Course Information Sheet for entry in 2026-27: MSc in Quantum Technologies

Course facts

Mode of study	Full Time Only
Expected length	1 year

About the course

The MSc in Quantum Technologies is a taught interdisciplinary course covering quantum computing, sensing, and communications, with practical training and a four-month research project bridging academia and industry.

Quantum technologies (across quantum computing, sensing and communications) have the potential to bring transformative changes across different sectors from scientific research to industrial applications.

The MSc in Quantum Technologies will provide you with the central technical background in these technologies, combined with hands-on practical training through short modules and research experience through an extended four-month project.

This course is taught in collaboration with the Departments of Engineering, Materials, Mathematics, Computer Science and Chemistry, providing an interdisciplinary overview. The course is designed to be accessible to students with a strong background in any of these areas of study.

At the end of the course, it is expected that you will have achieved the following learning objectives:

- to have a technical overview of the principles underpinning quantum technologies
- to understand the principles of quantum computing, sensing and communications
- to have an overview of the state-of-the-art in hardware for quantum technologies
- to have further detailed knowledge of specific topics within quantum technologies and their applications (through chosen option courses)
- to appreciate the challenges and opportunities of translating quantum technologies to applications across different setups
- to complete short training in transferable skills including presenting work
- to have practical hands-on experience in practical techniques underpinning quantum technologies chosen from options ranging from laboratory techniques and control systems to programming of quantum computers
- to have demonstrated competence in completing and presenting a research project, both in written and oral form

Course structure

An overview of the course structure is provided below. Details of the compulsory and optional elements of the course are provided in the *Course components* section of this page.

The academic year is split into three terms of eight weeks but work on the MSc course continues throughout the year and is not restricted just to term time.

During the three terms of the course, you will choose from modules on various aspects of quantum technologies.

There are two seminar-based compulsory modules comprising an Industry Seminar and a Graduate Public Engagement element. The Industry Seminar is assessed by a coursework report. Option modules are available in terms one and two.

You will work on a four-month research project and will be placed either within a University research team, or at an industrial partner organisation.

The course will be strongly connected to the emerging international quantum technologies industry, with regular industry seminars highlighting the opportunities and challenges of translating these technologies across different sectors, as well as entrepreneurship and IP management. Some projects will be directly connected to or based within industry research teams.

Attendance

The course is full-time and requires attendance in Oxford. Full-time students are subject to the University's Residence requirements. (//www.ox.ac.uk/admissions/graduate/after-you-apply/accommodation/residence-requirements)

The majority of research projects are expected to be based in Oxford and the surrounding area, but some may be based further afield. Any student who prefers to be allocated a project based in or near Oxford will be given that option.

Resources to support your study

As a graduate student, you will have access to the University's wide range of resources including libraries, museums, galleries, digital resources and IT services.

The Bodleian Libraries is the largest library system in the UK. It includes the main Bodleian Library and libraries across Oxford, including major research libraries and faculty, department and institute libraries. Together, the Libraries hold more than 13 million printed items, provide access to e-journals, and contain outstanding special collections including rare books and manuscripts, classical papyri, maps, music, art and printed ephemera.

The University's IT Services is available to all students to support with core university IT systems and tools, as well as many other services and facilities. IT Services also offers a range of IT learning courses for students to support with learning and research, as well as guidance on what technology to bring with you as a new student (https://www.it.ox.ac.uk/what-to-bring) at Oxford.

Academic Resources

The University of Oxford has over 70 academics working in quantum science and technologies and related areas, including in Physics, Engineering Science, Materials, Computer Science, Mathematics, and Chemistry. You will benefit from teaching laboratory facilities during practical training components, and the resources of these research teams (including laboratory and computing facilities), and those of our industrial partners, during the four-month project phase of the course.

Non-Academic Resources

There is a range of welfare and academic support available in the Department of Physics. The Course Director and Graduate Administrator are available to offer support and signpost, and there are several support networks in the department, all of which are available to our graduate students.

Oxford Physics Gender Equity Network (OPGEN), which is run by a committee drawn from across the students, academics and staff in the Department of Physics and organises events and campaigns to promote gender equity in the department.

The Graduate Liaison Committee (GLC). The GLC's purpose is to discuss issues that may concern graduate students in the department such as the quality of graduate courses, availability of skills training, accessibility to library and IT services, and general student welfare.

The Graduate Peer Support Network, which is a subgroup of the informal mentoring network Physics Thrive.

New students will also be welcome in the wider Oxford Physics community, with multiple opportunities of mutual support and social interactions.

Supervision

The allocation of graduate supervision for this course is the responsibility of the Department of Physics 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 is often found outside the Department of Physics.

All projects will be supervised by experts in quantum technologies and underpinning areas across different Mathematical, Physical, Engineering and Life Sciences (MPLS) departments.

You will be matched with a supervisor ahead of your final dissertation project. Some projects may be based with industry partners, in which case a university-side supervisor will also be appointed for the project. Students can typically expect to interact with University supervisors regularly, eg weekly or, in some cases (such as where the project is based in industry), monthly. Most supervisors run an extended research group, including several DPhil students and post-docs, who interact frequently (usually on a daily basis in laboratory or office settings).

Assessment

You will be assessed for all taught modules, research and business case studies, and individual dissertations.

There will be one combined exam for the core modules, which will be held at the beginning of the second term (Hilary term).

Elective modules will be assessed as appropriate to the module, which will be a combination of examinations, mini-projects, reports and/or presentations.

A dissertation of 20,000 words, completed independently under the guidance of an expert supervisor, focusing on the four-month research project and approved by the supervisor and MSc Course Director will be submitted at the end of the course.

