Statistical analysis makes sense of data. It gives meaning to numbers and helps to decode complexity.
Statistics is an exciting area of modern mathematics. Are humans the cause of global warming? Which genetic mutations are associated with common human diseases? Statistical models and modern computational techniques can help to answer questions such as these.

The 3-year BA and 4-year MMath in Mathematics and Statistics courses combine the strengths of the traditional Oxford Mathematics degrees with the ability to pursue probability and statistics in depth. It will equip you with outstanding and sought-after analytical skills used in finance, science, industry and medicine, whilst also providing an excellent springboard for postgraduate study.

Why study Mathematics & Statistics at Oxford?

The Department of Statistics at Oxford is an exciting and vibrant place to study. The department has teaching and research strengths in a wide range of modern areas of statistical science.

We have world-leading research groups in Computational Statistics and Statistical Methodology, Applied Probability, and Statistical Genetics and Bioinformatics. Our new research group working on statistical machine learning and scalable methods for Big Data is flourishing. Our research covers topics as diverse as methods to unlock the secrets of human genetic variation and disease to the analysis of random graphs and networks.

These research interests are reflected in the courses available to undergraduates in the third and fourth years, and give exposure to the advances being made in statistical theory as well as the practical application of techniques to large datasets. This means that graduates from our degrees are well-equipped to enter highly analytical careers. Both the BA and MMath in Mathematics and Statistics are accredited by the Royal Statistical Society.

The University also offers fantastic facilities, exceptional academic support through the collegiate system and has a range of financial support options.

Personally, coming and applying to Oxford was one of the best decisions I have ever made. Initially, I was not going to as I truly felt I would be out of my league but by coming I realised how naïve that thought was. The students at Oxford are just normal everyday people, who just have an interest in learning, which was great for me as I really loved my subject.

Samiha
How is the course structured?

There are two Mathematics and Statistics degrees, the 3-year BA and the 4-year MMath. You will not be asked to choose between the degrees until your third year.

The first year and part of the second year introduce core topics in pure and applied mathematics, probability and statistics. Options start in the second year, with three long options and three short options taken. In the third and fourth year there is a wide range of options available in both mathematics and statistics.

You can choose to graduate after three years with a BA, or to continue to a fourth year to graduate with an MMath. The MMath allows for more in-depth study on advanced material, and includes a dissertation on a topic with a large statistical component.

I find the range of practical applications for statistics really appealing. I heard a talk about the uses of statistics at a maths talk on the open day, and immediately knew that this would be the right course for me. I have lectures in both pure and applied maths each week, and then have problem sheets that I have to prepare for my tutorials. It’s great fun to try and solve a variety of different problems using newly learnt skills.

Henry
Teaching at Oxford University

Mathematics and Statistics students from all colleges attend the same lectures, which are arranged by the University. This is usually how students first meet the topics in each course. Mathematics and Statistics students can expect to attend between 9 and 12 hours of lectures per week. Each lecturer will set exercises on their lectures, and these problems will typically form the basis of college tutorials.

The University’s friendly tutorial system means that you will receive much more personal tuition and greater pastoral support than many other universities can offer. A tutorial is an hour long meeting in a college between a tutor and small group (often a pair) of students. College tutors mark their students’ tutorial work each week and during the tutorial the work (typically a set of problems set by the lecturer or college tutor) is considered and discussed.

What is the role of the college?

All students at the University of Oxford are a member of a college. Each college has its own particular history, ethos and architecture, but the quality of the teaching is identical. Through the college you will attend weekly tutorials with a tutor.

The colleges provide affordable accommodation for at least two (and often more) years of your course. College life is one of the university’s greatest assets, and the close college community provides a friendly and welcoming home.

Practical classes

By the third and fourth years the subject options become much more specialised and are taught in intercollegiate classes organised by the University, typically involving 8-10 students. Again there is plenty of chance to ask questions and discuss ideas with class tutors.

