

Course Information Sheet for entry in 2025-26: DPhil in Interdisciplinary Life and Environmental Science



Course facts

Mode of study	Full Time	Part Time
Expected length	4 years	6 to 8 years

About the course

The DPhil in Interdisciplinary Life and Environmental Science is funded by a BBSRC and NERC Landscape Award, and provides students with the opportunity to undertake research across the full breadth of biological and environmental science, from cellular mechanisms and crop science, through to climate change and dynamic earth processes.

The course provides innovative training for graduates from a life science, physical science or computational and mathematical science background who wish to conduct leading-edge bioscience and environmental science research.

The course is led by the University of Oxford in partnership with five world-class research organisations:

1. The Pirbright Institute, which provides the UK's national capabilities for the study and control of viral diseases of livestock
2. Oxford Brookes University
3. The Open University
4. Diamond Light Source
5. ISIS Neutron and Muon Source

Diamond Light Source and ISIS Neutron and Muon Source are based at the Harwell Science and Innovation Campus, and provide the UK's national capabilities for synchrotron science and neutron science. The course is also supported by researchers in a much broader range of public and third sector organisations as well as industrial partners.

Based in the University of Oxford's innovative Doctoral Training Centre (DTC), you will undertake an in-depth programme of cohort-based, experiential learning that:

- Provides a strong foundation in the computational and quantitative techniques that underpin interdisciplinary research;
- Further develops these skills in a research context through rotations and team projects;
- Builds connections within and between themes, supporting learning, sharing best practice and inspiring interdisciplinary innovation;
- Develops communication skills and connections with broader communities through teaching, outreach and policy engagement;
- Provides work experience through internships that provide an opportunity for you to engage with the real-world applications of research and embed transferable skills in a non-academic context;
- Fosters an entrepreneurial spirit through an innovative entrepreneurship training programme;
- Connects you with business to co-create industrially relevant projects through an Open Innovation Industrial Consortium.

You will have the opportunity to work on fundamental and applied research projects with supervisory teams within the partnership, or undertake collaborative projects with non-academic partner organisations who are members of our Open Innovation Industrial Consortium (Open-IIC), or with other collaborative partners. A full list of current partners is available on the course website.

If you undertake a doctoral project with translational or commercial potential you will have access to support from the course and the partner organisations in realising this potential, including specific training in communication, enterprise and business skills.

Research themes

There are five research themes:

Climate and Earth

Advancing understanding of climate and earth systems. Research topics include, but are not limited to:

- Earth observation
- natural resources
- past/future climates
- predictability of weather and climate
- volcanology
- seismology
- global biogeochemical cycles

- hazards
- extreme events
- terrestrial and freshwater landscapes
- atmospheric science
- oceanography
- cryospheric science
- water security
- geoengineering.

Biodiversity and Sustainability

Sustainable approaches to support food, feed and energy security, manufacturing and biodiversity. Research topics include, but are not limited to:

- crop science
- agriculture
- aquaculture
- fisheries
- food systems
- forestry
- nature recovery
- systematics
- climate resilience
- biocultural heritage
- life cycle assessment
- supply chains
- biomanufacturing
- the circular economy
- waste management
- conservation
- ecosystem services
- nature-based solutions.

Animal and Human Health

Innovative approaches to understand and support animal and human health. Research topics include, but are not limited to:

- infectious diseases of animals
- antimicrobial resistance
- immunology
- microbiology
- microbiome science
- healthy aging
- pharmaceutical and vaccine production
- regenerative medicine
- diet and nutrition
- diagnostics
- sensors
- improving environmental quality to benefit human and animal health.

The course does not support research focused on specific human diseases and human disease processes or abnormal conditions.

Rules of Life

Frontier science addressing fundamental questions about biological organisms and ecosystems. Research topics include, but are not limited to:

- integrative biology
- developmental biology
- physiology
- cellular mechanisms
- evolutionary biology
- physiology
- cellular mechanisms
- evolutionary biology
- genetics
- animal behaviour

- structural biology
- neuroscience
- astrobiology
- biophysics
- ecological processes.

