

## Course Information Sheet for entry in 2016-17

### Statistical Science (EPSRC and MRC Centre for Doctoral Training)

#### About the course

The Statistical Science CDT is a four-year DPhil research programme in the theory, methods and applications of next-generation statistical science for 21st century data-intensive environments and large-scale models.

The programme provides structured training and research experience in the first year, followed by a three-year research project leading to a DPhil. It is the Oxford component of OxWaSP (the Oxford Warwick Statistics Programme), an EPSRC and MRC Centre for Doctoral Training in Next-Generational Statistical Science.

In the first year you will receive training for research in five key areas:

#### Statistical inference in complex models

The new demands of scientific research and the availability of vast data sets have required statisticians to revisit and reformulate the foundations of their discipline so that theory and methods become scalable to modern data.

#### Multivariate stochastic processes

A substantial number of inferential environments evolve dynamically in time or space, or both, often under stochastic control. A wide range of applied probabilistic and statistical methods are currently being developed to address these needs.

#### Bayesian analyses for complex structural information

The recent surge in Bayesian methodologies merges the now well-understood tools of probabilistic reasoning with stochastic computational and statistical inference. Current research frontiers further develop this relationship to apply to an ever increasing domain of application where essential contextual structural information can be properly coded as part of an extensive data-analysis exercise.

#### Machine learning and probabilistic graphical models

Over recent decades a mutual understanding of the rich symbioses between statistics and machine learning methodologies has developed and researchers have now begun to exploit these relationships. One of the key areas of such exchange is in probabilistic graphical modelling.

#### Stochastic computation for intractable inference

Many recent advances in statistical modelling have only been made possible by the dramatic progress in techniques which admit the fast analysis of probabilistic and statistical models. These methods are being increasingly customized to the needs of different model classes.

#### Pattern of teaching, learning and supervision



The first two terms consist of a series of two-week modules. Modules start with two days of lectures and exercises. Over the subsequent five days you read some of the original literature and write a report. Industrial and academic speakers visit Oxford for informal lunch sessions mid-module, and you will have the opportunity to invite speakers.

At the end of each module you travel to Warwick for a mini-symposium on the theme of the module. The rest of the first year consists of two ten-week research projects. Towards the end of the first year you choose a supervisor for your main DPhil project in Oxford and carry out this research in years 2 to 4. There will be formal assessments of your progress at around 18 and 36 months into the degree.

Where appropriate for the research, student projects will be run jointly with the department's leading industrial partners and you will have the chance to undertake a placement in data-intensive statistics with some of the strongest statistics groups in the USA, Europe and Asia.

### **Changes to courses**

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.

### **Expected length of course**

4 years

### **Annual fees for entry in 2016-2017**

Fee Status	Tuition fee	College fee	Total annual fees
Home/EU (including islands)	c. £4,200	£2,933	c. £7,133
Overseas	£18,770	£2,933	£21,703

The fees shown above are the annual tuition and college fees for this course for entry in the 2016-17 academic year; for courses lasting longer than one year, please be aware that fees will usually increase annually. For details, please see our guidance on likely increases to fees and charges.

Tuition and college fees are payable each year for the duration of your fee liability (your fee liability is the length of time for which you are required to pay tuition and college fees).

Graduate students who have reached the end of their standard period of fee liability may be required to pay a termly University and/or college continuation charge.

The University continuation charge, per term for entry in 2016/17, is currently £440, please be aware that this will increase annually.

For part-time students, the termly charge will be half of the termly rate payable by full-time students.

If a college continuation charge applies (not applicable to non-matriculated courses) it is likely to be in the region of £100 to £400 per term. Please contact your college for more details.

### **Additional cost information**

There are no compulsory elements of this programme that entail additional costs beyond fees and living costs. However, please note that, depending on your choice of research topic and the research required to complete it, you may incur additional expenses, such as travel expenses, research expenses, and field trips. You will need to meet these additional costs, although you may be able to apply for small grants from your department and/or college to help you cover some of these expenses.

## Living costs

**In addition to your fees, you will need to ensure that you have adequate funds to support your living costs for the duration of your course.**

The likely living costs for 2016-17 are published below. These costs are based on a single, full-time graduate student, with no dependants, living in Oxford. We provide the cost per month so you can multiply up by the number of months you expect to live in Oxford.

	Likely living costs for 1 month		Likely living costs for 9 months		Likely living costs for 12 months	
	Lower range	Upper range	Lower range	Upper range	Lower range	Upper range
<b>Food</b>	£265	£298	£2,384	£2,673	£3,177	£3,565
<b>Accommodation</b>	£469	£667	£4,221	£6,002	£5,627	£8,006
<b>Personal items</b>	£119	£244	£1,073	£2,187	£1,429	£2,915
<b>Social activities</b>	£60	£107	£539	£960	£718	£1,280
<b>Study costs</b>	£36	£73	£314	£661	£418	£880
<b>Other</b>	£19	£44	£197	£410	£265	£547
<b>Total</b>	£970	£1,433	£8,727	£12,894	£11,636	£17,191

When planning your finances for any future years of study in Oxford beyond 2016-17, you should allow for an estimated increase in living expenses of 2% each year.

More information about how these figures have been calculated is available at [www.ox.ac.uk/admissions/graduate/fees-and-funding/living-costs](http://www.ox.ac.uk/admissions/graduate/fees-and-funding/living-costs).

21 October 2015