COURSE HANDBOOK

2024/2025

Engineering Science

Prelims

Contents

FOREWORD

Statement of Coverage

This handbook applies to students starting the MEng in Engineering Science in Michaelmas Term 2024. The information in this handbook may be different for students starting in other years.

Version 1.0 September 2024

DISCLAIMER

The Examination Regulations relating to the MEng course in Engineering Science are available at https://examregs.admin.ox.ac.uk/ If there is a conflict between information in this handbook and the Examination Regulations, then you should follow the Examination Regulations. If you have any concerns, please contact the Student Administration Office at exams@eng.ox.ac.uk.

The information in this handbook is accurate as of August 2024; however, it may be necessary for changes to be made in certain circumstances, as explained at www.ox.ac.uk/coursechanges. If such changes are made the department will publish a new version of this handbook together with a list of the changes and students will be informed. The up-to-date version can be found on Canvas.

Please note that the opening information and availability listed in this handbook assume normal operating circumstances. Please check opening times before you make plans to visit the department.

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WELCOME

Head of Department's Welcome

I am delighted to welcome you to the Department of Engineering Science at the University of Oxford. From our foundation in 1908, we have grown to be one of the world's leading engineering departments, housing cutting-edge research and teaching across most branches of engineering. Oxford is an incredible place to study. Through the college system, you have the opportunity to interact with other exceptional students across subjects. As a Global university, we have students and staff from around the world, all contributing to a broad intellectual and cultural experience. I encourage you to take advantage of all that Oxford has to offer.

Of course, you are primarily here because of your interest in engineering. Your education at Oxford will allow you to develop both the breadth and depth of your engineering knowledge, skills and understanding; when you graduate you will be uniquely placed to address future challenges that require integration of solutions from the full range of the engineering discipline. From the solid foundation of the first and second year, our third and fourth year course allows you to explore in more depth our current understanding of topics of interest to you, whilst, through a portfolio of practical and project work, you will gain the experience required to become an innovative generator of future knowledge and applications. When you graduate, you will be ready to address challenging and important problems. Research in our department impacts government policy, industry, communications, transport and security, and addresses some of the key global challenges in energy, resource use and healthcare, as well as opportunities arising from, for example, advances in AI, robotics, materials, and synthetic biology. All of these are reflected in our current undergraduate course.

Since arriving in Oxford 18 years ago, I have continually felt fortunate to work with students who, above all, are enthusiastic to learn more about the subject. The university has a unique and special history and structure, but what makes it really enjoyable and productive is the people, including you. We are all pleased to welcome you and look forward to guiding and supporting you during your studies.

Prof. Clive Siviour, Head of Department

Associate Head of Department's (Teaching) Welcome

A warm welcome to the Department of Engineering Study at the University of Oxford. We very much hope that you will enjoy the engineering programme on offer and that you thrive academically on our course. The engineering programme at Oxford is an intensive but highly rewarding course that we hope you will find both stimulating and challenging. We hope that you will have a fantastic time whilst studying at Oxford and that you are able to take advantage of the many opportunities that are on offer through the department, colleges, and university.

For the first two years of the course, you will cover fundamental material across most of the engineering disciplines. We refer to this as the core papers and in the first two years all students take the same papers. However, at the end of the second year, you will then start to choose which areas of engineering you want to concentrate on. While there are also core courses in the third year, you will also have the opportunity to select topics from a broad selection of papers, specialising in the areas of engineering that interest you. Even greater freedom and choice is provided in Year 4 of our engineering programme. Furthermore, as you progress through the course the amount of project work increases, culminating in a research project in your final year that runs throughout Michaelmas and Hilary terms. In Years 1 and 2, tutorials are arranged by your college tutors; however, for Years 3 and 4 the department is largely responsible for the organisation of your tutorials and classes.

During your degree there will be times when you need to know details of the course syllabus, the processes involved for submitting project work, and other administrative details. The relevant information should be in this handbook and complementary material can be found on Canvas (the online repository of course material). You are strongly advised to read through the handbook before you embark on your course and that you keep it to hand as you may need to refer to it from time to time. The Student Administration Office carry out much of the day-to-day running of our course and so you will receive regular information from them about course related matters. They should be your first point of contact for all departmental (as opposed to college) matters.

Lastly, I wish you a very happy four years studying in Oxford and look forward to meeting you over this time.

Prof. Stephen Morris, Associate Head (Teaching)

1. HOW TO USE THIS HANDBOOK

This handbook is a guide for you throughout your first (preliminary) year on the Engineering Science course at Oxford. It is designed to provide you with information regarding departmental processes and procedures as well as the staff and facilities available to you. In addition, it will give you details about how you will be assessed, the course structure, and what to expect during your first year. It is your responsibility to read through the handbook and familiarise yourself with the course requirements and procedures. A new handbook will be issued to you for the final three years of your course – known as the Final Honours School.

This course handbook should be your first port of call for any queries concerning the course. For other issues or questions please contact the Student Administration Office (student.administration@eng.ox.ac.uk). Course handbooks are published on Canvas.

2. IMPORTANT SOURCES OF INFORMATION

Important Documents

Engineering Science Canvas site

The most comprehensive source of information for your studies is the Engineering Science Canvas site at www.canvas.ox.ac.uk. On this site you can find details of the syllabus, lecture notes, example sheets, solutions, lecture recordings, and many other useful pieces of information.

Examination Regulations

The Examination Regulations are the authoritative document on University examinations. They are available online at https://examregs.admin.ox.ac.uk/. This website can be searched to find regulations for the Preliminary and Final Honour School examinations for the MEng degree in Engineering Science. These regulations define the format of each component of the examination process, including conditions for on-course progression and deadlines for submitting coursework. The Examination Regulations are complemented and expanded by the Examination Conventions. This document provides further information on all matters relating to your formal examinations. It is normally published on Canvas to students prior to the start of Hilary Term.

The University Student Handbook

A reference document entitled The University Student Handbook is produced by the Proctors and Assessor and is available online for new students at the start of Michaelmas Term. The document explains the role of the Proctors and Assessor, and provides useful information about welfare, support, recreation, examinations and University regulations. It is available to download at https://www.ox.ac.uk/students/academic/student-handbook.

Other important sources of information

The student portal at www.ox.ac.uk/students provides a single point of access to information, services and resources for students.

Please ensure that you are familiar with the following University policies and guidance:

- Disability
- Harassment

- Safety for Students
- Computer Usage Rules and Etiquette

During the course of your studies, you might also need to consult other policy documents such as those on:

- Intellectual Property Rights which are set out in the University Statues and Regulations at https://www.ox.ac.uk/students/academic/guidance/intellectual-property
- Data Protection at https://www.ox.ac.uk/about/organisation/governance/dataprivacy
- Paid work at www.ox.ac.uk/students/life/experience

You will also find the Syllabus for each individual paper and lab a useful source of information on the content and expected learning outcomes of your course. This document is available on Canvas.

Along with this handbook, please also familiarise yourself with your college handbook.

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3. KEY CONTACTS IN THE DEPARTMENT

The Student Administration Office

The Student Administration Office on the 8th Floor of the Thom Building is the main location to go to if you have any general queries regarding teaching.

student.administration@eng.ox.ac.uk

01865 283253

Opening hours: Monday – Friday 9:00 am – 4.30 pm.

Student Administration staff will also be available remotely by email Monday to Friday 8:30 am – 4.30 pm.

If your query is about exams, you should email exams@eng.ox.ac.uk.

Planning a visit?

Please email or telephone in advance if you're planning to make a trip to the Department to see a specific person.

Who's who?

The Student Administration Office team is managed by the Head of Student Administration and headed up by a lead academic – the Associate Head of Department (Teaching). Details of the current Student Administration Office team and associated staff supporting teaching are listed below:

Associate Head of Department (Teaching) Prof Stephen Morris stephen.morris@eng.ox.ac.uk	Head of Student Administration/Disability Contact Christine Mitchell christine.mitchell@eng.ox.ac.uk
Undergraduate Studies Administrator	Undergraduate Studies Officer

Bridie Thompson
student.administration@eng.ox.ac.uk

Undergraduate Studies Officer
Jane Fallaize
student.administration@eng.ox.ac.uk

Undergraduate Data Officer
Purvi Patel
student.administration@eng.ox.ac.uk

Simon Mager-Coath
student.administration@eng.ox.ac.uk

Details for all Academic Staff are available here: https://eng.ox.ac.uk/people/?c=ac

Useful email addresses

Engineering Science Reception - for general queries to the Department
reception@eng.ox.ac.uk

Engineering Science IT Helpdesk – for help with IT
thehub@eng.ox.ac.uk

Departmental Safety Officer
Peter Garland
safety@eng.ox.ac.uk

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4. DATES TO NOTE

Dates of Term 2024-25

The Oxford term runs from Week 1 to Week 8. Please note that each begins on the Sunday. Your college may require you to be in attendance from 0th Week. Full details can be found here: https://www.ox.ac.uk/about/facts-and-figures/dates-of-term

Michaelmas Term	Sunday 13th October to Saturday 7th December
Hilary Term	Sunday 19th January to Saturday 15th March
Trinity Term	Sunday 27th April to Saturday 21st June

