

## Mathematics and Statistics Information Sheet for entry in 2016

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.



### Mathematics and Statistics at Oxford

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 30 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 the college.

There are two Mathematics and Statistics degrees, the three-year BA and the four-year MMath. You will not be asked to choose between the degrees until you are in your 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 weekly timetable

The typical week of a student in Mathematics and Statistics is similar to that for Mathematics.

- Years 1 & 2: around 10 lectures and 2-3 tutorials or classes a week
- Years 3 & 4: 8-12 lectures and 2-4 classes a week, depending on options taken

- Courses involving statistical software packages have some lecture hours replaced by teaching sessions in labs

<b>1st year</b>	
<p><b>Courses</b></p> <p>Compulsory 1st year includes:</p> <ul style="list-style-type: none"> <li>• Algebra</li> <li>• Analysis</li> <li>• Probability and statistics</li> <li>• Geometry and dynamics</li> <li>• Multivariate calculus and mathematical models</li> </ul>	<p><b>Assessment</b></p> <p>First University examinations: Five compulsory papers</p>
<b>2nd year</b>	
<p><b>Courses</b></p> <p>Core courses:</p> <ul style="list-style-type: none"> <li>• Probability</li> <li>• Statistics</li> <li>• Algebra and differential equations</li> <li>• Metric spaces and complex analysis</li> </ul> <p>Options:</p> <ul style="list-style-type: none"> <li>• Statistical programming and simulation</li> <li>• Selection from a menu of other options in Mathematics</li> </ul>	<p><b>Assessment</b></p> <p>Final University examinations, Part A: Four core papers and four optional papers</p>
<b>3rd year</b>	
<p><b>Courses</b></p> <p>Current options include:</p> <ul style="list-style-type: none"> <li>• Applied statistics</li> </ul>	<p><b>Assessment</b></p> <p>Final University examinations, Part B: The equivalent of eight written papers</p>

<ul style="list-style-type: none"> <li>• Statistical inference</li> <li>• Applied probability</li> <li>• Statistical lifetime models</li> <li>• Actuarial science</li> <li>• Mathematical finance</li> <li>• Wide range of other options in Mathematics</li> </ul>	including assessed practicals
<b>4th year</b>	
<b>Courses</b> <ul style="list-style-type: none"> <li>• Statistics project</li> <li>• Advanced options ranging across probability and statistics, pure and applied mathematics, and statistical genetics</li> </ul>	<b>Assessment</b>  Final University examinations, Part C: Project and papers (or equivalent) in ratio 3:5 Upper second required to progress to Part C.

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.

### Fees

These annual fees are for full-time students who begin this undergraduate course here in 2016.

Fee Status	Tuition fee	College fee	Total annual fees
Home/EU	£9,000	£0	£9,000
Islands (Channel Islands & Isle of Man)	£9,000	£0	£9,000
Overseas	£16,280	£7,135	£23,415

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

### Living Costs

Your living costs will vary significantly dependent on your lifestyle. These are estimated to be between £970 and £1,433 per month in 2016-17. Undergraduate courses usually consist of three terms of eight weeks each, but 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.

## Living costs breakdown

	Per month		Total for 9 months	
	Lower range	Upper range	Lower range	Upper range
Food	£265	£298	£2,384	£2,673
Accommodation (including utilities)	£469	£667	£4,221	£6,002
Personal items	£119	£244	£1,073	£2,187
Social activities	£60	£107	£539	£960
Study costs	£36	£73	£314	£661
Other	£19	£44	£197	£410
<b>Total</b>	<b>£970</b>	<b>£1,433</b>	<b>£8,727</b>	<b>£12,894</b>

30 October 2015