

## Applied Mathematics

University of Aberdeen

### Venues

Old Aberdeen Campus

### Content

First Year: Students take up to four mathematics courses. Three of these are compulsory: two introductory courses in Analysis (Calculus 1 and 2) and a course in Algebra. The fourth course, which is optional, covers a range of mathematical topics.

The Analysis courses begin with fundamental ideas concerning sets, functions and methods of proof. Then they discuss limits, differentiation and integration of functions in one variable. The Algebra course includes such topics as vectors, matrices, complex numbers and methods of counting. The optional course includes topics like symmetry, elementary number theory, functions and relations, elementary probability and elementary astronomy.

Second Year: Students take up to five mathematics courses. Four of the courses are compulsory. Of these, two are Analysis courses, one is in Set Theory and Algebraic Structures and one is in Linear Algebra. The optional course is in Probability Theory.

The two Analysis courses consolidate students' knowledge in differentiation and integration of functions in one variable, and lead on to the differentiation of functions of several variables and to ordinary differential equations. The course on Set Theory and Algebraic Structures includes an introduction to elementary set theory and an introduction to the mathematics of symmetry.

The Linear Algebra course focuses on systems of linear equations and the associated matrix algebra. The Probability Theory course provides an introduction to the mathematical framework needed to handle events involving a certain amount of randomness.

Third Year (Junior Honours): In third and fourth year taken together, Mathematics students take a total of 14 courses (plus 2 courses of enhanced study). In third year, most of these are compulsory and cover topics which are essential for any further study, for example Complex Analysis, Group Theory, Ring Theory and Topology of Metric Spaces. There are further courses, some of which are optional, covering a variety of topics from Pure and Applied Mathematics, such as Mechanics, Mathematical Methods of Physics, Stochastic Processes and Linear Optimisation.

Fourth Year (Senior Honours): In fourth year there are now even more options, and they depend to some extent on whether a student wishes to obtain a degree in Mathematics or in Applied Mathematics. The programme includes courses on Measure Theory, Galois Theory, Mathematical Modelling and Nonlinear Dynamics, along with a range of optional courses (which may vary from year to year) from Pure and Applied Mathematics, reflecting the research interests in the Department. There is a major project which involves presenting an individual report.

## Start Date

September

## Qualification

Degree

## Study Method

Full time

## Award Title

BSc Hons

## UCAS Code

G120

## Course Length

4 years

## Faculty

Arts and Social Sciences

## Department

Social Science

## Entry Requirements

2023 entry requirements:

Standard entry:

4 Highers at AABB (by end of S5) including Maths and a science subject by end S6 plus English, Maths and Chemistry or Physics at National 5. Those with Highers at BBB by end of S5 are encouraged to apply.

For second year entry you would require the above plus 3 Advanced Highers at ABB including Maths and a science subject at AB or BA.

Widening access entry:

2 Highers at BB (by end of S5). Additional Highers/Advanced Highers in S6.

## SCQF Level

10

## Progression Routes

«ProgressionRoutes»

## Combination Courses

«htmlCombinationCourse»

«htmlCombinationUCASCode»

## Address

King's College  
Aberdeen  
Aberdeen City  
AB24 3FX

## Website

[www.abdn.ac.uk](http://www.abdn.ac.uk)