

MEng in Engineering Science 2020

Engineering Science **combines creativity, technical training, team working and academic rigour** to equip you with the necessary skills for a career in an exciting, innovative and ever-changing industry.

www.eng.ox.ac.uk



Why Engineering?

Engineering applies science and maths to solve problems and, in so doing, helps people. Engineers find solutions that benefit society and improve quality of life. If you are creative, enjoy working in a team, want to solve problems and build a better future then engineering is for you.

Why Study Engineering Science at Oxford?



The Department of Engineering Science at Oxford is a unified department, covering all major engineering disciplines. It has a top-level rating for teaching and an international reputation for research. In keeping with other top-ranking engineering departments, we aim to provide professional training with a sound theoretical foundation.

We admit approximately 180 undergraduates per year onto the four-year programme in Engineering Science, leading to the degree of Master of Engineering. All our undergraduates are members of an Oxford college, as well as the wider University.

Accreditation

To ensure a consistently high standard of teaching, our course undergoes a strict quality review every four years. Our course has been accredited by:

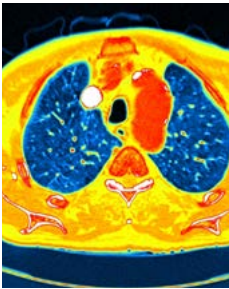
- Institution of Civil Engineers (www.ice.org.uk)
- Institution of Structural Engineers (www.istructe.org.uk)
- Institution of Engineering & Technology (www.theiet.org)
- Institution of Mechanical Engineers (www.imeche.org)
- Institute of Measurement & Control (www.instmc.org.uk)
- Institution of Chemical Engineers (www.icheme.org)





'My DPhil research topic focuses on solid mechanics and microscopy, a unique field spanning materials science and engineering that enables me to work with a specialist company, Deben, on developing new technologies and testing materials. The breadth and depth of the general engineering degree course at Oxford meant I was able to become involved in this research by undertaking an interdisciplinary project involving microscopy, materials science, pharmaceuticals and mechanical engineering in my fourth year. As well as teaching me with the core knowledge, my time at Oxford also equipped me with the skills and understanding to build on this knowledge allowing me to explore engineering further through research.'

Rhiannon Heard, MEng Engineering Science
(Trinity College, Oxford 2017)



How is the Course Structured?

All Engineering students study core topics in the first two years which are relevant to all major engineering specialisms.

In the third and fourth years you are able to specialise in one of six areas of engineering: Biomedical, Chemical, Civil, Electrical, Information and Mechanical. An exclusive pathway in Entrepreneurship and Innovation is also available for engineers who have entrepreneurial ambition.



FIRST YEAR	<ul style="list-style-type: none"> • P1 Mathematics • P2 Electronic and Information Engineering • P3 Structures and Mechanics • P4 Energy • P5 Engineering Coursework
SECOND YEAR	<ul style="list-style-type: none"> • A1 Mathematics • A2 Electronic and Information Engineering • A3 Structures, Materials and Dynamics • A4 Energy Systems • A5 Engineering Practical Work
THIRD YEAR	<ul style="list-style-type: none"> • B Papers (choose 5 options) • B1 Engineering Computation • B2 Engineering in Society • B3 Group Design Project (3rd Year Project) • B4 Engineering Practical Work
FOURTH YEAR	<ul style="list-style-type: none"> • C Papers (choose 6 options) • 4th Year Project

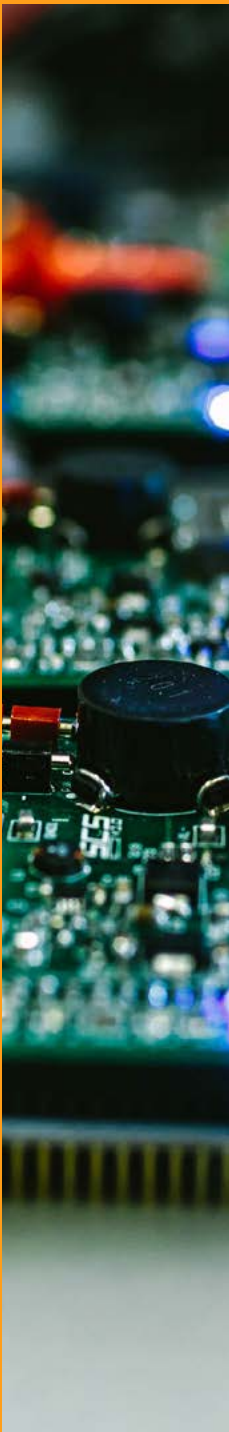
Study Abroad

You may have the opportunity to study overseas in your final year as a part of an exchange. Exchange agreements are currently in place with Princeton University, USA and the National University of Singapore (NUS). For current information about our exchanges, go to www.eng.ox.ac.uk/study/undergraduate/study-abroad

How will you be taught?

