

## Studying Maths at Oxford

The Mathematical Institute at Oxford provides courses that cover a wide array of topics ranging across all areas of pure and applied mathematics.

Mathematics is a logical subject, and you will need to think mathematically, arguing clearly and concisely as you solve problems. For some of you, this way of thinking or solving problems will be your goal. Others will want to see what else can be discovered. Either way, it is a subject to be enjoyed.

The first year of the Oxford degree consists of core courses in pure and applied mathematics (including statistics). With this mathematical foundation established students can then select from a wide variety of other courses in subsequent years of study.

## Studying Maths at St Anne's

St Anne's has a large teaching team in college with expertise across most areas of maths. Additionally we are located across the road from the Mathematical Institute which allows easy access to the department, classes, library and other academic resources.

St Anne's has an active mathematical community with events held jointly with Computer Science taking place each term. All those interested in mathematics and computer science at all levels within the college have an opportunity to meet together.

There are undergraduates student participating in the mathematics degree as well as others completing joint degrees, such as Mathematics and Statistics, Mathematics and Philosophy or Mathematics and Computer Science. This leads to a strong community of mathematicians in college.

## Study durations

You can apply to study Mathematics as a single or joint subject for any study duration.

	Ext AY	AY	Fall Term	Hilary and Trinity terms	Studied with other subjects
<b>Mathematics</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>  Jointly with almost any other humanities, social science or science subject. Most easily studied jointly with computer science, psychology or philosophy.

## Courses

Visiting Students will need to attend the lectures in the Mathematical Institute, and these will be supplemented with tutorials (1-3 students), or sometimes larger classes (10-12 students).

**As mathematics is a hierarchical subject, in order to take any course a strong background is a necessity.**

The following is an indicative list of courses that should be accessible to students with some experience of calculus and algebra at university – please note courses and terms may differ

- Analysis 16 Lectures, in each of Michaelmas, Hilary and Trinity Terms
- Linear Algebra 16 Lectures, Michaelmas and 8 lectures Hilary Term

- Groups and group actions 16 lectures Hilary and Trinity Terms
- Probability 16 Lectures, Michaelmas term
- Introductory Calculus 16 Lectures, Michaelmas Term
- Geometry 16 Lectures, Michaelmas Term
- Fourier Series and partial differential equations 16 Lectures, Hilary Term
- Multivariable calculus 16 Lectures, Hilary term
- Dynamics 16 Lectures, Hilary term
- Statistics 16 Lectures, Trinity term

The following courses are more advanced and require at least two years experience of university mathematics.

- Complex Analysis and metric spaces 32 Lectures, Michaelmas Term
- Differential Equations 16 Lectures, Michaelmas Term
- Linear Algebra 16 lectures Michaelmas Term
- Fluid Dynamics 16 Lectures, Hilary Term
- Rings and Modules 16 Lectures, Hilary Term
- Probability 16 lectures, Michaelmas Term
- Statistics 16 lectures Hilary Term
- Numerical Analysis 16 lectures Hilary Term
- Quantum Theory 16 lectures Michaelmas Term

There are also 8 hour lecture courses available on topics such as - Number Theory, Integral transforms, Calculus of Variations, Mathematical Biology, Graph Theory, Special Relativity, Group Theory, Multidimensional Analysis and Geometry, Projective Geometry.

There are also higher-level courses, usually taught through classes in the Mathematical Institute, and most rely on elements of the courses listed above, so enrolment in these options would be dependent on demonstrating the correct level of previous experience.

There is an [indicative list of previous courses on the Mathematical Institute's website](#). Prelims refers to first year courses, Part A courses refer to second year, Part B to third year. Note that not all courses listed are available to visiting students and courses and terms may differ.

### **Pre-requisites**

Visiting students applying to study maths need to have a strong foundation in maths when they apply. Successful completion of introductory maths courses are required for all courses and, ideally, an applicant has taken further maths courses at a higher-level. Ideally, applicants have taken some proof based university-level maths courses.

### **Additional information**

Mathematical Institute <https://www.maths.ox.ac.uk/>

**Fridays@2** are a series of seminars designed to help students to develop useful skills, to explore career possibilities, and to put their mathematics courses into a broader context. Events are held by the Mathematical Institute.

The [Oxford Mathematics Alphabet](#), gives an insight into the world leading research that goes on in the department.