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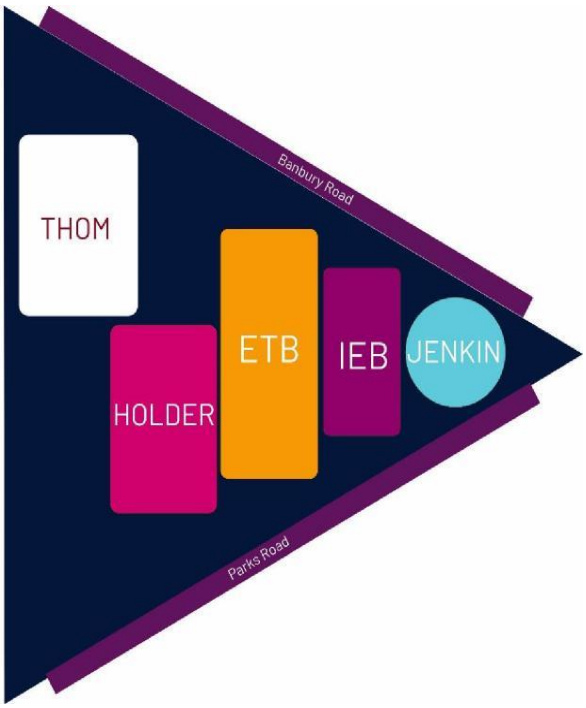
5. FINDING YOUR WAY AROUND

5.1 Location of the Department of Engineering Science

The Department of Engineering Science is located mainly over four sites across Oxford. Maps of Oxford showing the location of these sites can be found at https://eng.ox.ac.uk/contact-us/ , or you can view the interactive map at https://www.ox.ac.uk/visitors/map.

Main site – central Oxford (Keble Road Triangle)

Most of the Department's buildings are on the 'Keble Road Triangle' between Banbury Road, Parks Road and Keble Road.



What happens where?

Most of your teaching, including lectures, classes, and labs, will take place in the Thom Building. The Thom Building also has a Student Study Space on the 8th floor.

If you need to access the Thom building for whatever reason, the main entrance is at ground level on the Banbury Road (up the steps or via the wheelchair accessible ramp).

Just to the north of the Thom Building is the Holder Building. Beyond that, you will find the Engineering and Technology Building (ETB) in which the Design Office is located. Both the Holder Building and the ETB are shared with the Department of Materials.

The Information Engineering Building (IEB) is located on the Banbury Road alongside these buildings and includes Lecture Rooms 7 and 8 (known as LR7 and LR8) on the ground floor. At the northern tip of the Triangle is the Jenkin Building which housed the whole of the Engineering Science department from 1914 until 1963, and now contains staff offices and several research laboratories.

Parking

Unfortunately, there are no car parking facilities for students on the Keble Road Triangle. There are, however, some pay and display spaces on Keble Road, but parking time is limited.

Other Engineering Science locations

Southwell Laboratory

The Thermofluids Research Laboratory in the Southwell Building is situated at Osney Mead not far from the Railway Station. The laboratory was opened by the Vice Chancellor in 2010 as part of the University's strategic investment in the UK's science base. The laboratory houses some of the most sophisticated turbine and high-speed flow facilities in the world, and the research group includes internationally recognised experts in computational fluid dynamics (CFD), flow and heat transfer experiments. The laboratory is home to the Rolls-Royce University Technology Centre in Heat Transfer and Aerodynamics and is where we work with colleagues in industry to develop more fuel-efficient jet engines.

Institute of Biomedical Engineering

The Department's Institute of Biomedical Engineering (www.ibme.ox.ac.uk) is located on the Churchill Hospital campus next to Oxford's major clinical teaching hospitals. It offers a centralised venue for engineers and clinicians to work together to coordinate expertise, discoveries, and best practice to enhance the diagnosis and treatment of a range of conditions. The Institute provides purpose-built research laboratories, shared common support facilities, a core of securely funded staff, the latest equipment for research and development and the right setting to promote collaboration among medical, biological, and physical scientists and engineers.

Begbroke Science Park

The Begbroke Science Park is a fully integrated research and development facility, located north of the city. It hosts research groups from a range of departments in the Mathematics, Physical and Life Sciences Division of Oxford University—including Engineering Science.

5.2 The Thom Building

Floor plan

A list of what is located on which floor in the Thom Building is on the left. You'll also find a similar list by the lifts on each floor in the Thom Building, and another copy inside each lift.

Opening hours

The main door to the Thom Building and the Thom Building reception desk is open on weekdays between 7:30 am and 6 pm all year around.

Holder Building

The Holder Building is only accessible with card access.

8th Floor Study Area

There is an open study area for all students on the 8th floor of the Thom Building. It has individual study desks in addition to group study areas.

The Oxford Wireless LAN (OWL) is available on the 8th floor. Laptops require the Cisco VPN client software to connect to it - information about VPNs (virtual private networks) can be found at https://help.it.ox.ac.uk/vpn. Students are welcome to use their laptops in the open study area but are asked to sit close to a plug socket if their laptop needs to be connected to a power source.

Trailing electrical leads may cause a trip hazard in open study areas. Alternatively, students may use the individual study desks as all have a power socket.

Students are asked to vacate the 8th floor study area promptly at 7 pm. Please note that you will not be able to gain access to the Thom Building after 6 pm. If you leave the building after 6 pm, you will not be able to gain access again. Please keep your personal belongings with you at all times.

5.3 Radcliffe Science Library

The Radcliffe Science Library (RSL) http://www.bodleian.ox.ac.uk/science is the main science research library at the University. The library holds copies of all your reading list items, and most of your engineering library research will be done using RSL resources. The RSL can be found on the corner of Parks Road and South Parks Road, which is a short walk away from the Engineering Science department. Books are available for loan from the RSL and may also be available from college libraries.

Questions

The subject librarian responsible for Engineering Science is Alessandra Vetrugno and she is based at the RSL. If you have any questions, please contact alessandra.vetrugno@bodleian.ox.ac.uk for assistance.

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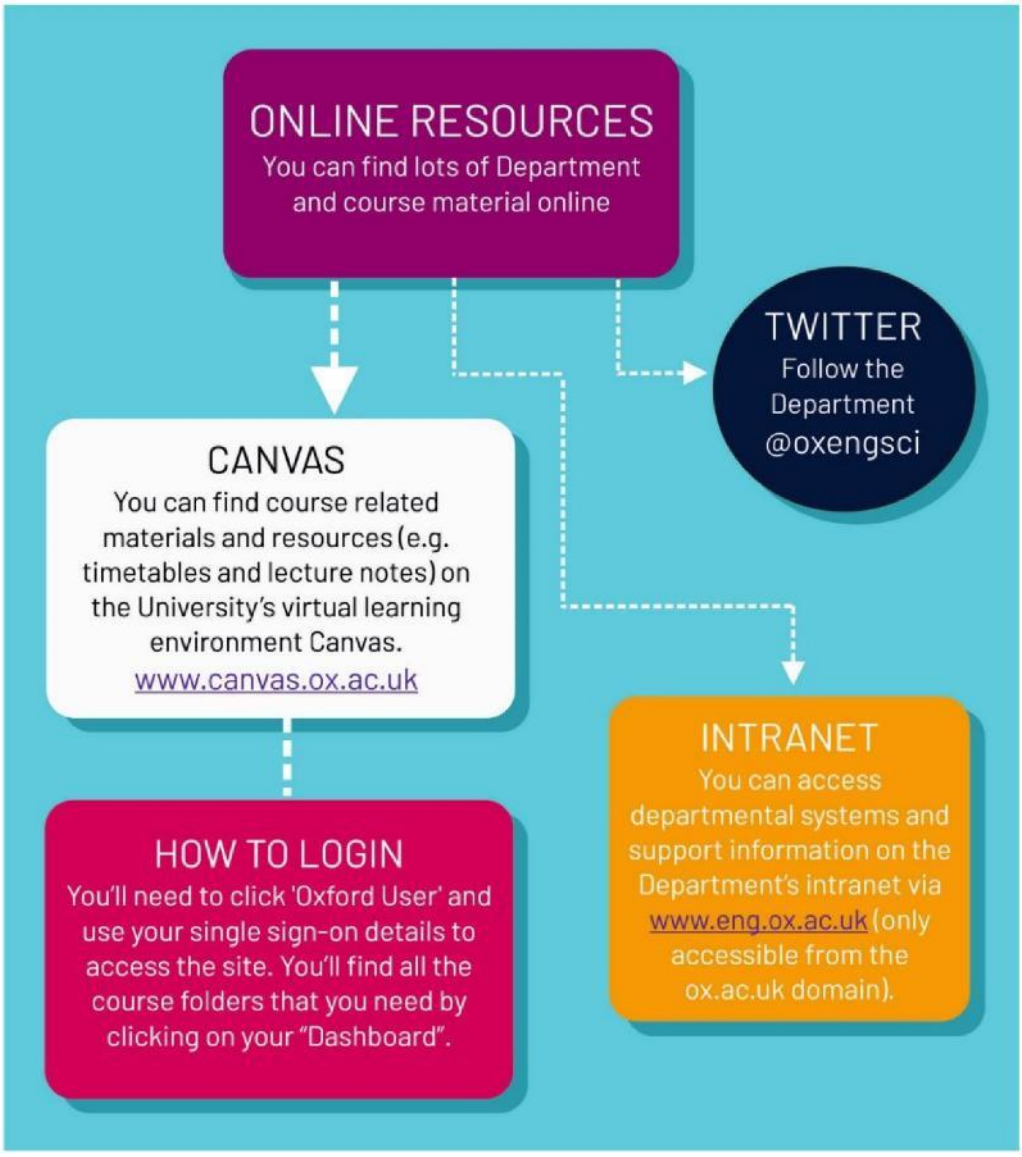
6. GENERAL INFORMATION

6.1 Communications

The Student Administration Office uses email as the main means of communication with you. It is expected that you will check your college email account on a daily basis, at the very least. While last minute timetable changes are not frequent, please get into the habit of checking your email before you set off for the Department…you could save yourself a wasted journey.