Here at Oxford we believe in providing high quality teaching, and we encourage you to improve your learning by studying hard in your own time in order to get the most out of the course. The course is delivered in the following ways:

- **University lectures** introduce you to a topic. Lecturers will provide an overview of the course syllabus and demonstrate how you can best understand the material.
- **College tutorials** are organised to complement lectures. Undergraduates, normally in pairs, usually have two one-hour sessions with one of their college tutors per week. In the fourth year, tutorials are replaced by classes, which take place in the department, rather than in college. The tutorial system means that you are likely to receive much more personal tuition and greater pastoral support than other universities are able to offer.
- **Practicals** are an essential part of your training, and provides you with the opportunity to apply your learning from lectures and tutorials. They cover a wide range of areas, and they can range from programming to building a bridge to designing an electric radio.
- **Coursework modules** combine practical work and theory. These are taken at the end of your second year. Modules are offered in a variety of engineering specialisms and are an enjoyable way to try out different kinds of engineering - this may help you choose your third year options and your potential career.
- **Projects** provide an opportunity for you to apply your skills and learning in creative ways. It will give you experience in the process of design from conception to evaluation. Projects can be undertaken individually and as part of a team.
- **Third Year** - You will work in a small design team to produce a detailed design proposal which can be used either by a manufacturer (as the basis for a marketable product), or as a design for an engineering project. Your team will be supported by a team of dedicated academics and Visiting Professors, who are on hand to provide guidance from their industrial experience.
- **Fourth Year** - You will work on a major research and design project chosen from a huge variety of topics under the supervision of an academic within the department. You are also able to suggest your own idea for a project, provided that an academic is able to supervise it.
- The **Radcliffe Science Library** will offer you support in finding information for your third and fourth year projects. Our Engineering Subject Librarian produces an online library guide especially to help you with your projects, and also provides advice by email or in person should you need it.

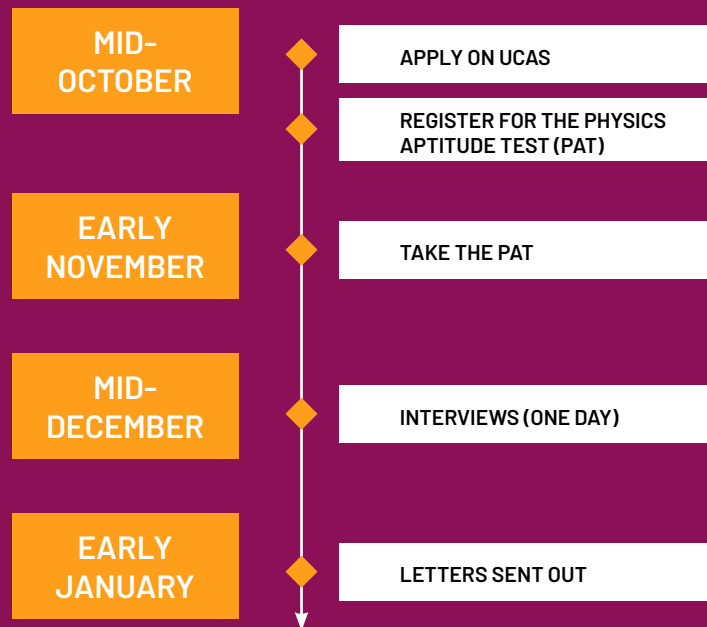




How do I apply for Engineering Science at Oxford?

The application process for a place on course begins nearly a year earlier than your intended year of entry. To be considered, you must apply via UCAS, and register and take the Physics Aptitude Test (PAT). If your application is successful, you will be offered an interview and will find out if you have been offered a place in early January the following year.