Transformative Technologies

Development of tools and technologies underpinning biological and environmental research.

The majority of research projects undertaken across all five themes involve 'transformative technologies', which include advanced imaging and data analysis techniques, the development and application of new and emerging methods and technologies, mathematical modelling, 'omic and systems approaches.

Students in the Transformative Technologies theme usually conduct research that is primarily focused on the development of new scientific technologies, methods, software or modelling approaches; often working at the interface between life or environmental and physical sciences. Research topics include, but are not limited to:

- systems approaches
- computational biology
- mathematical modelling
- statistics
- data science
- artificial intelligence
- machine learning
- advanced experimental techniques
- imaging
- spectroscopy
- synchrotron science
- neutron science
- cryo-EM
- drones
- earth observation techniques
- engineering biology
- bioinspired design
- data assimilation
- state estimation
- advanced computational techniques.

Course structure

In your first term you will be based at the Doctoral Training Centre (DTC) at the University of Oxford and undertake an individually-tailored training programme that includes training in research skills such as:

- mathematics and statistics
- programming
- imaging and image analysis
- data science
- modelling biological or environmental processes and systems.

You can also access a wide variety of additional training provided across the partnership throughout your doctoral studies.

Following the initial training period, you will undertake two rotation projects with different supervisory teams and a long format team-based project with other members of the cohort before deciding on your substantive three-year doctoral project.

A distinctive feature of the course is that you are required to undertake a 12-week internship to gain experience of work in a professional environment and in transferable skills that will be beneficial in your future career. Internships can be undertaken full or part-time and areas that may be explored during internships include (but are not limited to):

- industrial research and development
- science policy
- teaching
- science communication
- publishing
- entrepreneurship
- project management.

If you are working on a project that is co-supervised by a non-academic partner organisation, you will normally undertake a placement with that organisation instead of a 12-week internship. In these cases placements may range from 12 weeks to 18 months. If you are working on a project that has translational potential you can choose to use your internship to focus on translational aspects of your project such as market research or business plan development.

If you are studying full-time you will normally submit a research proposal for your substantive doctoral project during your first year (within three terms) and undertake transfer of status after six terms and confirmation of status after ten terms.

Attendance

The course can be studied full-time or part-time with both modes requiring attendance in Oxford. Full-time students are subject to the University's Residence requirements. Part-time students are required to attend course-related activities in Oxford for a minimum of 30 days each year.

If you are studying part-time you will be required to commit to allocating an average of 20 hours per week (50% full time equivalent) to doctoral study. As a part-time student you will follow an individually-tailored training programme that is adjusted to suit your work pattern, with the opportunity to undertake additional training as needed during the later years of your studies. Where possible you are encouraged to allocate additional time to your studies at the beginning of your first year of study to fully benefit from induction processes, cohort interactions and foundational training. If you are part-time you will be assessed at milestones that are adjusted to take your working hours into account (eg 12 terms for transfer of status for a student working at 50% FTE).

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.

In addition to the University facilities, the Doctoral Training Centre has a stock of reference books available. You will have access to e-journal and other electronic resources provided by the University of Oxford when working within University departments or in partner organisations such as The Pirbright Institute or organisations at the Harwell Science and Innovation Campus.

You will have access to a wide variety of world-class research facilities across all six of the partner organisations, depending on your research interests. These include:

- beamlines at Diamond Light Source and ISIS Neutron and Muon Source
- access to an exceptionally wide variety of advanced imaging and microscopy systems that enable imaging across all scales from subatomic to Earth observation
- containment facilities for animal virology, transgenic plant and plant disease research
- facilities and expertise for advanced methodologies such as mass spectrometry, geochemistry, proteomics, genome engineering, protein production and purification
- supercomputing facilities for data-intensive applications
- field sites for environmental research such as Wytham Woods and the Weston Open Living Lab.

