UNDERGRADUATE ADMISSIONS AND OUTREACH
University Offices, Wellington Square, Oxford OX1 2JD

Mathematics Information Sheet for entry in 2021

Mathematicians have always been fascinated by numbers. One of the most famous problems is Fermat's Last Theorem: if $n \geq 3$, the equation $x^n+y^n=z^n$ has no solutions with x, y, z all nonzero integers. An older problem is to show that one cannot construct a line of length $\sqrt[3]{2}$ with ruler and compass, starting with a unit length.

Often the solution to a problem will require you to think outside its original framing. This is true here, and while you will see the second problem solved in your course, the first is far too deep and was famously solved by Andrew Wiles.

In applied mathematics, we use mathematics to explain phenomena that occur in the real world. You can learn how a leopard gets its spots, explore quantum theory and relativity, or study the mathematics of stock markets.

We will encourage you to ask questions and find solutions for yourself. We will begin by teaching you careful definitions so that you can construct theorems and proofs. Above all, mathematics is a logical subject, and you will need to *think* mathematically, arguing clearly and concisely as you solve problems. For some of you, this way of thinking or solving problems will be your goal. Others will want to see what else can be discovered. Either way, it is a subject to be enjoyed.

There are two Mathematics degrees, the three-year BA and the four-year MMath. Decisions regarding continuation to the fourth year do not have to be made until the third year. The first year consists of core courses in pure and applied mathematics (including statistics). Options start in the second year, with the third and fourth years offering a large variety of courses, including options from outside mathematics.

A typical week

Years 1 and 2

- Around ten lectures and two-three tutorials or classes a week
- Additional practicals in computing (first year) and numerical analysis (if taken)

Years 3 and 4

- Six-ten lectures and two-four classes each week, depending on options taken
- Compulsory dissertation in the fourth year

Tutorials are usually 2-4 students and a tutor. Class sizes may vary depending on the options you choose. There would usually be around 8-12 students though classes for some of the more popular papers may be larger. Most tutorials, classes, and lectures are delivered by staff who are tutors in their subject. Many are world-leading experts with years of experience in teaching and research. Some teaching may also be delivered by postgraduate students who are usually studying at doctorate level.

To find out more about how our teaching year is structured, visit our Academic Year page.

Course structure

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YEAR 1	
COURSES Compulsory Year 1 includes: • Algebra • Analysis • Probability and statistics • Geometry and dynamics • Multivariate calculus and mathematical models	**ASSESSMENT** First University examinations: five compulsory papers; Computational mathematics projects
YEAR 2	

COURSES
• Compulsory core:
  ○ Algebra
  ○ Complex analysis
  ○ Metric spaces
  ○ Differential equations
• Selection from topics including: Algebra; Number theory; Analysis; Applied analysis; Geometry; Topology; Fluid dynamics; Probability; Statistics; Numerical analysis; Graph theory; Special relativity; Quantum theory
	ASSESSMENT
	Final University examinations, Part A: three core papers and six or seven optional papers

YEARS 3 AND 4	
COURSES • Large variety, ranging across: Algebra; Applied and numerical analysis; Algebraic and differential geometry; Algebraic and analytic topology; Logic and set theory; Number theory; Applied probability; Statistics; Theoretical and statistical mechanics; Mathematical physics; Mathematical biology; Mathematical geoscience; Networks; Combinatorics; Information theory; Actuarial mathematics; Undergraduate	**ASSESSMENT** Year 3: Final University examinations, Part B: eight papers or equivalent Year 4: Final University examinations, Part C: eight, nine or ten papers or equivalent, including a dissertation Classification on Parts A and B: currently a 2:1 over Parts A and B, as well as a 2:1 in Part B alone, is required to progress to Part C.

ambassadors scheme; Mathematical philosophy; Computer Science options; History of mathematics • A dissertation in Year 4 is compulsory	

MMathPhys Year 4
The Physics and Mathematics Departments jointly offer an integrated master's level course in Mathematical and Theoretical Physics. Mathematics students are able to apply for transfer to a fourth year studying entirely mathematical and theoretical physics, completing their degree with an MMathPhys. The course offers research-level training in: Particle physics, Condensed matter physics, Astrophysics, Plasma physics and Continuous media.