The timeline for applications looks like this:



Entry Requirements: A*A*A to include Mathematics and Physics. The A*s must be in Mathematics, Physics or Further Mathematics if taken.

For additional details on applying, applying with alternative qualifications, and information on extenuating circumstances, visit: www.ox.ac.uk/admissions/undergraduate/courses-listing/engineering-science.

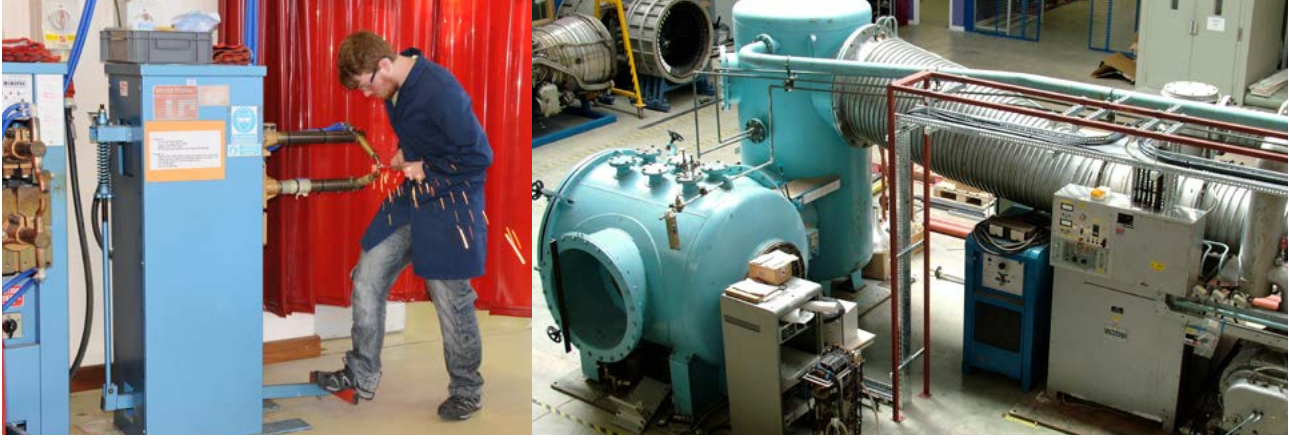
Open Days

There's no better way to find out what Oxford is really like than to visit us. Many colleges and departments welcome arranged visits throughout the year but our University open days remain the most popular time to visit. Explore colleges and departments and to talk directly to tutors and students to help you make your decisions. For details, please see: www.admissions.ox.ac.uk/opendays



'My current research project is looking at developing high speed temperature and flow measurements for fuel injectors. The project involves both mechanical and signal processing aspects. The engineering science course at Oxford has given both a chance to explore multiple fields of engineering and learn how to handle difficult and unfamiliar problems. This has allowed me to be able to acquire and process new information when I need it for my research.'

Maruthi Malladi, MEng Engineering Science (University College, Oxford 2017)



What can I do after I finish my degree?

The wide ranging careers available to Oxford engineers cannot be understated. Many of our Oxford Engineering Science alumni go on to work in the engineering and manufacturing sector. Alumni also work in various areas such as banking & investment, consultancy, accountancy, IT & computing, and energy & the environment. Some of our alumni complete postgraduate study, either at Oxford or elsewhere.

For more information on applying to Oxford, please visit www.admissions.ox.ac.uk. The University's Admissions Office can help answer questions about applying to undergraduate or graduate degrees offered by Oxford.

Please contact: **+44 (0) 1865 288000** or study@ox.ac.uk.

'Understanding how things works is at the very heart of what I do. My work involves talking to inventors about their products, drafting patent applications, and analysing other patents to identify similarities and differences between inventions. I also have the opportunity to be involved in the business side, advising clients on their IP portfolios and budgeting. I have been privileged to work with a range of clients, including both small tech start-ups and multinational corporations, on a diverse array of products, ranging from gaming apps to oil and gas recovery techniques. The breadth and depth of the general engineering degree at Oxford has given me an excellent foundation, and the confidence, to be able to work well in this fast-paced and varied profession, in which I am continuously learning about a huge variety of technologies.'



Catriona Collerton (Christ Church, Oxford 2016)
Trainee Patent Attorney, Page White & Farrer

Get in touch...

The department's website provides more information on the course and advice on applying. If you have any questions about the course please do get in touch.

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