course, a student will learn basic techniques for model formulation, analysis and implementation. The MATLAB environment will be used to implement the necessary numerical methods.

Other Courses Offered: Advanced Calculus; Differential Equations; Geometry; Real Analysis

BOTSWANA

University of Botswana

MAT242 Computing I

Other Courses Offered: MAT251 Vectors and Introductory Mechanics; MAT361 Maths. Programming and Game Theory; MAT425 Measure Theory ; MAT252 Newtonian Mechanics