On the ground floor and 1st floor of the Thom Building you will see display screens along with noticeboards. These carry timetable information and other important announcements, and so it is useful to check them regularly.

Contacting staff

You can contact members of staff via email – details are available at https://eng.ox.ac.uk/people/?c=ac.

6.2 Student opportunities

Details of visits from companies to the Department, opportunities for further study, and announcements from engineering related student societies, are posted on the Student Bulletin for students to view (http://studentinfo.eng.ox.ac.uk).

If you represent a society or organization that you feel would be of interest or benefit to engineering students, then get in touch. Simply email the text you would like to be circulated to student.administration@eng.ox.ac.uk and we may publish it accordingly. We reserve the right to refuse to include material if it is deemed inappropriate for the audience.

The Careers Service is also an invaluable resource. Visit www.careers.ox.ac.uk to find out more about how the Careers Service can assist you in improving your employability skills. The Careers Service also have a job search database called CareerConnect for internships, placements, and graduate opportunities.

6.2.2 Paid work

Term-time employment is permitted only under exceptional circumstances and always with the explicit agreement of your tutor and Senior Tutor/ Academic Director. During vacations you will have academic work, and this should take priority among your other commitments. If you are studying at Oxford under the terms of a visa, refer to visa and immigration for information regarding working in the UK.

6.3 Room bookings

Rooms for group study are available for booking through reception on the ground floor of the Thom Building.

reception@eng.ox.ac.uk

01865 273000

While we will make every effort not to change your booking, we ask that you remain cooperative if a more urgent need for the room you have booked arises.

6.4 Computing facilities in the Department

The Software Laboratory on the 6th floor of the Thom Building houses workstations running Linux and MS Windows operating systems. These provide a wide variety of software and Computer Aided Engineering packages.

Each undergraduate is given an "Engineering Domain Account" which is used for the first-year Computing Laboratory, various Coursework Modules, and projects. Undergraduates can also use these computers to access e-mail and the internet which they may use, outside timetabled laboratory hours, for academic purposes.

The Design Office is located on the ground floor of the Engineering and Technology Building. Most of the PCs are used for timetabled laboratories, but four are made available for project work.

All these computing facilities are supported by the Engineering IT Services section https://intranet.eng.ox.ac.uk/it/. Notes are issued to all new users, who will also be asked to sign an undertaking to abide by the University Rules for the use of computers.

6.5 We want your feedback!

Your opinion counts… we want to hear your feedback on lectures, examples sheets, and laboratory experiments, as well as the general quality of life in the Department. REMEMBER the sooner you pass your comments to us, the more likely we will be able to act on them. The teaching feedback survey is open all year round, but we will send out termly reminders to you.

Direct feedback to lecturers/tutors	You can contact academic staff directly - constructive criticism will always be welcome, and you can contact the Associate Head (Teaching) at any time.
Joint Consultative Committee (JCC)	The JCC meets once a term and provides discussion between students and staff on administrative and academic topics. Calls for JCC membership typically go out at the beginning of Michaelmas Term. This body has an important function in collecting and communicating opinion in an organised way. JCC representatives also serve on relevant Department and University committees.
Divisional Board	Student representatives sitting on the Divisional Board are selected through a process organised by the Oxford University Student Union (OUSU). Details can be found on the OUSU website along with information about student representation at the University level.

Engineering Science Confidential Reporting System (CRS)	Health and safety first! You can report practices or incidents which you think are potentially dangerous to yourself or your peers. This system helps to highlight hazardous and dangerous situations and understand what causes them. Further information is available online.
Teaching Feedback	You can give your feedback at any time during the course. We are currently in the process of changing how this is collected and you will be updated by email.
University Feedback	Students on full-time and part-time matriculated courses are surveyed once per year on all aspects of their course (learning, living, pastoral support, college) through the Student Barometer. Previous results can be viewed by students, staff and the general public at: www.ox.ac.uk/students/life/student-surveys. Final year undergraduate students are surveyed through the National Student Survey (NSS). Results from previous NSS surveys may be found at https://discoveruni.gov.uk/.

6.6 Student societies

The Oxford University Engineering Society

The Oxford University Engineering Society (https://www.facebook.com/OUEngSoc) exists to promote a wider interest in Engineering than is possible through the academic courses. A regular programme of meetings and visits is run by an undergraduate committee with the support of a senior member from the staff of the department. You are warmly invited to participate.

Women in Engineering

A women's networking group has been established in the department with the intention of organizing talks, social events, and other networking activities (for all members of the department). Membership of this organizing group consists of postdoctoral research assistants, postgraduate students, undergraduate students, and an academic member of staff.

If you are interested in joining the networking group, further information can be found here: https://eng.ox.ac.uk/women-in-engineering/.

Oxford Engineering Alumni (OEA)

As a current student you automatically become an associate member of this society, and you will become a full member when you graduate. OEA is a society for former students who have graduated from the department, and for present and former members of the teaching and research staff. Its purpose is to help former Oxford Engineering students and staff keep in touch with each other and with the department, for their mutual benefit, when they move on to other things after leaving the university. More information is given on the alumni page of the Department's website at https://eng.ox.ac.uk/alumni/.

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7. THE COURSE

7.1 Overview

All engineering teaching is based on a general course in Engineering Science. We offer this unified course because we believe that future engineering innovation will benefit from broad foundations as well as specialized knowledge. Links between topics in apparently diverse fields of engineering provide well-structured fundamental understanding and can be exploited to give efficient teaching.

The Engineering Science course is planned by the Faculty of Engineering Science, which consists mainly of the Department's academic staff.

The information in this handbook covers the first year of the four-year undergraduate MEng in Engineering Science. The entire MEng course is taught to Level 7 of the Frameworks for Higher Education Qualifications (FHEQ) guidelines. The course is taught and developed within the subject benchmark statement guidelines issued by the Quality Assurance Agency (QAA), the independent governing body for monitoring and advising on standards and quality in UK higher education.[1]

7.2 Accreditation by the Engineering Institutions

Many Oxford engineering graduates will want to become corporate members of a Professional Engineering Institution and seek Chartered Engineer status. Satisfactory completion of an accredited university course is the first step towards full membership of one of the main Engineering Institutions. Each Institution offers free membership for students, and it is recommended that you join institutions in your engineering areas of interest.

University courses are considered for accreditation by each major institution separately, and this approval is reviewed regularly. Following the department's most recent review in 2023, the Institutions accrediting the MEng course were as follows:

Civil, Structural, and Transport	Joint Board of Moderators: • Institution of Civil Engineers (ICE) • Institution of Structural Engineers (IStructE)	Yes

[1] Subject Benchmark Statement – Engineering, February, QAA, February 2015, https://www.qaa.ac.uk/the-quality-code/subject-benchmark-statements/subject-benchmark-statement-engineering

	• Chartered Institution of Highways and Transportation (CIHT) • Institute of Highway Engineers (IHE) • The Permanent Way Institution (PWI)	
Electrical	Institution of Engineering and Technology (IET)	Yes
Mechanical	Institution of Mechanical Engineers (IMechE)	Yes
Measurement and Control	Institute of Measurement and Control (InstMC)	Yes
Chemical	Institution of Chemical Engineers (IChemE)	Pending

In some cases, appropriate options are required for accreditation; details are available on Canvas.

For further information, you should ask the institution concerned, the Student Administration Office or one of the Department's liaison officers as follows:

Any Accreditation Query	Dr B. Richards
Institution of Civil Engineers	Prof M. Chatzis
Institution of Engineering and Technology (IET)	Mr J. Memon
Institution of Mechanical Engineers	Prof D.R.H. Gillespie
Institution of Chemical Engineers	Prof N.P. Hankins
Institution of Measurement and Control (InstMC)	Prof. M. Cannon

7.3 Course aims

- To provide students with: a systematic understanding of the knowledge base of Engineering Science; the ability to analyse complex issues both systematically and creatively, make sound judgements in the absence of complete data and communicate their conclusions clearly; the ability to be self-directed and innovative in tackling and solving problems; the independent learning ability required for continuing professional development.
- To provide a broad curriculum which provides state-of-the-art knowledge and practical skills in Engineering.
- To provide a learning environment that enables students of high innate ability to reach their full potential, personally and academically, so that on graduation they are free to choose from many different careers, and have the understanding, knowledge, and

personal maturity to make a rapid contribution to their chosen employment or research area.

