

Course Information Sheet for entry in 2025-26: Engineering Biology (EPSRC and BBSRC CDT)



Course facts

Mode of study	Full Time Only
Expected length	4 years

About the course

Engineering Biology applies engineering principles to biology and aims to exploit our synthetic biology knowledge to drive the bioeconomy. The Engineering Biology Centre for Doctoral Training (EngBioCDT) will provide bespoke cohort-based training with a focus on how synthetic biology concepts and technologies can be translated into products with real-world impact.

This course is run jointly with the University of Bristol.

After training in the fundamentals of mathematics, biology, engineering and computing and team-based problem solving projects, you will complete two short research projects, one of which will develop into your substantive DPhil project. Throughout the course, you will undertake bespoke training in translational aspects.

Throughout the four years of the programme, there will be bespoke innovation and commercialisation training, responsible innovation, EDI and bioethics training, and career development programmes.

Each year, a summer school will take place in June/July which will include talks from engineering biology leaders, pitches from the innovation in engineering biology projects, and outreach projects.

During the course, you will also have access to the extensive range of seminars and symposia in both the Department of Engineering Science and other departments of the University. During term-time there are regular departmental seminars which all graduate students are expected to attend, along with the annual Department of Engineering Science specific Lubbock Lecture and BioEngenuity events.

Students also present at regular progress seminars, which bring together groups in the department working in related areas. Your research group will be able to advise you as to which seminar series you should attend. All seminars are advertised on the web portal Oxford Talks.

There will be multiple opportunities for you to present your work, within the course and to a wider university audience. You will also have opportunities to present your work at national and international conferences.

Graduate students in the department run a lively Graduate Students' Association and meet regularly for social, science and networking events.

Course structure

The first year of the course will be divided into three segments.

The first segment will begin with a series of inductions as part of the department's welcome weeks in Oxford. This will include meeting tutors, potential supervisors, the management team, and students from other cohorts.

You will then receive around four weeks of foundation training. The student cohort will be split into two groups, based on background. Those students with a background in life sciences will receive foundation training in engineering and computational principles, and for those with engineering/physical sciences backgrounds, foundation training in biology will be provided.

This will be followed by around six weeks of specialised training in engineering biology topics, techniques and challenges. This training will take place at the University of Bristol for all students. It will typically include interdisciplinary training in engineering biology design across scales (from biomolecules to cells), as well as advanced engineering biology topics and techniques such as:

- Modelling and control theory
- Artificial intelligence and machine learning
- Gene circuit design
- Protein design and engineering
- Tissue engineering.

At the end of this first segment, you will typically attend a retreat for innovation in engineering biology group projects. This may be attended by students from earlier cohorts, Synthetic Biology graduates, industrial partners, and supervisors, who will provide input and case studies.

During the first four weeks of your second segment, you will work on your innovation in engineering biology group projects and write a report in the style of a scientific publication and make (where possible) data and code available to students of future cohorts to offer the opportunity to build on the research performed (eg via GitHub). This will be followed by the first of two individual short research projects.

Segment three will comprise the second of these research projects and a summer school. Research will aim to align with four major focus areas:

1. Robust methods for bioengineering;
2. Rational biomolecular & biosystems design;
3. Evolution-guided biodesign; or
4. Digital cells & AI.

Potential collaborative research projects will also be offered by the University of Bristol and can be found on the institution's website.

One of the two short research projects will typically develop into the substantive DPhil project that you will work on throughout years two to four.

Short projects and substantive DPhil studies in collaboration with our industry partners are also encouraged and can be discussed at interview.

You will also take advanced units in AI and robotics for engineering biology and in current engineering biology applications for industry alongside the rest of the course cohort.

Attendance

The course is full-time and requires attendance in Oxford. Full-time students are subject to the University's Residence requirements.

Provision exists for students on some courses to undertake their research in a 'well-founded laboratory' outside of the University. This may require travel to and attendance at a site that is not located in Oxford. Where known, existing collaborations will be outlined on this page. Please read the course information carefully, including the additional information about course fees and costs.

Resources to support your study

As a graduate student, you will have access to the University's wide range of world-class resources including libraries, museums, galleries, digital resources and IT services.

The Bodleian Libraries is the largest library system in the UK. It includes the main Bodleian Library and libraries across Oxford, including major research libraries and faculty, department and institute libraries. Together, the Libraries hold more than 13 million printed items, provide access to e-journals, and contain outstanding special collections including rare books and manuscripts, classical papyri, maps, music, art and printed ephemera.

The University's IT Services is available to all students to support with core university IT systems and tools, as well as many other services and facilities. IT Services also offers a range of IT learning courses for students, to support with learning and research.

You will have use of University Libraries such as the Radcliffe Science Library and the Cairns Library. Library access includes full online access to all relevant scientific journals.

There are numerous seminar and meeting rooms available within the Department of Engineering Science, fully equipped with audio-visual equipment. You will be provided with bench space in your supervisor's laboratory and a suitable desk.

There are central facilities for nanoscale characterisation, flow cytometry, microscopy and genome engineering. Members of the department also have access to a wide range of shared facilities, including proteomics, imaging, structural biology, genomics, 3D printing and bioprinting, and drug-discovery. Training and support is available for use of all these resources.