Course components

Compulsory study

There are two seminar-based compulsory modules comprising an Industry Seminar and a Graduate Public Engagement element.

Term one (Michaelmas term)

- Quantum Mechanics for Quantum Technologies (optional for students with previous quantum mechanics courses)
- Introduction to Quantum Technologies

Term two (Hilary term)

- Quantum Technologies and their applications
- Hardware for Quantum Technologies

Terms one and two (Michaelmas and Hilary)

- Industrial Seminar
- Quantum Technologies Practical Training

Summer term (Trinity term) and summer vacation

- Quantum Technologies Project, with a dissertation to be submitted on the first Tuesday in September

Research project

You will work on a four-month research project and will be placed either within a University research team, or at an industrial partner organisation.

Options

The options that are offered may vary from year to year as the course develops, and according to the interests of teaching staff. These modules will be available in terms one and two (Michaelmas and Hilary), typical modules will include:

- Quantum Processes and Computation
- Quantum Information
- Materials for Quantum Technologies
- Experimental Techniques Seminar
- Quantum Optics and Atomic Physics
- Additional Quantum Technologies Practical Training
- Many-body Physics.

Changes to this course

The University will seek to deliver this course in accordance with the description set out in this course page. 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. The safety of students, staff and visitors is paramount and major changes to delivery or services may have to be made if a pandemic, epidemic or local health emergency occurs. In addition, in certain circumstances, for example due to visa difficulties or because the health needs of students cannot be met, it may be necessary to make adjustments to course requirements for international study.

Where possible your academic supervisor will not change for the duration of your course. However, it may be necessary to assign a new academic supervisor during the course of study or before registration for reasons which might include illness, sabbatical leave, parental leave or change in employment.

For further information please see our page on changes to courses (//www.ox.ac.uk/admissions/graduate/courses/changes-to-courses) and the provisions of the student contract (//www.ox.ac.uk/admissions/graduate/after-you-apply/your-offer-and-contract) regarding changes to courses.

Costs

Annual course fees

The fees for this course are charged on an annual basis.

Fees for the 2026-27 academic year at the University of Oxford

Fee status	Annual Course fees
Home	£16,220
Overseas	£43,730

Please note the published fee for this course changed on 10 January 2025. It was previously advertised as £14,910 (Home) and £38,410 (Overseas).

What do course fees cover?

Course fees cover your teaching as well as other academic services and facilities provided to support your studies. Unless specified in the additional information section 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 costs information below.

How long do I need to pay 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 fees will usually increase annually, as explained in the University's Terms and Conditions (//www.ox.ac.uk/students/new/contract) .

Our fees and other charges (//www.ox.ac.uk/admissions/graduate/fees-and-funding/fees-and-other-charges) pages provide further information, including details about:

- course fees and fee liability (//www.ox.ac.uk/admissions/graduate/fees-and-funding/fees-and-other-charges/courses-fees-and-liability) ;
- how your fee status is determined (//www.ox.ac.uk/admissions/graduate/fees-and-funding/fees-and-other-charges/fee-status) ; and
- changes to fees and other charges (//www.ox.ac.uk/admissions/graduate/fees-and-funding/fees-and-other-charges/changes-to-fees-and-charges) .

Information about how much fees and other costs will usually increase each academic year is set out in the University's Terms and Conditions (//www.ox.ac.uk/students/new/contract) .

Additional costs

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 choose a project with an industrial partner outside Oxford. Please note that, depending on your choice of project and the location of the industrial partner, you may incur additional expenses, such as travel expenses. Funding contribution for travel will be offered if the project is based outside Oxford, and projects in Oxford will be available for any student who wishes to remain in Oxford.

Living costs

In addition to your course fees and any additional course-specific costs, you will need to ensure that you have adequate funds to support your living costs for the duration of your course.

Living costs for full-time study

For the 2026-27 academic year, the range of likely living costs for a single, full-time student is between £1,405 and £2,105 for each month spent in Oxford. We provide the cost per month so you can multiply up by the number of months you expect to live in Oxford. Depending on your circumstances, you may also need to budget for the costs of a student visa and immigration health surcharge (//www.ox.ac.uk/admissions/graduate/fees-and-funding/living-costs) and/or living costs for family members or other dependants (//www.ox.ac.uk/admissions/graduate/fees-and-funding/living-costs#field_listing_content_content-item--2) that you plan to bring with you to Oxford (if dependant visa eligibility criteria (//www.ox.ac.uk/students/visa/before/family) are met).

Further information about living costs

The current economic climate and periods of high national inflation in recent years make it harder to estimate potential changes to the cost of living over the next few years. For study in Oxford beyond the 2026-27 academic year, it is suggested that you budget for potential increases in living expenses of around 4% each year – although this rate may vary depending on the national economic situation.

A breakdown of likely living costs for one month during the 2026-27 academic year are shown below. These costs are based on a single, full-time graduate student, with no dependants, living in Oxford.

Likely living costs for one month in Oxford during the 2026-27 academic year

	Lower range	Upper range
Food	£315	£545
Accommodation	£825	£990
Personal items	£160	£310
Social activities	£50	£130
Study costs	£35	£90
Other	£20	£40
Total	£1,405	£2,105

For information about how these figures have been calculated as well as tables showing the likely living costs for nine and twelve months, please refer to the living costs (//www.ox.ac.uk/admissions/graduate/fees-and-funding/living-costs) page of our website.

Document accessibility

If you require a more accessible version of this document please contact Graduate Admissions and Recruitment by email (graduate.admissions@admin.ox.ac.uk).