- To provide a course which meets the educational requirements of all the appropriate Professional Engineering Institutions for Chartered Engineer status.

7.4 Learning outcomes

To meet the conditions of accreditation by the Professional Engineering Institutions a degree course must have learning outcomes that satisfy established criteria across six key areas of learning. The following section is a statement on how the Engineering Science programme delivers these outcomes at the integrated Masters (MEng) level.

Science, Mathematics and Engineering principles

The application of advanced mathematical methods to a comprehensive range of tutorial problems, underpinning the engineering principles and tools required in their solution. The scientific practice and application of mathematics in a substantial group project (3YP) and higher-level individual project (4YP).

Engineering analysis

The application of engineering concepts to solve set problems in tutorial work. The collection, analysis, and application of data through laboratory-based coursework (practical), group project (3YP) and an individual research project (4YP).

Design and Innovation

Lecture courses that cover the general principles of design, product development, materials, and processing. The 3YP is a substantial group design project centred on a viable product, planning the design process, evaluating the business and wider engineering context. The individual research project requires the student to engage in a series of creative design processes, build and evaluations.

The Engineer and Society

A lecture course on 'Engineering in Society' and associated coursework and examination; includes professional and ethical responsibilities, environment, safety, management, and business practices.

Engineering practice

Laboratory work in general and particular engineering disciplines, covering a range of techniques and practice. A lecture course in the first year on Engineering in Practice provides insight into the challenges faced by professional engineers. The 3YP group design project requires understanding of the different roles in the engineering team. The individual project is a substantial research project, assessed by both report and interview.

Additional general skills

Creativity and innovation are developed through tutorial work and coursework modules. The group project is the setting for developing teamwork, communication and presentational skills. Foundations for lifelong learning are given through opportunities such as societies, seminars and broader engagement.

These are covered by the following methods:

	Lectures	Tutorials/ Classes	Practicals
Science, Mathematics and Engineering principles	✓	✓	✓
Engineering analysis	✓	✓	✓
Design and innovation	✓	✓	✓
The Engineer and Society	✓	✓	
Engineering practice	✓		✓
General Skills	To be developed in FHS		

7.5 Course structure

The MEng in Engineering Science is a 4-year course. The first year is known as the Preliminary Year (or 'Prelims'), at the end of which you will sit your First University examinations. You will then move on to Final Honours School ('FHS'), which is made up of Year 2 (Part A), Year 3 (Part B), and Year 4 (Part C). Further details on these later years can be found in the corresponding Handbook.

The table below gives the title of the compulsory components of the Preliminary Year of the MEng Engineering Science course:

YEAR	PART	ELEMENT	WRITTEN EXAMINATION PAPER (WP) OR COURSEWORK (C)
1	PRELIMS	P1 Mathematics	WP
		P2 Electronic and Information Engineering	WP
		P3 Structures and Mechanics	WP
		P4 Energy	WP
		P5 Engineering Coursework	C

Details of how this course is assessed in the 1st (Preliminary) year is outlined later in this handbook.

7.6 Course syllabus

In P1 Mathematics, you will study Calculus, Linear and Complex Algebra, and Ordinary Differential Equations.

In P2 Electronic and Information Engineering, topics include Components and Circuits, Digital Electronics, and Active Circuits and Devices.

In P3 Structures and Mechanics, you will learn about Statics, Dynamics, Bending and Torsion, and Materials and Solid Mechanics.

In P4 Energy, modules include Heat and Mass Transfer, Fluid Mechanics, Thermodynamics and Dimensional Analysis.

For P5 Engineering Coursework, there are three "Design, Build and Test" laboratories in Computing, Electrical and Mechanical Engineering, along with Drawing and Design classes, Workshop Practice and a Thermodynamics laboratory.

More detailed information on the syllabus is available on Canvas.

Syllabi may be revised annually on approval by the Engineering Faculty, and where appropriate, after scrutiny by the University. If you have any problems accessing the material that you need on Canvas, please email student.administration@eng.ox.ac.uk.

Lecture handouts

Lecture notes will be uploaded by the lecturer to the relevant Canvas page prior to the lecture going live.

7.7 Looking ahead to the second year

The course structure of the second year of the MEng Engineering Science does not hugely differ from the preliminary year – there is a lab-based assessment and four examination papers. However, it is crucial that you remain on top of your workload during the second year – this is the first set of assessments that count towards your final degree, so do not lose focus after your Prelims. If you find that you are struggling, do not hesitate to speak to your college tutor and the department, or one of the student welfare services available to you.

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8.TEACHING AND LEARNING

8.1 Overview

Engineering Science at Oxford is taught in various ways, through lectures, tutorials, classes, laboratory coursework and projects. The course is planned so that these mechanisms support each other; none are optional.

Lectures, tutorials, and laboratories are subject to differing sets of timetabling constraints. Tutors will often schedule tutorial work after all four lectures corresponding to the tutorial problems have been given.

In the case of labs, due to a limit on the number of students able to attend each session, lab sessions will very often be scheduled before the corresponding lectures and tutorials have taken place. Consequently, laboratory instructions will include extra information and preparatory work to be completed and understood before you attend the session. Failure to do this will almost certainly end up with you taking longer to complete the planned exercises and might result in a poor assessment grade.

When you choose your specialist options in third and fourth year, some tutorials will be run in the department rather than your college, and some may be replaced by larger group classes which are also run in the department. The pattern remains as one example sheet for every four lectures, but the material will be taught by specialists in the field.

When planning your study in relation to the lecture courses and examples sheets, remember that they are the lecturer's personal, and inevitably abbreviated exposition of a subject, and cannot be expected to tell you everything about it. Attending lectures and working through tutorial problems provides a base from which your own understanding can be developed; they are the beginning of your study, not the end.

Many lecturers will upload lecture notes and reading lists to Canvas in order to accompany their lectures. These are no substitute for your own notes, written as you yourself master the material. This mastery requires more time: you will need to study from textbooks as well as the lecture notes.

If you have any issues with teaching or laboratory supervision, please raise these as soon as possible so that they can be addressed promptly. Details of who to contact are provided in section 12.2 Complaints and Appeals.

Students who have declared a disability are encouraged to discuss their specific needs with the Department Disability Contact (Christine Mitchell, Head of Student Administration).

8.2 Timetable

The timetable for each term is released in 0th week on Canvas under 'Timetables' on the MEng Engineering Science page. The timetable is also shown on the display screens on the ground floor reception area, the 1st floor, and the 8th floor of the Thom Building.

The table below indicates how many hours are required for each assessment unit from P1 to P5.

Paper	Term	Faculty Teaching	College Teaching	Comments
		Lectures	*Tutorials*	
P1 Mathematics	MT	32	8	There are 36 lectures for each paper, supported by one example sheet of tutorial problems for every four (or thereabouts) lectures.
	HT	0	0	
	TT	4	1	
P2 Electronic and Information Engineering	MT	8	2	
	HT	20	5	
	TT	8	2	
P3 Structures and Mechanics	MT	16	4	
	HT	20	5	
	TT	0	0	
P4 Energy	MT	8	2	
	HT	22	6	
	TT	6	1	
Laboratories				
P5 Practical Work	Drawing and Design	10 hours across the year		
	Workshop Practice	2 hours across the year		
	Computing Laboratory	25 hours across the year		
	Mechanical Laboratory	26.5 hours across the year		
	Electrical Laboratory	25 hours across the year		
	Thermodynamics Laboratory	5 hours across the year		

8.3 Access to worked solutions

All of the tutorial problem sheets are uploaded to Canvas at the start of each term, on the individual course sites (P1 Mathematics, P2 Electronic and Information Engineering etc.). The corresponding tutorials will then take place throughout the term. The corresponding solutions are released on Canvas by the end of week two in the following term. You can also find solutions for the Preliminary examination past papers on the MEng Engineering Science Canvas page.

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9. ASSESSMENT

9.1 Overview

To successfully continue on the MEng in Engineering Science you will need to pass the Preliminary Examinations (Prelims) at the end of your first year. These are public examinations and differ from the collections you may sit periodically in college to help you and your tutors to assess your progress.

For the Preliminary Examinations, the possible outcomes are Pass, Pass with Distinction, Partial Pass (awarded if students do not pass one to two papers), or Fail (if you fail three or more papers). Those who fail P1 to P4 may, if their college permits, retake them in September; but you must pass all the papers you are retaking in order to progress on the course. The coursework paper P5 may not be retaken, so failure in it will normally constitute failure of the examination and you will not be able to progress on the course.

The following table summarizes the examinable elements of the first-year course:

YEAR	PART	Item	Written Exam Duration	Examination Units (EU)
1	PRELIMS	P1 Mathematics P2 Electronic & Information Engineering P3 Structures, Materials & Dynamics P4 Energy Systems P5 Engineering Practical Work	3 hours 3 hours 3 hours 3 hours N/A	1 1 1 1 0.5
Total Number of Examination Units – PRELIMS				4.5

Examiners are appointed from among the teaching staff but are considered formally independent; they set examination papers that reflect the content of the lecture courses and their accompanying tutorial example sheets. Past examination papers and examiner reports are available on Canvas.