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.

Teaching delivery
At the time of writing course information sheets for 2021/22 entry, the COVID-19 pandemic was still impacting the University. A range of measures have been put in place to comply with Government legislation and guidance in response to the pandemic, and to help keep students, staff and the wider community safe.

Inevitably, some changes have been necessary to teaching and student services during the pandemic (for example, a greater amount of online teaching and examinations, and restrictions on numbers allowed to access facilities at one time).

Whatever the circumstances in the 2021/22 academic year, the University will deliver core services and learning outcomes for each course, even though the modes of delivery may change.

All course information sheets should be read in that context, and we will keep offer holders and students regularly informed if circumstances change. Further details are available on our website and within the Student Terms and Conditions.

Fees
These annual fees are for full-time students who begin this undergraduate course here in 2021.

Information about how much fees and other costs may increase is set out in the University's Terms and Conditions.

Please note that while the University sets out its annual fees as a single figure, this is a combined figure for both your University and college fees. More information is provided in your Terms and Conditions.

Fee status	Annual Course fees
Home (UK, Republic of Ireland, Channel Islands & Isle of Man)	£9,250
Overseas (including most EU students– see Note below)	£31,230

Note: Following the UK's departure from the EU, most EU students starting a course in 2021/22 will no longer be eligible to pay fees at the 'Home' rate and will instead be charged the higher 'Overseas' rate. This change will not apply to Irish nationals living in the UK or Ireland, who will continue to be charged fees at the 'Home' rate for the duration of their course.

The government has issued guidance stating that EU, other EEA, and Swiss nationals who have been granted settled or pre-settled status in the UK under the EU settlement scheme may be eligible for 'Home fee' status and student loan support, subject to meeting residency requirements. However, until the government formally updates its fee status regulations the University is unable to confirm fee statuses for students who may qualify on this basis. We will contact you directly if we need further information from you to determine your fee status.

Please refer to the Undergraduate fee status and the Oxford and the EU pages for more information.

Living costs
Your living costs will vary significantly dependent on your lifestyle. These are estimated to be between £1,175 and £1,710 per month in 2021-22. Each year of an undergraduate course usually consists of three terms of eight weeks each but you may need to be in Oxford for longer. As a guide, you may wish to budget over a nine-month period to ensure you also have sufficient funds during the holidays to meet essential costs.

Living costs breakdown

	Per month		**Total for 9 months**	
	Lower range	Upper range	Lower range	Upper range
Food	£280	£400	£2,520	£3,600
Accommodation (including utilities)	£655	£790	£5,895	£7,110
Personal items	£130	£250	£1,170	£2,250
Social activities	£45	£115	£405	£1,035

Study costs	£45	£100	£405	£900
Other	£20	£55	£180	£495
Total	**£1,175**	**£1,710**	**£10,575**	**£15,390**

In order to provide these likely living costs, the University and the Oxford University Students' Union conducted a living costs survey to complement existing student expenditure data from a variety of sources including the UK government's Student Income and Expenditure Survey and the National Union of Students (NUS). The likely lower and upper ranges above are based on a single student with no dependants living in college accommodation (including utility bills) and are provided for information only.

When planning your finances for future years of study at Oxford beyond 2021-22, you should allow for an estimated increase in living expenses of 3% each year.

Document accessibility
If you require an accessible version of the document, please contact Undergraduate Admissions by email (uao.comms@admin.ox.ac.uk) or via the online form (http://www.ox.ac.uk/ask).

Please note, at the time of publishing the CIS, further details regarding the availability and eligibility of financial support for some EU students with settled or pre-settled status remained outstanding. Confirmation about funding arrangements for the year abroad were also outstanding. Any updates impacting students will be published on the Oxford and the EU webpage.