

## Course Information Sheet for entry in 2016-17

### MSc in Mathematical and Theoretical Physics

#### About the course

The course provides a high-level, internationally competitive training in mathematical and theoretical physics, right up to the level of modern research. It covers the following main areas:

quantum field theory, particle physics and string theory

theoretical condensed matter physics,

theoretical astrophysics, plasma physics and physics of continuous media

mathematical foundations of theoretical physics

The course concentrates on the main areas of modern mathematical and theoretical physics: elementary-particle theory, including string theory, condensed matter theory (both quantum and soft matter), theoretical astrophysics, plasma physics and the physics of continuous media (including fluid dynamics and related areas usually associated with courses in applied mathematics in the UK system). If you are a physics student with a strong interest in theoretical physics or a mathematics student keen to apply high-level mathematics to physical systems, this is a course for you.

The course offers considerable flexibility and choice; you will be able to choose a path reflecting your intellectual tastes or career choices. This arrangement caters to you if you prefer a broad theoretical education across subject areas or if you have already firmly set your sights on one of the three subject areas, although you are encouraged to explore across sub-field boundaries.

You will have to attend at least ten units' worth of courses, with one unit corresponding to 16 hours of lectures (with one unit defined as a 16 hour lecture course or a dissertation). You can opt to replace one 16-hour lecture course by a dissertation. Your performance will be assessed by one or several of the following means:

invigilated written exams

course work marked on a pass/fail basis

take-home papers

mini-projects due shortly after the end of the lecture course.

The modes of assessment for a given course are decided by the course lecturer and will be published at the beginning of each academic year. As a general rule, foundational courses will be offered with an invigilated exam while some of the more advanced courses will typically be relying on the other assessment methods mentioned above. In addition, you will be required to give an oral presentation towards the end of the academic year which will cover a more specialised and advanced topic related to one of the subject areas of the course. At least four of the ten units must be assessed by an invigilated exam and, therefore, have to be taken from lecture courses which provide this type of



assessment. Apart from this restriction, you are free to choose from the available programme of lecture courses.

The course offers a substantial opportunity for independent study and research in the form of an optional dissertation (worth one unit). The dissertation is undertaken under the guidance of a member of staff and will typically involve investigating and write in a particular area of theoretical physics or mathematics, without the requirement (while not excluding the possibility) of obtaining original results.

### **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**

9 months

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

Fee Status	Tuition fee	College fee	Total annual fees
Home/EU (including islands)	£7,185	£2,933	£10,118
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).

### **Additional cost information**

There are no compulsory elements of this course that entail additional costs beyond fees and living costs. However, as part of your course requirements, you may need to choose a dissertation, a project or a thesis topic. Please note that, depending on your choice of 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).

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