Biochemistry (Molecular and Cellular) Information Sheet for entry in 2019

The study of living things at the molecular level has undergone tremendous expansion in recent years, leading to ever-increasing insights into topics as various as the origin of life, the nature of disease and the development of individual organisms. Powerful new techniques, such as those of molecular genetics and NMR spectroscopy, enable us to analyse biological phenomena in more and more precise molecular terms. These studies have led to commercially valuable developments in drug design and synthesis, forensic science, environmental sensing and a whole range of other areas. Furthermore, advances in biochemistry are largely responsible for the breakdown of traditional boundaries between cell biology, medicine, physics and chemistry as their applications become increasingly wide reaching.

The Biochemistry Department in Oxford is one of the largest in Europe, and is subdivided into research areas: Cell Biology, Development and Genetics; Chromosomal and RNA Biology; Infection and Disease Processes; Microbiology and Systems Biology; and Structural Biology and Molecular Biophysics. The department is extremely active in research, with about 300 postgraduate students and research staff. The breadth and excellence of these activities are reflected in the scope of the undergraduate course and underpin the teaching.

The department has superb research and teaching facilities and excellent IT resources together with access to a wide range of online and hard-copy journals.

An important aspect of the Oxford Biochemistry course is its fourth-year project, lasting 18 full-time weeks, which allows you to explore in detail both laboratory-based research and specific recent advances in biochemistry. You choose the project yourself. Under the supervision of a group leader, you will design your own experiments and will learn to plan research programmes and present your results and ideas – orally and in written form – to other workers in the field. The experience gained is much valued by employers. The project also gives you the opportunity to reflect on your aptitude and enthusiasm for a research career.

Research placements/international opportunities
A wide choice of fourth-year research projects is available both within the Biochemistry Department and in related departments, such as Molecular Medicine, Clinical Biochemistry, Pathology and Pharmacology. It is also possible to carry out your project outside the University or indeed the UK.

A typical week
Years 1-3: There are three terms in the Oxford academic year, each eight weeks long. Students usually arrive a week early in the first term of their first year for welcome and induction activities.

During years 1–3, your work is divided between lectures (about ten a week), tutorials (one or three a week) and practicals (averaging one full day a week). The remaining time is spent on private study (set reading, or problem-solving exercises). Tutorials are usually 2-4 students and a tutor. Class sizes may very depending on the topic but are usually no more than 10-12 students. The ratio of demonstrators to students during practical sessions is usually about 1:12.

Most tutorials and lectures are delivered by staff who are tutors in their subjects, many of whom are world-leading experts with years of experience in teaching and research. Some tutorials and lectures may be delivered by postdoctoral researchers, while tutorials are occasionally delivered by postgraduate students. Departmental classes and practicals are supervised by a senior member of

staff and largely delivered by postdoctoral researchers or postgraduate students who are studying at doctoral level.

Year 4 extended terms: In the final year of the Biochemistry course, students also work an extended first term to begin their research project. You will need to be in Oxford for 12 weeks in the first term, followed by a two-week break over Christmas. You will then complete your project in the first six weeks of the second term, and then submit your project dissertation and deliver an oral presentation at the beginning of the final term.

In the remaining two weeks of the second term, and throughout the eight weeks of your final term, you will study two further courses that you choose from a list of options (see table below). These are assessed at the end of the final term.

This additional work in your final year means that you will graduate with an MBiochem - a master's degree - as well as invaluable research experience that will be excellent preparation for further study or a range of careers.

Your final degree class is derived from a combination of marks from second, third and fourth-year courses.

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

1st year	
Courses Five courses are taken: • Molecular cell biology • Biological chemistry • Biophysical chemistry • Organic chemistry • Mathematics and statistics	**Assessment** First University examinations: Five written papers; satisfactory practical record
2nd and 3rd years	
Courses Five courses are taken: • Structure and function of macromolecules • Energetics and metabolic processes • Molecular biology and genetics • Cell biology and integration of function • Data analysis and interpretation	**Assessment** Final University examinations, Part 1: Six written papers; satisfactory practical record
4th year (extended first term)	
Courses A research project (full time, 18 weeks) plus two courses taken from a list of six options. The list typically includes subjects such as:	**Assessment** Final University examinations, Part II:

• Bionanotechnology • Cancer biology • Clinical and applied immunology • Membrane transport • Neuropharmacology • Signalling and coordination in plants • Structural proteomics • Virology	Project dissertation and oral presentation; options written papers and/or submitted coursework

The course structure is currently under review, the results of which are likely to affect students starting from October 2020. Details will be on the Biochemistry website as soon as these become available.

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.

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	£32,715

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 Biochemistry (Molecular and Cellular)

All students are required to wear laboratory coats and safety glasses during practicals. These can be purchased from the department at a subsidised cost of £10.

In the final year of the Biochemistry course, students work an extended first term to begin their research project. You will need to be in Oxford for 12 weeks in the first term, followed by a two-week break over Christmas. You will then complete your project in the first six weeks of the second term, and then submit your project dissertation and deliver an oral presentation at the beginning of the final term. In the remaining two weeks of the second term, and throughout the eight weeks of your final term, you will study two further courses that you choose from a list of options. These are assessed at the end of the final term.

The extended terms mean that you will need to budget for higher living costs in the final year, as you will be required to be in Oxford for longer than the standard terms. The additional work in this final year means that you will graduate with an MBiochem - a master's degree - as well as invaluable research experience that will be excellent preparation for further study or a range of careers.

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.