Information about examination conventions for engineering papers is given below in section 9.5.

9.2 Preparing for exams

After you have enrolled with the University, and prior to sitting your examinations, your college will formally enter you for them.

Exam timetable

Your personal examination timetable will be sent to you at least two weeks before your first examination. Further information is available here:

https://www.ox.ac.uk/students/academic/exams/timetables

What to wear for in-person exams

All members of the University are required to wear academic dress with *subfusc* when attending any university examination. There is a useful guide about examinations here (both specifically in relation to entering and more generally): www.ox.ac.uk/students/academic/exams.

9.3 Examination Regulations

The Examination Regulations are published online at https://examregs.admin.ox.ac.uk/.

9.4 Sitting your Examination

Information on (a) the standards of conduct expected in examinations and (b) what to do if you would like examiners to be aware of any factors that may have affected your performance before or during an examination (such as illness, accident or bereavement) are available on the Oxford Students website: https://www.ox.ac.uk/students/academic/exams/guidance.

9.5 Examination Conventions

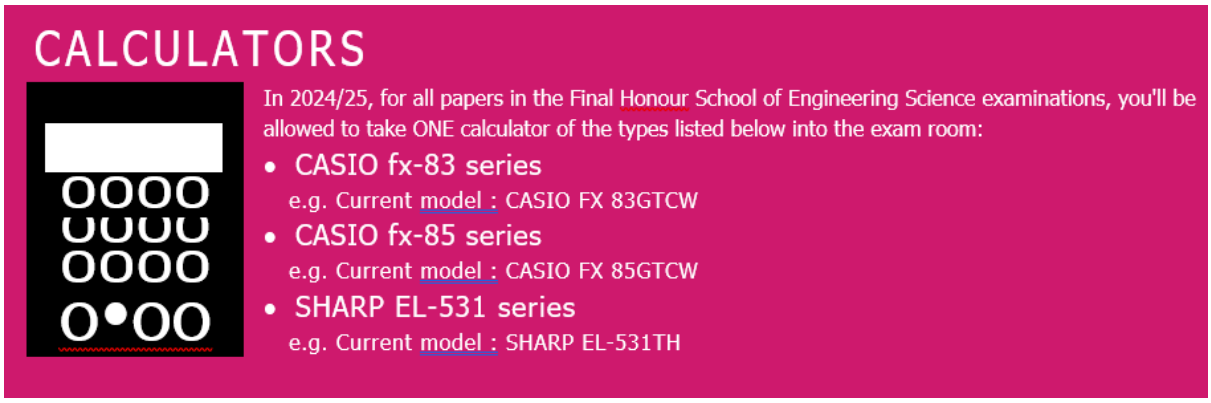
Examination conventions are the formal record of the specific assessment standards for the course or courses to which they apply. They set out how your examined work will be marked and how the resulting marks will be used to arrive at a final result and classification of your award. They include information on: marking scales, marking and classification criteria, scaling of marks, progression, resits, use of viva voce examinations, penalties for late submission, and penalties for over-length work.

The examination conventions for Engineering Science are approved on an annual basis and the examination conventions for 2024/25 will be made available to candidates on Canvas as soon as they have been approved. This is normally no later than one whole term prior to the examination.

It must be stressed that to preserve the independence of the Exam Board, candidates are not allowed to make contact directly with any Examiner regarding matters relating to the content or marking of papers.

Any communication must be via the Senior Tutor of your college, who will, if he or she deems the matter of importance, contact the Proctors. The Proctors in turn will communicate with the Chair of Exams.

9.6 Calculators in Engineering Examinations



Please note:

- The restriction on the use of calculators applies to examinations only. For all laboratory, project and tutorial work, you are free to use any calculator.
- You are encouraged to buy one of the permitted calculators early.
- The permitted list will be updated annually as new models are introduced or old models are discontinued. It is hoped that models can be retained on the list long enough that you need only buy one such calculator during the course.

9.7 Plagiarism

If you find yourself under pressure as the deadline approaches for submission of coursework (laboratory write-ups, engineering and society assignments, project reports), you might be tempted to cheat by copying from a book, a published article, or even the work of one of your friends. This is not clever, nor is it harmless. It is a serious offence called plagiarism.

The University definition of plagiarism is as follows:

"Presenting work or ideas from another source as your own, with or without consent of the original author, by incorporating it into your work without full acknowledgement. All published and unpublished material, whether in manuscript, printed or electronic form, is covered under this definition, as is the use of material generated wholly or in part through use of artificial intelligence (save when use of AI for assessment has received prior authorisation e.g. as a reasonable adjustment for a student's disability). Plagiarism can also include re-using your own work without

citation. Under the regulations for examinations, intentional or reckless plagiarism is a disciplinary offence."

Further information can be found here. Here you will find a link to the University's online course about understanding what plagiarism is, and how to avoid it. You are strongly advised to complete the online course.

In The University Student Handbook, there are clear guidelines issued regarding the issue of plagiarism under Section 7.7. It states that:

"You must read the Proctors' Disciplinary Regulations for University Examinations, which make clear that

- you must indicate to the examiners when you have drawn on the work of others, using quotation marks and references in accordance with the conventions of your subject area
- you must not present as your own work material generated by AI
- other people's original ideas and methods should be clearly distinguished from your own
- the use of other people's words, illustrations, diagrams etc. should be clearly indicated regardless of whether they are copied exactly, paraphrased or adapted material you have previously submitted for examination, at this University or elsewhere, or published, cannot be re-used – including by drawing on it without referencing it, which constitutes 'autoplagiarism' – unless specifically permitted in the special Subject Regulations.

Failure to acknowledge your sources by clear citation and referencing constitutes plagiarism. '

In recent years, the examiners have uncovered several instances of plagiarism in relation to engineering coursework. All cases were referred to the Proctors who imposed heavy penalties on the offenders.

Additional information

For information about good academic practice please refer to the University's websites:

https://www.ox.ac.uk/students/academic/academicpractice

www.ox.ac.uk/students/academic/guidance/skills

9.8 Referencing Guide

In order to avoid plagiarism, it is critical that you reference all citations and opinions of others. The Department of Engineering Science recommends that all referencing for assignments is done

using the Scientific Style and Format system; but as long as you are using a recognised referencing and citation system, and it is used consistently, you will not be penalized.

A quick guide to the Scientific Style and Format system is available here at http://www.scientificstyleandformat.org/Tools/SSF-Citation-Quick-Guide.html. If you're still unsure, then please speak to staff in the Radcliffe Science Library for a consultation or formal referencing guide, or to your tutor for advice.

9.9 Examiners' reports

You can access examiners' reports for previous Preliminary exams on Canvas. Examiners' reports are normally published early in the Hilary Term following the exam sitting.

9.10 Prizes

Each year, the department awards prizes to students for excellent performance in examinations or assessments. Many of these prizes are sponsored by external donors or by engineering institutions.

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10. LABORATORIES

10.1 Introduction

Laboratories, or simply "labs", are an essential element in the education of every professional engineer. As well as illustrating ideas and topics from lectures and tutorials, they help you to develop your practical and professional skills. A basic function of practical work is to gain experience and understanding of using a piece of equipment to perform a task or make a measurement. You will see that theoretical principles are not merely intellectual ideas but are there for practical use.

Another function, realized in recording and presenting the results of experiments, is training in the skill of technical communication; this skill is essential in the real world of engineering where people from different backgrounds and experience levels work together on large enterprises. As engineers we need to understand how to communicate our knowledge and ideas appropriately and effectively.

Project and design work have a special purpose in training engineers to not merely be concerned with obtaining correct answers to calculations but with taking creative and responsible decisions based upon all available knowledge.

In your first year, you will have two different types of laboratories. To begin, labs are experiment-based, and focused on putting into practice the knowledge you have gained from lectures and tutorials. Once you have built up your practical experience, you will complete three "Design, Build and Test" (DBT) projects. These DBT labs focus on an objective, which you will work towards and achieve over the course of multiple lab classes. Overall, this consists of 18 5-hour lab sessions, a 2-hour Workshop Practice session, a 1.5-hour introduction to 3D Printing, and two 1.5-hour workshops on Professional Engineering Skills. In later years of the course, your experiment-based lab classes continue, and will support the lecture and tutorial-based learning.

In your second year, you will take week-long coursework modules, where you focus on a particular engineering challenge like in your DBT labs or undertake multiple experiments over the course of a week to explore an engineering discipline in more depth.

In your third year, you will undertake a major group design project where you work with other engineers, likely specialising in different disciplines to complete a complex and open-ended design challenge. You will also complete a series of mini projects based around engineering computation.

In your fourth year, your lab work depends on the choice of your final year research project – you will find yourself spending a lot of time in practical labs, and/or working on complex computational simulations at the cutting edge of engineering knowledge, so it is important to practice and hone your skills throughout the course.

10.2 1st Year Labs

In your 1st year, you will have a 5-hour lab class almost every week, usually on a Monday or Tuesday. Occasionally, you will have shorter labs on other days of the week. It is important that you check the lab timetable on Canvas and make sure you know when your labs are happening. If you miss a lab, it can be very difficult to catch up.

