Course Information Sheet for entry in 2025-26: MSc in Mathematics and Foundations of Computer Science

Course facts

Mode of study	Full Time Only
Expected length	12 months

About the course

The MSc in Mathematics and Foundations of Computer Science, run jointly by the Mathematical Institute and the Department of Computer Science is a full-time course which focuses on the interface between pure mathematics and theoretical computer science.

The mathematical side of the course concentrates on areas where computers are used, or which are relevant to computer science, namely algebra, general topology, number theory, combinatorics and logic.

Examples from the computing side include computational complexity, concurrency, computational learning theory, and quantum computing.

You will take a minimum of five optional courses, and write a dissertation. There are no core modules on the course. Apart from the dissertation, around 75% of the course comprises taught content and 25% is self-directed learning.

The course is suitable for those who wish to pursue research in pure mathematics (especially algebra, number theory, combinatorics, general topology and their computational aspects), mathematical logic, or theoretical computer science. It is also suitable for students wishing to enter industry with an understanding of mathematical and logical design and concurrency.

The course runs from the beginning of October through to the end of September, including the dissertation.

Attendance

The course is full-time and requires attendance in Oxford. Full-time students are subject to the University's Residence requirements.

Resources to support your study

As a graduate student, you will have access to the University's wide range of world-class 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.

The Mathematical Institute provides IT support and the department's Whitehead Library, where students will find an extensive range of books and journals. A shared study room with desktop computers is located in the Mathematical Institute for MSc in Mathematics and Foundations of Computer Science students.

Graduate students have access to the department common room, where graduate students regularly gather for coffee and other social occasions and the mezzanine level of the Andrew Wiles Building houses a café and teaching spaces.

The Department of Computer Science Library contains books, monographic series, journals, technical reports and past theses covering the main research interests of the department. It is principally for use by graduate students and staff. The department has kitchens on each floor and a central common room where you can meet informally. There is an active social committee organising events for staff, students and families.

Supervision

The allocation of graduate supervision for this course is the responsibility of the Mathematical Institute and/or the Department of Computer Science 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 outside the Mathematical Institute and/or the Department of Computer Science.

Assessment

The course will consist of examined lecture courses, usually taught as lectures supported by classes in groups of 8-10, and a written dissertation.

The lecture courses will be divided into schedule I (basic) and schedule II (advanced). Students will be required to satisfy the examiners in at least two courses taken from schedule II. The majority of courses should be given in the first two terms.

During Trinity term and over the summer students should complete a dissertation on an agreed topic. The dissertation must bear regard to course material. It is normal to have around eight meetings with your dissertation supervisor, mainly during Trinity term, but possibly continuing into July, but the exact arrangements are made mutually. Between terms there is work on take-home exams (mini projects).

It is intended that a major feature of this course is that candidates should show a broad knowledge and understanding over a wide range of material. Consequently, each lecture course taken will receive an assessment upon its completion by means of a test based on written work. Students will be required to pass five courses that include two courses at the schedule II level and the dissertation. The dissertation is marked by the supervisor and a second marker, and the final mark is based on their reports as well as a short compulsory viva held in September. The dissertation submission date is around the beginning of September and students must submit their dissertation proposals early in Trinity term.

Changes to this course

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 you commence your course. These might include significant changes made necessary by any pandemic, 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 2025-26

Fee status	Annual Course fees
Home	£15,300
Overseas	£41,250

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 specified 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.

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 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.

The likely living costs for the 2025-26 academic year 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	£330	£515
Accommodation	£790	£955
Personal items	£200	£335
Social activities	£45	£100
Study costs	£40	£90
Other	£20	£40
Total	£1,425	£2,035

Likely living costs for nine months

	Lower range	Upper range
Food	£2,970	£4,635
Accommodation	£7,110	£8,595
Personal items	£1,800	£3,015
Social activities	£405	£900
Study costs	£360	£810
Other	£180	£360
Total	£12,825	£18,315

Likely living costs for twelve months

	Lower range	Upper range
Food	£3,960	£6,180
Accommodation	£9,480	£11,460
Personal items	£2,400	£4,020
Social activities	£540	£1,200
Study costs	£480	£1,080
Other	£240	£480
Total	£17,100	£24,420

When planning your finances for any future years of study at Oxford beyond the 2025-26 academic year, it is suggested that you allow for potential increases in living expenses of 4% each year – although this rate may vary depending on the national economic situation.

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

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) or via the online form (http://www.graduate.ox.ac.uk/ask/form).