Fourth-year dissertation

If you choose to do the four year MMath course, you will be required to write a dissertation in a topic closely related to statistics. These are a good opportunity to do individual research on a topic that interests you.

Colleges also act as a social hub, with a vast range of extracurricular activities on offer so whatever your interests – music, drama, sports, politics – there will be a society for you in Oxford.

You can name a college at the application stage, but it is not necessary to do this. A quarter of students happily end up at a college different to the one they originally applied for.

Please see www.ox.ac.uk/ugcolls for a list of all colleges offering Mathematics and Statistics.

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Is this course for me?

If you are a highly motivated student and you are passionate about studying Mathematics with a particular interest in the applications to data analysis then the University of Oxford offers an outstanding environment in which to study. The course will introduce topics that may be completely new to you and will allow you to specialise in the areas that interest you most.

We strongly recommend that you take as much Mathematics as your school offers to full A-level or equivalent. If your school does not offer Further Maths, we would recommend that you consider studying it through the Further Mathematics Support Programme. See www.fmnetwork.org.uk for more details.

What qualifications do I need?

You should have achieved good grades overall at GCSE or equivalent.

We would also expect:


or

Advanced Highers: AA/AAB with A in Mathematics.

or

IB: 39 points, including score 7 in higher level Mathematics and a further 6 6.

or

any other equivalent. For further information, please see www.stats.ox.ac.uk/ug/apply.

What are tutors are looking for?

In addition to looking for a very good track record of academic achievement and a particular enthusiasm for Mathematics, tutors are looking for candidates that have a capacity to absorb and use new ideas, the ability to think and work independently, and have perseverance and enthusiasm.

The MAT

Given the very strong competition for places, all applicants must register for and sit the Mathematics Aptitude Test (MAT). This is usually undertaken at a local test centre (often your own school or college) in November. MAT results will be considered when short-listing applicants for interview. Please see www.matoxford.org.uk for more details. The STEP (Sixth Term Examination Paper) does not form part of Oxford offers.

The Interview

Tutors take all aspects of each application into account when deciding who to invite for interview. All shortlisted candidates will be interviewed in at least two colleges in Oxford in December. As part of the process, candidates will stay in a college for several days, giving them the opportunity to sample college life. All meals and accommodation are provided free of charge. It may also be possible to arrange Skype interviews for international candidates.

Applying

All applications should be made through UCAS by 15 October, and applicants should also register for the MAT by this date. For more information about the application process, see www.stats.ox.ac.uk/ug/apply.
What can I do after I finish my degree?

Many of our graduates have careers in Statistics and the closely related field of Operational Research. They are in high demand in the insurance and financial services, and in recent years about 35% of Oxford Mathematics graduates have joined the finance and finance-related sectors. This has included a management analyst for a management consultancy firm and an actuarial consultant. Graduates in Statistics can also enter careers in fields as diverse as health, technology, education, research and industry.

For more information on applying to the University of Oxford, please look at the admissions website at www.ox.ac.uk/admissions or visit the University’s Admissions Information Centre. The staff here can answer questions about applying to undergraduate or postgraduate courses at Oxford.

Visit us

There are five Open Days each year, including two Departmental Open Days in May for Mathematics and its joint courses including Mathematics and Statistics. There are programmes of talks for both of these days. In addition there are three University Open Days, two in June/July and one in September. These are university-wide and there is usually a set of repeated departmental talks, allowing you to visit more than one department, including the Mathematical Institute, together with some colleges, all in one day.

Please note that booking is required to attend in May, but not for University Open Days. You can book and see more details at www.maths.ox.ac.uk/open-days.

Our Schools Liaison Officer also gives talks about Statistics and the Oxford Mathematics and Statistics course at schools and colleges around the country. Go to www.stats.ox.ac.uk/outreach to find out more.

The department expects to move into a new home in central Oxford in 2015, with excellent new teaching facilities for undergraduates.