You should expect to have preparatory work for each of your labs. At a minimum, this will include reading through the lab notes and may include calculations and coding to be prepared. If you do not complete the prep work, you may lose marks, and will likely find it hard to complete the lab within the allocated time.

The labs you will complete in your 1st year are as follows:

Computing Laboratory	5 x 5-hour sessions Includes Rocket Lander DBT
Electrical Laboratory	5 x 5-hour sessions Includes Music Box DBT
Mechanical Laboratory	5 x 5-hour sessions Includes Bridge DBT
Drawing and Design Laboratory	2 x 5-hour sessions
Thermodynamics Laboratory	1 x 5-hour session
Workshop Practice	1 x 1.5-hour session
3D Printing Laboratory	1 x 1.5-hour session
Engineering Professional Skills Workshops	2 x 2-hour sessions

Design Build and Test Projects

The Computing, Electrical and Mechanical laboratories each include a Design Build and Test (DBT) Project. These run over multiple lab classes. You will use the skills you have developed to produce an artefact – a Rocket Lander Simulation, a Music Box, or a Model Bridge.

In each DBT lab, you will have a specification to meet. You will be guided in how to meet that specification and will need to make design choices to achieve it. These may be based on facts and calculations, but you will have to use your own engineering judgement – there may not be a single correct approach.

10.3 Safety

There are always risks associated with the operation of equipment. Undergraduates are not permitted to work in laboratories or workshops unsupervised.

A risk assessment is completed by the lab organiser for each laboratory experiment and will be included with the lab notes – it will also be displayed in the laboratory in which the experiment is being undertaken. You must read the risk assessment before the laboratory and identify the hazards before starting an experiment. If you come late to a laboratory and miss an essential safety briefing, or if you disobey safety rules, you may be refused access to equipment.

The guidance notes for undergraduates on health and safety are contained in Appendix A.

10.4 Timetabling

Detailed lab timetables are published on Canvas, typically on the "MEng Engineering Science" site. A specific day and time will be allocated for each lab. You are responsible for finding out in advance the times of your labs and for attending at those times, even if it happens to be on the first Monday of term. If you are late for your labs, you risk losing marks. Apparatus is usually fully utilised, and it may be impossible to reschedule a lab that has been missed.

10.5 Lab Notes and Preparation

Each lab will have a set of notes that explains what you will do in the lab. These will be uploaded to Canvas in advance of your lab. You must check these notes before your lab to confirm what preparatory, or "prep", work needs to be completed for the lab. Make sure you give yourself enough time to complete this work (the night before the lab is not sufficient!). If you don't complete it, you will significantly delay your progress in the lab, and this may cost you marks. Some of the prep work will be completed and submitted on Canvas. It is your responsibility to check the deadlines for your prep work – it may be days before the start of the lab.

10.6 Lab sign-off and records

In each lab, you will be given a record of the lab's completion. This may be a sheet you and the demonstrator complete when the lab is marked at the end of the session, or it may be a pro-forma sheet that you complete over the course of the lab. These may be on paper or digital, depending

on what is appropriate for each lab. Often you will need to upload work to Canvas. For labs that take place over multiple sessions, and especially DBT labs, you should bring your work from each prior session, as you may need to refer to it.

It is your responsibility to keep these signed off records of your assessment safe so that there can be no doubt as to whether you have completed any lab. You will be given the opportunity to check your practical record, as held by the Student Administration Office, in the Trinity Term of years one, two and three, prior to the presentation of this information to the Examiners. In the event of a query regarding the completion of a laboratory, the record will only be amended in the light of supporting evidence, normally the signing-off sheet.

10.7 Good Practice for Laboratory record-keeping

You should keep a good record of what you have done in the labs. This will help you explain your work when being assessed. We expect you to follow these recommendations:

- Records should normally be such that another reasonably competent undergraduate in your own year, and reading the same subject, should be able to understand them (for example, students you are working with in the lab).
- Record in such a way that if you referred to it again a year later you would be able to make sense of what you wrote.
- For experimental data, make sure that it is a clear, full and precise recording of all data obtained. Data is often recorded as tables of numbers for use in subsequent calculations. It helps if you plan these calculations and tables in advance.
- For computer programming, your code should be thoroughly documented through commenting and the use of readme files.
- For design work, keep records of all drawings, calculations and statements of design ideas and final proposals. If you are recording decisions you took, give reasons for them. 'Reasons' do not necessarily have a mathematical basis, even in engineering. 'Because it seemed more elegant' or 'because it was readily available' are perfectly respectable reasons for choosing between alternatives that are otherwise technically acceptable.

10.8 Assessment of Laboratories

Formal regulations for laboratory work are set out without detail in the 'Examination Regulations'.

All engineering laboratory work is assessed on a continuous basis throughout the year, by the lab organisers and demonstrators, with the marks being submitted to the examiners at the end of the

year. For the 5-hour lab sessions, it is expected that the majority of students can complete the lab and be assessed within 5 hours.

10.8.1 General Protocols for Assessment in Engineering Laboratories

These protocols for laboratory work have been agreed by the Engineering Faculty.

Each set of lab notes will include a marking rubric that details what you need to do in each lab to evidence that you have met the learning outcomes of the session. The majority of labs will be marked out of 10, and this may be broken down into different assignments within each lab. There are no plus, minus or fractional marks. The Workshop Practice is a half day lab and is marked out of 5.

The following table is a general descriptor of what your lab marks mean:

9-10 Marks	This is broadly equivalent to a distinction/1st. These are for students who are well prepared for the lab and show intelligent understanding when interrogated about their work.
7-8 Marks	The mark that the majority of students will obtain for work that is essentially correct and complete.
5-6 Marks	The mark for work that is either incomplete or incorrect or required a lot of help.
3-4 Marks	The mark for work that is both incomplete and incorrect.
1-2 Marks	Did little more than attend the lab and make some attempt at recording activities.
0 Marks	Non-attendance

Assessment Procedure:

Labs are usually assessed by a discussion with a lab organiser or demonstrator. During this discussion, they will look at your work, and will ask questions to assess your understanding of the lab material. Some labs will use a pro-forma which you fill out throughout the lab to guide this discussion. Each set of lab notes will include guidance on how the lab is marked.

Occasionally, work submitted to Canvas may be marked outside of the lab. You will receive feedback and your marks directly through Canvas.

There is only a single opportunity for work to be marked and signed-off. In other words, you cannot do additional work after a 'first marking' in order to try and attain an improved mark.

If any dispute about marking cannot be resolved by the Senior Demonstrator present, then it should be referred to the Lab Organiser, or failing that, the Associate Head (Teaching).

Attendance:

Students who arrive later than 10 minutes after the start will be penalized by 1 mark. It is the responsibility of the student to ensure that their presence is recorded in the register, by a demonstrator, at the start of the lab. Late arrivals (beyond 30 minutes), without prior permission or agreement by the lab organiser that there are exceptional circumstances, may be refused access to the lab.

if you wish to attend an outside event (e.g., job interview, funeral, award of a prize), then you should contact the Lab Organiser (copying the message to your college tutor and the Student Administration team at student.administration@eng.ox.ac.uk) normally at least a week in advance, to obtain permission, and an alternative slot if available. Last minute rearrangement of lab classes for extracurricular activities is not permitted.

If you are ill, it is important to inform the lab organiser as soon as possible, especially as some lab projects involve groups working across multiple labs. In the first instance, the lab organisers will try to arrange for you to attend a later slot. However, if this is not possible and you are unable to complete a laboratory through illness or other urgent cause, you should obtain evidence immediately - usually from your doctor, college nurse, or member of college staff – where it states which laboratory sessions were affected and why. You should send this evidence to exams@eng.ox.ac.uk. The Exam Board will review the evidence in due course and decide whether it is appropriate for you to receive an excusal for that lab.

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11. SKILLS AND LEARNING DEVELOPMENT

11.1 Academic progress

The monitoring of academic progress is carried out on both collegiate and Departmental levels. The Department is responsible for recording and tracking your attendance, any issues related to your teaching and learning and for timetabling your lectures and labs. Your college is responsible for your tutorial support, feedback using the college's reporting system (TMS), and your overall pastoral care. Please refer to your college handbook for full details of what they provide for you.

11.2 Learning development and skills

Having access to high quality teaching material and dedicated tutors is the starting point for your university education; the rest is up to you. There is no replacement for patient and well-planned personal study. It is essential that you invest the time and effort to absorb the concepts and facts presented in lectures. The tutorial sheet problems provide an opportunity to apply new knowledge and to discover how solutions develop. Like any skill you wish to develop further it is necessary to practice without rushing and pay attention to detail. Avoid the temptation to learn superficially and work consistently well throughout the academic year. Your college tutors will have a lot more to say on this topic during the tutorials and preparation for the Preliminary examinations to follow.

11.3 Induction

A separate induction programme has been issued to you in the pre-course pack, sent to you by your colleges in August.

11.4 Opportunities for skills training and development

A wide range of information and training materials are available to help you develop your academic skills through the Oxford Students website. These include time management, research, library skills, referencing, revision skills and academic writing.

http://www.ox.ac.uk/students/academic/guidance/skills.

11.5 Language learning and upskilling

The University of Oxford Language Centre provides a wide range of general and specialised courses in foreign languages and Academic English. See https://www.lang.ox.ac.uk/.