Collaborative partners provide access to further specialist facilities spanning BBSRC and NERC science areas.

During your first year, you will undertake the majority of the taught components of your training programme in a modern purpose-designed Doctoral Training Centre located in the heart of the University's South Parks Road Science Campus, shared by this course and other doctoral training courses.

The co-localisation of this course with other life science and environmental science graduate courses in the DTC, each with its own distinctive remit and student cohorts, provides a unique opportunity for you to establish friendships and scientific collaborations with graduate researchers from a wide range of academic backgrounds.

Supervision

The allocation of graduate supervision is the responsibility of the Interdisciplinary Life and Environmental Science Landscape Award and it is not always possible to accommodate the preferences of incoming graduate students to work with a particular member of staff.

In the first year of the course you will be supervised by the course directors, who will support you in choosing your rotation projects, doctoral research project and supervisory team. Supervision arrangements for years two to four will be confirmed towards the end of the first year when you choose your doctoral project.

All students will have two supervisors and in some cases more than two supervisors. If you are working with a non-university academic partner organisation you will have a supervisor at the university at which you are registered, and a supervisor in one of the non-university academic partner organisations (eg Diamond Light Source, The Pirbright Institute, ISIS Neutron and Muon Source).

If you choose a project with an Open Innovation Industrial Partner or collaborative partner you will have a primary and secondary academic supervisor in one or more of the six core partner organisations, including a supervisor at the university at which you are registered, and an additional co-supervisor in the company or non-academic organisation that is involved in the project. All supervisors are required to meet specific requirements in terms of training, experience and capacity to supervise students.

Typically, you should expect to have meetings with your supervisors or a member of the supervisory team with a frequency of around once every two weeks averaged across the year when in the research phase of your DPhil. The regularity of these meetings may be subject to variations according to the time of the year, and the stage you are at in your research. If you are working part-time you may meet with your supervisory team less frequently, in proportion to your pattern of work.

Assessment

The course has annual milestones to assist you in your progress.

You will be required to write a research proposal during the first year of your doctorate, in consultation with your supervisory team, which describes the background literature, aims and rationale for your project, along with a plan of work. This will be assessed by two researchers with relevant expertise to check the suitability and feasibility of the proposed project, along with your understanding of your project. This will enable you to receive useful feedback on your proposed project at an early stage.

The University of Oxford has two further formal milestones to measure your progress, the first being transfer of status, and the second being confirmation of status, which are typically undertaken in the second and third year of your degree respectively. The exact assessment format used will vary according to discipline and department, but each typically involves an assessment of your progress by two researchers with relevant expertise.

The purpose of the transfer process is to review your project and your plans for future work, to check that you are making satisfactory progress in the development of your project, and to satisfy the assessors that your work is potentially of DPhil quality.

You will receive formative feedback on your performance in taught modules and in the team project undertaken in the first year and beyond, but this does not contribute to the formal assessment of your DPhil.

At the end of your studies you will submit and be formally assessed on a written thesis describing your research. Specific thesis requirements are set by the department in which you are registered to undertake your substantive DPhil project.

An oral examination (viva) normally forms part of the overall method of assessment, but where needed reasonable adjustments to the viva format can be requested.

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

Full-time study

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

Part-time study

Fee status	Annual Course fees
Home	£5,035
Overseas	£16,685

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

Full-time study

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.

Part-time study

Please note that you are required to attend in Oxford for a minimum of 30 days each year, and you may incur additional travel and accommodation expenses for this. Also, as part of your course requirements, you may choose a project with an partner organisation outside Oxford. Please note that, depending on your choice of project and the location of the industrial partner, you may incur additional expenses, such as travel expenses. Funding contribution for travel may be offered if the project is based outside Oxford, and projects in Oxford will be available for any student who wishes to remain in Oxford.

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.

If you are studying part-time your living costs may vary depending on your personal circumstances but you must still ensure that you will have sufficient funding to meet these 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>).