Mathematics and Statistics Information Sheet for entry in 2019

All over the world, human beings create an immense and ever-increasing volume of data, with new kinds of data regularly emerging from science and industry. A new understanding of the value of these data to society has emerged, and with it, a new and leading role for Statistics. In order to produce sensible theories and draw accurate conclusions from data, cutting-edge statistical methods are needed. These methods use advanced mathematical ideas combined with modern computational techniques, which require expert knowledge and experience to apply. A degree in Mathematics and Statistics equips you with the skills required for developing and implementing these methods, and provides a fascinating combination of deep and mathematically well-grounded method-building and wide-ranging applied work with data.

The Department of Statistics at Oxford is an exciting and dynamic place to study, with teaching and research strengths in a wide range of modern areas of statistical science. Many of its academic staff work in the development of fundamental statistical methodology and probability. There is a strong new research group working on statistical machine learning and scalable methods for Big Data. The department's world-leading team, working on population genetics and evolution, applied new statistical methods to huge genetic data sets to unlock the secrets of human genetic variation and disease. Other groups work on applied probability, network analysis, and medical, actuarial and financial applications. These interests are reflected in the lecture courses available to undergraduates in their third and fourth years.

Course structure
The first year of this course is identical to Mathematics, and the core mathematics part of the degree is completed in the first term of the second year. Mathematics and Statistics students also follow second-year courses in probability and statistics, and the remainder of the second year allows for some choice of topics in preparation for the greater selectivity of the third and fourth years. In the first two years it is usually straightforward to move between the Mathematics course and the Mathematics and Statistics course, subject to the availability of space on the course and to the consent of your college.

There are two Mathematics and Statistics degrees, the three-year BA and the four-year MMath. Decisions regarding continuation to the fourth year do not have to be made until the third year. All third- and fourth-year mathematical topics available in the Mathematics course are also available to Mathematics and Statistics students. The fourth year is, naturally more challenging and it provides an opportunity for more in-depth study, including a substantial Statistics project.

A typical week
The typical week of a student in Mathematics and Statistics is similar to that for Mathematics:
- Years 1 and 2: around ten lectures and two–three tutorials or classes a week
- Years 3 and 4: eight–twelve lectures and two–four classes a week, depending on options taken
- Courses involving statistical software packages have some lecture hours replaced by teaching sessions in labs.

Tutorials are usually 2-4 students and a tutor. Class sizes may vary depending on the options you choose. There would usually be around 8-12 students though classes for some of the more popular papers may be larger.

Most tutorials, classes, and lectures are delivered by staff who are tutors in their subject. Many are world-leading experts with years of experience in teaching and research. Some teaching may also be

delivered by postgraduate students who are usually studying at doctorate level. To find out more about how our teaching year is structured, visit our Academic Year page.

1st year

Courses	Assessment
Compulsory 1st year includes: • Algebra • Analysis • Probability and statistics • Geometry and dynamics • Multivariate calculus and mathematical models	First University examinations: Five compulsory papers Computational mathematics projects

2nd year

Courses	Assessment
Current core courses: • Probability • Statistics • Algebra and differential equations • Metric spaces and complex analysis Current options: • Statistical programming and simulation • Selection from a menu of other options in Mathematics	Final University examinations, Part A: Five core papers and four or five optional papers

3rd year

Courses	Assessment
Current options include: • Applied and computational statistics • Statistical inference • Statistical machine learning • Applied probability • Statistical lifetime models • Actuarial science • Wide range of other options in Mathematics	Final University examinations, Part B: The equivalent of eight written papers including assessed practicals

4th year (extended terms)

Research	Assessment
• Statistics project Current options include: • Stochastic models in mathematical genetics • Network analysis • Advanced statistical machine learning • Advanced simulation methods • Graphical models • Bayes methods • Computational biology • Probabilistic Combinatorics	Final University examinations, Part C: The equivalent of eight written papers Currently upper second in Parts A and B, as well as an upper second in Part B alone, is required to progress to Part C.

• Wide range of other options in Mathematics *The options listed above are illustrative and may change. A full list of current options is available on the <u>Mathematics</u> and <u>Statistics</u> websites.*	

The University will seek to deliver each course in accordance with the descriptions set out above. However, there may be situations in which it is desirable or necessary for the University to make changes in course provision, either before or after registration. For further information, please see the University's Terms and Conditions.

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Fees
These annual fees are for full-time students who begin this undergraduate course here in 2019.

Fee status	Annual Course fees
Home/EU	£9,250
Islands (Channel Islands & Isle of Man)	£9,250
Overseas	£27,240

Information about how much fees and other costs may increase is set out in the University's Terms and Conditions.

Additional Fees and Charges Information for Mathematics and Statistics
There are no compulsory costs for this course beyond the fees shown above and your living costs.
If you're buying a computer for university, please do consider a laptop over a desktop, so that you can take the laptop to classes. If you don't have your own, the department has several spare laptops that you are welcome to use.

Living costs

Your living costs will vary significantly dependent on your lifestyle. These are estimated to be between £1,058 and £1,643 per month in 2019-20. Each year of an undergraduate course usually consists of three terms of eight weeks each but you may need to be in Oxford for longer. As a guide you may wish to budget over a nine-month period to ensure you also have sufficient funds during the holidays to meet essential costs.

	Per month		Total for 9 months	
	Lower range	Upper range	Lower range	Upper range
Food	£265	£371	£2,387	£3,342
Accommodation (including utilities)	£566	£739	£5,093	£6,655
Personal items	£122	£271	£1,098	£2,435
Social activities	£42	£126	£380	£1,138
Study costs	£40	£88	£359	£788
Other	£23	£48	£208	£432
Total	**£1,058**	**£1,643**	**£9,525**	**£14,790**

In order to provide these likely living costs, the University and the Oxford University Students' Union conducted a living costs survey to complement existing student expenditure data from a variety of sources including the UK government's Student Income and Expenditure Survey and the National Union of Students (NUS). The likely lower and upper ranges above are based on a single student with no dependants living in college accommodation (including utility bills) and are provided for information only.

When planning your finances for future years of study at Oxford beyond 2019-20, you should allow for an estimated increase in living expenses of 3% each year.