11.6 Careers information and advice

Information and advice regarding careers are available at the University Careers Service: www.careers.ox.ac.uk.

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12. STUDENT LIFE AND SUPPORT

12.1 Help and advice

It's possible that at some point during your time here, you may run into a problem. It could be that your work gets on top of you. You might have health problems, or difficulties with your personal life. All of these things can stop you from enjoying your time at Oxford and prevent you from studying effectively.

If you do get into difficulties, the main thing to remember is that, although it may not feel like it, you are unlikely to be the only person to have had a particular problem, and many people are available to offer advice and support.

Do ask for help if you need it - don't struggle on and wait for the problem to go away of its own accord.

Details of the wide range of sources of support available more widely in the University are available from the Oxford Students website (www.ox.ac.uk/students/welfare), including in relation to mental and physical health and disability.

Who to contact?

In your college

The natural person for you to turn to first is your college tutor. They can help you if you are having a work crisis, maybe by rescheduling tutorials or offering extra help on a part of the course you are finding difficult. Your tutor may also be able to help with non-academic problems, but if you don't feel able to turn to them, there are many alternatives within the college community, such as the Senior Tutor (Academic Director), JCR Welfare Officers, Chaplain, Nurse, Doctor, and Tutor for Women.

Every college has their own systems of support for students. Please refer to your college handbook or website for more information on who to contact and what support is available through your college.

In the Department

In the Department, your first port of call for any problems concerned with teaching provision should be the Student Administration Office on the 8th floor of the Thom Building.

Staff with a particular responsibility for undergraduate issues are:

Professor Clive Siviour	Head of Department
Professor Stephen Morris	Associate Head of Department (Teaching)
Christine Mitchell	Head of Student Administration
Bridie Thompson	Undergraduate Administrator
Simon Mager-Coath	Undergraduate Studies Officer
Jane Fallaize	Undergraduate Studies Officer
Purvi Patel	Undergraduate Data Officer

At University level

At University level, you can seek advice and counselling from:

- The University Counselling Service
- Nightline: Listening and Information Service
- OUSU Student Advice Helpline
- www.ox.ac.uk/students/welfare

Harassment

The University condemns harassment as an unacceptable form or behaviour and has an advisory system to help people who think they are being harassed. Harassment includes any unwarranted behaviour directed towards another person which disrupts that person's work or reduces their quality of life.

Further information and guidance is available at https://edu.admin.ox.ac.uk/university-policy-on-harassment.

The Department of Engineering Science has a team of Bullying and Harassment Advisors. At present these are Christine Mitchell, Professor Harvey Burd, Karen Bamford, Professor Daniel Eakins, Caroline Brown, Professor John Coull, Professor David Gillespie, Laura O'Mahony, Professor Nick Hawes, Grahame Faulkner, Wendy Poole, and Jarlath Brine; any of whom may be consulted in relation to matters of harassment.

Equality and Diversity

Information about the University's Equality and Diversity Unit can be found at https://edu.admin.ox.ac.uk/.

Disabilities

If you have any form of disability, we strongly encourage you to disclose this to Christine Mitchell, Head of Student Administration, in order that we can make provision for you. Furthermore, your college will advise you of your Disability Contact who will be pleased to talk to you in the strictest confidence.

Students who have already declared a disability (for example on their UCAS form), will be contacted by the Disability Advisory Service by early Michaelmas Term to discuss their specific needs.

Students with a disability may also find useful advice and guidance on the University of Oxford Disability Office web page at https://www.ox.ac.uk/students/welfare/disability.

Mobility issues

If you experience mobility issues due to illness or injury (even if only temporary), please report this to the Department Safety Officer, Peter Garland (safety@eng.ox.ac.uk). This is so that appropriate help can be arranged at a local level which will be available in the event of an emergency evacuation.

12.2 Complaints and appeals

Complaints and academic appeals within the Department of Engineering Science

The University, the MPLS Division and the Department of Engineering Science all hope that provision made for students at all stages of their course of study will result in no need for complaints (about that provision) or appeals (against the outcomes of any form of assessment).

Where such a need arises, an informal discussion with the person immediately responsible for the issue that you wish to complain about (and who may not be one of the individuals identified above) is often the simplest way to achieve a satisfactory resolution.

Many sources of advice are available from colleges, faculties/departments and bodies like the Counselling Service or the OUSU Student Advice Service, who have extensive experience in advising students. You may wish to take advice from one of these sources before pursuing your complaint.

General areas of concern about provision affecting students as a whole should be raised through Joint Consultative Committees or via student representation on the faculty/department's committees.

Complaints

If your concern or complaint relates to teaching or other provision made by the Department of Engineering Science, then you should raise it with the Associate Head of Department (Teaching), Professor Stephen Morris, as appropriate. Complaints about departmental facilities should be made to the Head of Student Administration, Christine Mitchell. If you feel unable to approach one of these individuals, you may contact the Head of Department, Professor Clive Siviour.

If you are dissatisfied with the outcome, you may take your concern further by making a formal complaint to the Proctors under the University Student Complaints Procedure: https://www.ox.ac.uk/students/academic/complaints.

If your concern or complaint relates to teaching or other provision made by your college, you should raise it either with your tutor or with one of the college officers or Senior Tutor/Academic Director (as appropriate). Your college will also be able to explain how to take your complaint further if you are dissatisfied with the outcome of its consideration.

Academic appeals

An academic appeal is an appeal against the decision of an academic body, such as the Exam Board, on grounds such as procedural error or evidence of bias. There is no right of appeal against academic judgement.

If you have any concerns about your assessment process or outcome it is advisable to discuss these in the first instance with the exams team, who can be reached at exams@eng.ox.ac.uk. They will be able to explain the assessment process that was undertaken and may be able to address your concerns. Queries may not be raised directly with the examiners.

If you still have concerns, you can make a formal appeal to the Proctors who will consider appeals under the University Academic Appeals Procedure:

https://www.ox.ac.uk/students/academic/complaints.

12.3 Policies and Regulations

The University has a wide range of policies and regulations that apply to students. These are easily accessible through the A-Z of University regulations, codes of conduct and policies available on the Oxford Students website at https://www.ox.ac.uk/students/academic/regulations.

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APPENDIX A: Health and Safety

Introduction

In England and Wales, everyone has a 'duty of care' under Common Law both to themselves and others. Each one of us must take reasonable care of our own health and safety and that of others who may be affected by our acts and omissions. Further, under Statute Law in Great Britain, everyone has a duty to co-operate with their employer, in this case the department, so far as is necessary to enable the department to comply with its duties under the Health and Safety at Work Etc. Act 1974. Undergraduates and visitors will be expected to comply both with the law and the safety requirements of the Department. To this end, the department has a basic set of safety rules that apply to all undergraduates, these are listed below.

Departmental safety rules for undergraduates, applying to all years of study:

1. Undergraduates may use apparatus in laboratories only when supervised and within normal working hours, for the following purposes:
    a. Programmed experiments as timetabled, under the direct supervision of the laboratory organiser.
    b. Programmed experiments outside timetabled hours (see Access Hours and Lone working information in Appendix B) by specific permission of the organiser of the relevant laboratory class, and which are directly supervised. Fourth year undergraduate students working on project work may be granted access outside these hours following completion of an extended access permit.
    c. Project work by arrangement between the project supervisor, the staff member responsible for safety in the relevant laboratory and the staff member responsible for the apparatus required providing all necessary risk assessments have been completed before the project work starts.
    d. For the purposes other than programmed experiments or project work by permission of:
        i. the member of staff responsible for the safety in the relevant laboratory or,
        ii. the Administrator or,
        iii. the head of the relevant workshop providing all necessary risk assessments have been completed before the work starts.
2. Outside normal working hours, undergraduates may use apparatus only if there is a specific reason for which approval is granted by the Head of Department or Associate

Head (Teaching). This use must be in the presence of a member of staff. Such approval is currently granted for supervised access to computing facilities only.

3. Machine tools in the Staff/Student Workshop may be used only when supervised by an authorized person or by the technician in charge. The technician must be satisfied that the undergraduate is competent to operate the required machinery safely. The technician in charge has full authority to refuse anyone the use of machine tools if evidence of competency cannot be provided.
4. Except by permission of the member of staff responsible, undergraduates are not permitted to enter research laboratories, staff offices, stores, workshops, roof/balcony areas, service areas, photographic darkrooms, reception areas (except public spaces), or any room displaying a specific hazard warning notice.
5. Each practical and experimental exercise will provide risk assessments with more detailed safety requirements, where required. All undergraduates will be expected to abide by these safety requirements and act on them accordingly.
6. Workspace inductions and training for undergraduates as defined by the supervisor, must be completed prior to work being undertaken.
7. It is an offence under law for anyone to intentionally interfere with or misuse anything provided in the interests of health, safety, and welfare including putting themselves and/or others at risk. It is also an offence not to use any personal protective equipment (PPE) or engineering controls provided in the interests of health and safety. PPE must be maintained in good order, and you have a duty to report any PPE or engineering control that is damaged or if it does not suit your needs. Report the fact to your supervisor or member of staff responsible for the laboratory or workshop.