Supervision

The allocation of graduate supervision for this course is the responsibility of the Department of Engineering Science and it is not always possible to accommodate the preferences of incoming graduate students to work with a particular member of staff. A supervisor is often found outside the Department of Engineering Science.

You will have the opportunity to receive individual mentorship by the Course Director and other members of the course staff on a termly basis during the training year. During your DPhil studies you will meet according to the stipulations of your host department.

Assessment

During the training year there will be formative and summative assessment (eg essays, presentations).

You will also complete two short research projects during this first year, one of which you will develop into your substantive DPhil. Projects will be assessed via written reports and oral presentations.

All students will be initially admitted to the status of Probationer Research Student (PRS). Within a maximum of six terms as a PRS student you will be expected to apply for transfer of status from Probationer Research Student to DPhil status.

If you cannot complete transfer to DPhil status in Oxford, exit awards (from the University of Bristol, regardless of home institution) will be made depending on the credit points (CPs) gained (MRes with 180 CPs, or different for lower CPs, following the University of Bristol Credit Framework).

A successful transfer of status from PRS to DPhil status will require submission of work and interview according to the local rules of your host department. Students who are successful at transfer will subsequently be expected to apply for and gain confirmation of DPhil status within 10 terms of admission, to show that your work continues to be on track.

You will be expected to submit a substantial, original thesis after four years from the date of admission. To be successfully awarded a DPhil you will need to defend your thesis orally (viva voce) in front of two appointed examiners.

Changes to this course

The University will seek to deliver this course in accordance with the description set out above. However, there may be situations in which it is desirable or necessary for the University to make changes in course provision, either before or after you commence your course. These might include significant changes made necessary by any pandemic, epidemic or local health emergency. For further information, please see the University's Terms and Conditions (<http://www.graduate.ox.ac.uk/terms>) and our page on changes to courses (<http://www.graduate.ox.ac.uk/coursechanges>).

Costs

Annual fees for entry in 2025-26

Fee status	Annual Course fees
Home	£10,070
Overseas	£33,370

Information about course fees

Course fees are payable each year, for the duration of your fee liability (your fee liability is the length of time for which you are required to pay course fees). For courses lasting longer than one year, please be aware that fees will usually increase annually. Information about how much fees and other costs may increase is set out in the University's Terms and Conditions (<http://www.graduate.ox.ac.uk/terms>).

Course fees cover your teaching as well as other academic services and facilities provided to support your studies. Unless specified in the additional cost information (below), course fees do not cover your accommodation, residential costs or other living costs. They also don't cover any additional costs and charges that are outlined in the additional cost information.

Graduate students who have reached the end of their standard period of fee liability may be required to pay a termly University and/or a college continuation charge.

The University continuation charge, per term for entry in 2025-26 is £672, please be aware that this will increase annually. For part-time students, the termly charge will be half of the termly rate payable by full-time students.

If a college continuation charge applies (not applicable for non-matriculated courses) it is likely to be in the region of £100 to £600. Please contact your college for more details, including information about whether your college's continuation charge is applied at a different rate for part-time study.

Additional cost information

There are no compulsory elements of this course that entail additional costs beyond fees (or, after fee liability ends, continuation charges) and living costs. However, please note that, depending on your choice of research topic and the research required to complete it, you may incur additional expenses, such as travel expenses, research expenses, and field trips. You will need to meet these additional costs, although you may be able to apply for small grants from your department and/or college to help you cover some of these expenses.

Living costs

In addition to your course fees and any additional course-specific costs, you will need to ensure that you have adequate funds to support your living costs for the duration of your course.

The likely living costs for the 2025-26 academic year are published below. These costs are based on a single, full-time graduate student, with no dependants, living in Oxford. We provide the cost per month so you can multiply up by the number of months you expect to live in Oxford.

Likely living costs for one month

	Lower range	Upper range
Food	£330	£515
Accommodation	£790	£955
Personal items	£200	£335
Social activities	£45	£100
Study costs	£40	£90
Other	£20	£40
Total	£1,425	£2,035

Likely living costs for nine months

	Lower range	Upper range
Food	£2,970	£4,635
Accommodation	£7,110	£8,595
Personal items	£1,800	£3,015
Social activities	£405	£900
Study costs	£360	£810
Other	£180	£360
Total	£12,825	£18,315

Likely living costs for twelve months

	Lower range	Upper range
Food	£3,960	£6,180
Accommodation	£9,480	£11,460
Personal items	£2,400	£4,020
Social activities	£540	£1,200
Study costs	£480	£1,080
Other	£240	£480
Total	£17,100	£24,420

When planning your finances for any future years of study at Oxford beyond the 2025-26 academic year, it is suggested that you allow for potential increases in living expenses of 4% each year – although this rate may vary depending on the national economic situation.

More information about how these figures have been calculated is available at www.graduate.ox.ac.uk/livingcosts.

Document accessibility

If you require a more accessible version of this document please contact Graduate Admissions and Recruitment by email (graduate.admissions@admin.ox.ac.uk) or via the online form (<http://www.graduate.ox.ac.uk/ask/form>).

Accommodation will be arranged for Oxford students during their time in Bristol. Please consult the University of Bristol website for further information about living costs while studying at that institution.