Course Information Sheet for entry in 2023-24: Science and Technology of Fusion Energy DPhil Programme

About the course

The Oxford Science and Technology of Fusion Energy DPhil is a doctoral research degree programme, typically of four years in duration and known as a PhD at other universities.

As a research student in Oxford's Department of Materials you will be part of one of the top-ranked materials departments in the world (QS World University Rankings 2022). This vibrant research school consists of around 30 academic staff, about 12 Senior Research Fellows, and around 240 research students and 80 postdoctoral researchers. Research students are of many nationalities and come to the department from diverse scientific backgrounds. They are graduates in the traditional subjects of materials science, physics, chemistry and engineering and also mathematics, earth sciences and biology.

The Science and Technology of Fusion Energy DPhil is normally carried out in four years of full-time study under the supervision of an experienced member of staff. Details of the programme, including training opportunities (academic courses, research- specific skills and generic transferable career skills) and progression requirements, can be found in the current version of the Materials graduate course handbook, with further details available on the 'Fusion CDT' website (https://fusion-cdt.ac.uk/study-with-us/). Note in particular the requirement for Science and Technology of Fusion Energy DPhil students to spend periods of time during their first eight months, and eight to twelve weeks during their second year, away from Oxford; respectively engaged in the Fusion CDT taught course programme and their 'Collaboratory' project.

Research interests of the department extend over most branches of materials science, as well as some aspects of solid state physics and chemistry: they include the study of a wide range of materials of relevance in advanced technological applications, including metals and alloys, composites, semiconductors, superconductors, polymers, biomaterials, ceramics and materials for quantum information processing.

Much of the research is carried out in close collaboration with industry. World-leading research takes place on:

- characterisation of materials, where there is emphasis on electron microscopy and related techniques
- processing and manufacturing of materials
- modelling of materials, where there is attention to both structures and processes
- properties of materials
- energy materials, including those for batteries, nuclear fusion and photovoltaics
- quantum computing and quantum devices, which includes groups working on experimental studies, theory and modelling.

Each of the department's research groups works within one or more of the following broad themes and research projects available to applicants for the Science and Technology of Fusion Energy DPhil programme are listed under these themes:

- energy materials
- structural and nuclear materials
- device materials, including semiconductors, superconductors, quantum computing and quantum devices and NEMS
- polymers and biomaterials
- nanomaterials
- processing and manufacturing, including metals, alloys, superconductors and polymers
- characterisation of materials
- computational materials modelling.

Further information on current research and individual members of staff is available via the Materials Science website.

An overview of the provision for research students in the Department of Materials can be found at the Summary of Provision for Materials Research Students webpage (https://www.materials.ox.ac.uk/teaching/pg/researchprovision.html).

The current version of the Materials Graduate Student Handbook and other information about our research degree programmes can be found via the Materials Postgraduate Research Students webpages (https://www.materials.ox.ac.uk/teaching/pg.html)

Supervision

The allocation of graduate supervision for this course is the responsibility of the Department of Materials and it is not always possible to accommodate the preferences of incoming graduate students to work with a particular member of staff. Under exceptional circumstances a supervisor may be found from outside the Department of Materials.

Typically, a student should expect to have meetings with his/her supervisor or a member of the supervisory team with a frequency of at least once every two weeks averaged across the year. The regularity of these meetings may be subject to variations according to the time of the year, and the stage the student is at in his or her research programme.

The department's website provides further guidance on supervision arrangements.

Assessment

The first five terms are a probationary period, soon after which, subject to satisfactory progress, you will normally transfer from Probationer Research Student (PRS) to full DPhil status. A second formal assessment of progress, Confirmation of Status, takes place later in the programme, normally during the tenth term. The Transfer of Status and Confirmation of Status assessments are conducted by two members of staff other than the student's supervisor(s) or advisors.

Examination for the DPhil takes place at the end of the programme by means of a written thesis and an oral examination.

Expected length of course

	Full Time Only
Expected length	4 years

Changes to courses

The University will seek to deliver this course in accordance with the description 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. These may include significant changes made necessary by a pandemic (including Covid-19), epidemic or local health emergency. For further information, please see the University's Terms and Conditions (http://www.graduate.ox.ac.uk/terms) and our page on changes to courses (http://www.graduate.ox.ac.uk/coursechanges).

Costs

Annual fees for entry in 2023-24

Fee status	Annual Course fees
Home	£8,960
Overseas	£29,700

Information about course fees

Course 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 course fees). For courses lasting longer than one year, please be aware that fees will usually increase annually. Information about how much fees and other costs may increase is set out in the University's Terms and Conditions (http://www.graduate.ox.ac.uk/terms).

Course fees cover your teaching as well as other academic services and facilities provided to support your studies. Unless speci ed in the additional cost information (below), course fees do not cover your accommodation, residential costs or other living costs. They also don't cover any additional costs and charges that are outlined in the additional cost information.

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

The University continuation charge, per term for entry in 2023-24 is £572, 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 for non-matriculated courses) it is likely to be in the region of £100 to £600 per term. Please contact your college for more details.

Additional cost information

There are no compulsory elements of this course that entail additional costs to you beyond fees (or, after fee liability ends, continuation charges) 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 course 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 2023-24 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 one month

	Lower range	Upper range
Food	£300	£470
Accommodation	£715	£860
Personal items	£180	£305
Social activities	£40	£90
Study costs	£35	£80
Other	£20	£35
Total	£1,290	£1,840

Likely living costs for nine months

	Lower range	Upper range
Food	£2,700	£4,230
Accommodation	£6,435	£7,740
Personal items	£1,620	£2,745
Social activities	£360	£810
Study costs	£315	£720
Other	£180	£315
Total	£11,610	£16,560

Likely living costs for twelve months

	Lower range	Upper range
Food	£3,600	£5,640
Accommodation	£8,580	£10,320
Personal items	£2,160	£3,660
Social activities	£480	£1,080
Study costs	£420	£960
Other	£240	£420
Total	£15,480	£22,080

When planning your finances for any future years of study at Oxford beyond 2023-24, it is suggested that you allow for potential increases in living expenses of 5% or more each year – although this rate may vary significantly depending on how the national economic situation develops.

More information about how these figures have been calculated is available at www.graduate.ox.ac.uk/livingcosts.

Document accessibility

If you require an accessible version of the document please contact Graduate Admissions and Recruitment by email (graduate.admissions@admin.ox.ac.uk) or via the online form (http://www.graduate.ox.ac.uk/ask).