Physics Information Sheet for entry in 2019

Physics is concerned with the study of the universe from the smallest to the largest scale: why it is the way it is and how it works. Such knowledge is basic to scientific progress. The language of physics is mathematics: formulating physical theories sometimes requires new mathematical structures. Physics is a fundamental science and a practical subject. Many techniques used in medical imaging, nanotechnology and quantum computing are derived from physics instrumentation. Even the World Wide Web was a spin-off from the information processing and communications requirements of high-energy particle physics.

Oxford has one of the largest university physics departments in the UK, with an outstanding and very diverse research programme in six sub-departments:

- Astrophysics
- Atmospheric, Oceanic and Planetary Physics
- Atomic and Laser Physics
- Condensed Matter Physics (including Biophysics)
- Particle Physics
- Theoretical Physics.

Physics at Oxford is challenging and mathematical with a strong emphasis on fundamental concepts such as optics and relativity. The fourth-year MPhys option courses bring you to the threshold of current research, and can lead to subject specialism. An accepted student can also complete in three years with a BA. The department is equipped with state-of-the-art lecture facilities and teaching laboratories. Tutorials give students direct and regular access to physicists actively involved in research and provide an opportunity to explore scientific ideas with experts in the field.

Project work/international opportunities
A wide choice of fourth-year MPhys projects is available across all six physics sub-departments. Third-year MPhys students carry out a short project in the teaching laboratories. Those taking the three-year BA course do a group project investigating a real industrial physics problem.

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

A typical week
In the first year, time is equally divided between mathematics and physics, with about ten lectures and two tutorials plus one day in the practical laboratories a week. In the second and third years the core and mainstream physics topics are covered in tutorials and small group classes. Practical work is also done during the year. In the fourth year you take two major options and the MPhys project. Tutorials are usually 2-4 students and a tutor. Class sizes may vary depending on the options you choose. There would usually be no more than around 20 students though classes for some of the more popular papers may be up to 40 students.

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

<table>
<tr><td colspan="2">1st year</td></tr>
<tr><td>Current courses
Classical mechanics and special relativity
Electromagnetism, circuit theory and optics
Mathematical methods I
Differential equations and waves
Short options, eg:
Astronomy
Complex analysis
Quantum ideas</td><td>Assessment
First University examinations: Four written papers; short option paper; satisfactory laboratory work</td></tr>
<tr><td colspan="2">2nd year</td></tr>
<tr><td>Current courses
Thermal physics
Electromagnetism and optics
Quantum physics
Mathematical methods II
Short options, eg:
Classical mechanics
Climate physics
Introduction to biological physics</td><td>Assessment
Final University examinations, Part A (BA and MPhys): Three written papers; short option paper; laboratory work; individual presentation</td></tr>
<tr><td colspan="2">3rd year</td></tr>
<tr><td>Current courses
Flows, fluctuations and complexity
Symmetry and relativity
Quantum, atomic and molecular physics
Sub-atomic physics
General relativity and cosmology
Condensed-matter physics
Short options, eg:
Advanced quantum mechanics
Classical mechanics
Plasma physics</td><td>Assessment
Final University examinations, Part B (MPhys): Six written papers; short option paper; mini project; laboratory work
Final University examinations, Part B (BA): Four written papers; short option paper; mini project; group presentation; laboratory work; project report</td></tr>
<tr><td colspan="2">4th year</td></tr>
<tr><td>Research
Project and two option courses:
MPhys project
Current major options
Astrophysics
Laser science and quantum information processing
Condensed matter</td><td>Assessment
Final University examinations, Part C (MPhys): Project report; two major option papers</td></tr>
</table>

• Particle physics • Atmospheres and oceans • Theoretical physics • Biological physics *The options listed above are illustrative and may change. More information about current options is available on the Physics website.*	

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.

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Fees
These annual fees are for full-time students who begin this undergraduate course here in 2019.

Fee status	Annual Course fees
Home/EU	£9,250
Islands (Channel Islands & Isle of Man)	£9,250
Overseas	£34,678

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

Additional Fees and Charges Information for Physics
There are no compulsory costs for this course beyond the fees shown above and your living costs.

Living costs

Your living costs will vary significantly dependent on your lifestyle. These are estimated to be between £1,058 and £1,643 per month in 2019-20. 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.

	Per month		**Total for 9 months**	
	Lower range	Upper range	Lower range	Upper range
Food	£265	£371	£2,387	£3,342
Accommodation (including utilities)	£566	£739	£5,093	£6,655
Personal items	£122	£271	£1,098	£2,435
Social activities	£42	£126	£380	£1,138
Study costs	£40	£88	£359	£788
Other	£23	£48	£208	£432
Total	**£1,058**	**£1,643**	**£9,525**	**£14,790**

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 2019-20, you should allow for an estimated increase in living expenses of 3% each year.