Materials Science Information Sheet for entry in 2019

Materials Science is an interdisciplinary subject, spanning the physics and chemistry of matter, engineering applications and industrial manufacturing processes.

Modern society is heavily dependent on advanced materials: lightweight composites for faster vehicles, optical fibres for telecommunications and silicon microchips for the information revolution. Materials scientists study the relationships between the structure and properties of a material and how it is made. They also develop new materials and devise processes for manufacturing them. Materials Science is vital for developments in nanotechnology, quantum computing and nuclear fusion, as well as medical technologies such as bone replacement materials.

This diverse programme spans the subject from its foundations in physics and chemistry to the mechanical, electrical, magnetic and optical properties of materials, and the design, manufacture and applications of metals, alloys, ceramics, polymers, composites and biomaterials. This work is supported by excellent laboratory and teaching facilities.

In a course taught partly by the Saïd Business School, the programme also offers an opportunity to develop an introductory understanding of entrepreneurship (learning how to write a business plan, raise capital and start a company). There are also voluntary options to learn a language through Oxford's Language Centre.

The Oxford Materials degree includes in its fourth year the special feature of an eight-month full-time research project, when you join a research team here at Oxford in one of the strongest Departments of Materials in the UK or, occasionally, at an overseas university or in an industrial laboratory (additional costs may be associated with a project outside Oxford). You will learn how to break down a complex problem, design an experiment or model, manage a project and communicate your results. These research skills are transferable to many career paths and are valued highly by employers.

The current MEng degree is accredited by the Institute of Materials, Minerals and Mining (IOM3) on behalf of the UK Engineering Council, towards the achievement of Chartered Engineer status.

Work placements/international opportunities
Students are encouraged to undertake a voluntary summer project in industry or a research laboratory. Recent locations for overseas summer projects have included Beijing, Zhejiang, Tokyo, Bochum, Krakow, Santa Barbara and Boston.

A voluntary industrial tour to an overseas destination is organised in most Easter holidays. Recent destinations include China, Sweden, Italy, Poland and Ontario.

A typical week

During years 1 and 2, the work is divided between lectures (about ten a week), tutorials/classes (about two a week) and practicals (two or three afternoons a week). Typically the work in preparation for each tutorial or class is expected to take six to eight hours. Year 3 starts with a two-week team design project, and about eight lectures and two classes/tutorials a week for the first two terms. Most of term 3 is set aside for revision. Year 4 consists of a supervised research project spanning three extended terms.

Lectures throughout years 1-2 may be attended by the full year groups of around 40 undergraduate students; normally Materials Year 3 Options Courses lectures will be attended by a smaller number of undergraduates plus a small number of research students. Some Year 1 classes, which support the lectures, are attended by the full year group of around 40. Tutorials supporting the Year 1 and Year 2 Materials lecture courses are usually 2 to 4 students with a tutor. The Year 1 and 2 Mathematics lectures are supported by small group tutorial classes, typically up to 6 students per group. The Year 3 Options lectures are supported by small group tutorial classes, typically 8-12 students per group.

The majority of tutorials and lectures are delivered by staff who are Professors or Associate Professors. Many are world-leading experts with years of experience in teaching and research. Some teaching may also be delivered by post-doctoral researchers or postgraduate research students. To find out more about how our teaching year is structured, visit our Academic Year page.

Course structure

1st year	
Courses • Structure of materials • Properties of materials • Transforming materials • Mathematics for materials science • Crystallography • Practical work • Foreign language (optional)	**Assessment** First University examinations: Four written papers; continual assessment components equivalent to a fifth paper
2nd year	
Courses • Structure and transformation of materials • Electronic properties of materials • Mechanical properties • Engineering applications of materials • Foreign language (optional) • Supplementary subject (optional) • Mathematics • Practical work • Industrial visits • Entrepreneurship module • Industrial talks • Communication skills	

3rd year	
Courses • Materials options courses 1 • Materials options courses 2 • Team design project • Characterisation of materials or Materials modelling module Examples of current options courses are available on the *Materials Science website*. (At the start of Year 3 it is possible to transfer to a 3-year BA degree in Materials Science, graduating at the end of Year 3. See essential further information about this on the course website. The BA is not accredited.)	**Assessment** Final University examinations, Part I: Six written papers; continual assessment components equivalent to a further two papers
4th year	
Research Research project (full-time) (Students are required to achieve 50% minimum in the Part I assessment in order to progress to Part II.) Additional elements include Project management, Presentation skills and an optional foreign language course *Examples of project titles are available on the Materials Science website*.	**Assessment** Final University examinations, Part II (equivalent to 4 papers): Project dissertation submitted and assessed; oral examination of project dissertation
For important additional detail on course content, progression and assessment, please visit the Materials Science website. *This programme outline is for illustrative purposes and details may change from time to time.The 1st year course is currently under review - see the Materials Science website for the latest information.*	

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	£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 Materials Science
The fourth year is entirely devoted to research - a special feature of the Oxford MEng in Materials Science programme - consisting of a full-time individual research project under the supervision of a member staff. This final year has three extended terms of 12 to 13 weeks and is 37 weeks in total so 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. (See the likely range of living costs for an additional month in Oxford.) During the project you will learn how to break down a complex problem, design an experiment or model, manage your time and project, maintain systematic records, present your work orally and write a substantial report. These research skills are transferable to other career paths and are valued highly by employers. On occasion significant scientific publications result from these projects.

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.