NB: Any student experiencing health issues likelihood on impact on their ability to work and/or exit the building safely (even if only temporarily) should advise the Department's Safety Officer of their situation. This is so that appropriate help can be arranged which will be readily available in the event of an emergency such as Personal Emergency Evacuation Plans (PEEP).

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APPENDIX B: Department of Engineering Science – Access and Lone Working

This table provides guidance for undergraduates, postgraduates, and members of staff. Detailed guidance is available on the department's health & safety intranet page at this link: https://intranet.eng.ox.ac.uk/health-safety.

Category/ Hours	Core Hours 08:00-18:00	Non-Core Hours Monday to Friday 18:00-22:00	Weekends 08:00 - 22:00	Late Working 22:00 - 08:00	Departmental closed periods e.g., Easter, Christmas, and Bank Holidays outside term
Undergraduate	Access allowed from 08:00 – 18:00, 0-10th week inclusive (Hilary and Michaelmas Terms) and 0-8th week inclusive (Trinity Term). Undergraduates are allowed to remain until 18:00 apart from the 8th floor study area where access is allowed until 19:00	Access requires Extended Hours Permit & Risk Assessment	Access requires Extended Hours Permit & Risk Assessment	No access	No access
Postgraduate & Staff Members (Academic, Research Assistants, Support Staff)	Access allowed	Access allowed	Permitted for office-based work only, except where approved by Head of Department of Head of Administration and Finance.	Permitted for office-based work only	Permitted for office-based work only

Note: Core hours for IBME are 08:00 – 18:00 (Monday to Friday)

Lone Working

Lone working (other than for solely office-based activities) is only permitted for students and staff subject to a Risk Assessment by their Line Manager or Supervisor. In all cases, arrangements for summoning assistance in the event of an accident should be established and this information communicated to all relevant persons.

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APPENDIX C: Access to Departmental Buildings

1. Undergraduate Students are permitted to use the main entrances to the Thom (including 8th floor study area) and Holder Buildings in the Keble Triangle between the hours of 08:00hrs and 18:00hrs during the following periods:
    a. Weeks 0th -10th (inclusive) in the Michaelmas and Hilary terms
    b. Weeks 0th – 8th of the Trinity term
2. This permission is granted for the purposes of attending lectures and other course related meetings, visiting the 8th floor study area, and undertaking work related to Third Year Projects (3YP) or Fourth Year Projects (4YP).
3. This permission is granted on condition that the only activities undertaken are low-risk such as desk-based computer analysis of data, literature reviews or writing up of results.
4. This permission can be extended to allow higher risk activities or out of hours working by the Undergraduate Student such as tests and experiments using mechanical, electrical, or chemical equipment and materials, so long as supervision by a competent person is in place and an adequate risk assessment has been completed and reviewed by the DSO.
5. This permit, together with a current University Identity Card, must be carried at all times within the department, and produced upon request. Any Undergraduate Student that is unable to meet these requirements will be asked to immediately leave the department premises.
6. Random checks on Undergraduate Students present in the department will be conducted by the Head of Finance and Administration and the DSO. Students found to be not complying with this appendix will have their extended access permission withdrawn and the Head of Department notified.

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APPENDIX D: Guidance in the event of an attack by an armed person or persons

1. Be prepared and stay calm

Recent events in the UK and around the world remind us all of the terrorist threat we face. Police and security agencies are working tirelessly to protect the public, but it is also important that individuals remain vigilant and aware of how to protect themselves if the need arises.

In the event of an incident, quickly determine the best way to protect yourself.

2. Evacuate

- If it is possible to do so safely, exit the building or area immediately
- Have an escape route in mind (Fire Exit signs are a good point of reference)
- Evacuate regardless of whether others agree to follow
- Help others, if possible
- Prevent others from entering the area of danger
- Do not attempt to move wounded people
- When you are safe, call 999 and ask for the police

3. Hide

- If evacuation is not possible, find a place to hide where the offender is less likely to find you
- If you are in a room/office, stay there
- If you are in a corridor, get into a room/office
- Lock the door and blockade it with furniture
- Silence your mobile phone and remain quiet
- Turn off the lights and draw any blinds
- Hide out of view and behind something solid (desk or cabinet)

- If it is possible to do so safely, call 999 and ask for the police

4. Inform

If you contact the police, provide the following information:

- Exact location of and the number of offenders
- Type of incident
- Any physical descriptions of the offenders
- Number and type of weapons used by the offenders
- Number and potential casualties at the location

STAY SAFE

Further information and advice is available from Oxford University Security Services on 01865 (2) 72944 or security.control@admin.ox.ac.uk.

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APPENDIX E: Jargon Buster

There is a general Glossary of Terms available on the University of Oxford website here: https://www.ox.ac.uk/about/organisation/history/oxford-glossary. The list below are a few terms that may come up during your time with Engineering Science.

Canvas	This is the University of Oxford's Virtual Learning Environment (VLE) – an online resource where all of your course material and timetable is available.
Collections	These are internal exams held in the colleges which provide your college with an indication of your progress.
College	This is where students live - your rooms and meals will all be provided by your college, and you will also have your tutorials there. Oxford has a collegiate system, which means that every student and most of the teaching staff are members of a college.
Coming Up/Going Down	Arriving at the beginning of term/leaving at the end of term.
Demonstrating	The supervision or assistance of practical classes or labs.
Department	This is your area/course of study, and where you will spend the majority of your time in teaching. The Department of Engineering Science provides your labs and your lectures.
Design-Build-Test (DBT)	These are lab activities that involve students creating and constructing a project that tests theoretical engineering principles e.g., programming robots, building a small bridge.
Division	This is the term used to group departments, or academic subjects, together under one theme. Engineering Science is part of the Division of Mathematical, Physical and Life Sciences.
EEM	The acronym for the Engineering Science, Entrepreneurship and Management pathway of the MEng Engineering Science programme. This is available for students to apply for at the end of their second year.
Example/ Tute Sheet	The worksheet that is provided for you to complete before your tutorial.
Finals	The set of examinations that you will sit in years two, three and four (Part A, Part B and Part C). The outcome of these exams, along with your

	coursework marks, determine your final degree classification. The last three years of the course are sometimes referred to collectively as FHS ('Final Honours School').
General Scheme	A summary of the lecture timetable across three terms.
JCC	The acronym for Joint Consultative Committee, which is a meeting held once a term between academic staff and undergraduate students to discuss administrative and academic issues.
Labs	This is shorthand for laboratories or practical classes.
Matriculation	This is the formal process of University enrolment and takes place in the form of a ceremony held at the start of Michaelmas term. You must participate in this ceremony within two terms of starting the course or you will not be allowed to sit your exams.
Pidgeon Hole (Pidge)	This is where your post will be delivered to in your college. You may be asked to submit tutorial sheets to your college tutor's Pidgeon hole for example. They are often referred to as a "Pidge".
Prelims	Shorthand for 'preliminary examinations', which are the exams that you sit at the end of your first year. These exams cover the four different subject areas within Engineering Science and you must pass them in order to progress onto the rest of the course – however, they do not count towards your final degree classification.
Proctor	These are members of staff that officiate and are in charge of enforcing University regulations and discipline.
Radcliffe Science Library (RSL)	This is the main science, engineering and technology library and is located just five minutes' walk away from the Department. As well as lending books, the library provides access to electronic books and journals, and the subject librarians also run training courses to help you make the most of the library and maximize the efficiency of your study time. This is provided alongside the wide range of college libraries available to you.
Rustication	The withdrawal of access to University facilities, buildings etc. for a certain period of time or until certain conditions have been met. This is usually a consequence of misconduct or disciplinary procedure.

Sending Down	Another term for the termination of course – student expulsion for failing prelims, or major disciplinary offences.
Solution	The sheet that provides the answers to the questions on your example sheet.
Subfusc	The term used for formal academic dress, which you must wear to matriculate and sit examinations. It comprises of: Dark suit with dark socks, or dark skirt with black tights or stockings, or dark trousers with dark socks or dark hosiery; dark jacket if required, black shoes; plain white collared shirt or blouse with sleeves; white bow tie, black bow tie, black full-length tie, or black ribbon. Carnations are also often worn with *sub fusc*.
Suspension	The term for a student temporarily withdrawing from studies, usually on a voluntary basis e.g., for medical reasons.
Term	This is the phrase used for the 8-week teaching block that occurs three times in an academic year. Michaelmas is the first term which runs from October to December. Hilary is the second term and runs from approximately mid-January to March. Trinity is the last term and runs from April into June. Each week of the term is referred to by number, e.g., Week 1 of Michaelmas term.
Tutor	This is a member of the academic teaching staff, usually a Fellow in your college, who gives tutorials.
Tute/Tutorial	A small, group session with an academic member of staff held at your college. Engineering Science students should expect a one-hour tutorial after approximately every fourth lecture. This amounts to approximately two tutorials a week during term time.
3YP	The acronym for Third Year Project. This is chosen towards the end of the second year and is a group project that is intended to give experience and insight into the engineering design process.
4YP	The acronym for Fourth Year Project. This is chosen towards the end of the third year and tends to be taken by individual students although very occasionally larger projects may be split between a team of two or three

	people. It involves original research or design and construction and is undertaken in close consultation with an academic supervisor.

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